



# **New Trends in Social, Humanities and Administrative Sciences**

**Editor**  
**Prof. Sinan Sönmez, Ph.D.**



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**Chapter 1**

**Sexual Harassment:  
An Invisible Crime in Pakistani Society**

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## **Introduction**

Gender-based violence is commonplace across cultures affecting all women irrespective of their social standing. The forms of violence women experience include physical, sexual, psychological, emotional, and economic violence. Though gender-based violence prevails for a long time, it was explicitly acknowledged by the international community the first time in 1993 by passing the declaration on the elimination of the violence. It defines it as: any act of gender-based violence that results in, or is likely to result in, physical, sexual or psychological harm or suffering to women, including threats of such acts, coercion or arbitrary deprivation of liberty, whether occurring in public or private life. (United Nations General Assembly, 1993).

Among the violence experienced by women, sexual harassment (SH) is at the top of the list and the most unspoken violence. The term sexual harassment (SH) was coined in the early 1970s when the incident of sexual harassment at the workplace was noticed in the West. Sexual harassment entails unwanted verbal, non-verbal, or physical conduct, invasion of personal space, suggestive remarks, unwanted comments on dress and appearance, obscene jokes, and display of sexually offensive material. Sexual harassment at the workplace includes both quid pro quo and hostile environment. While quid pro quo harassment involves, threats and rewards related to employment decisions to gain sexual favor, a hostile environment entails unwelcome sexual behavior, which produces a hostile and intimidating environment at the workplace (Valente, & Bullough, 2004). The occurrence of sexual harassment is not limited to any space, it occurs on streets, at bus stops, at markets, and so forth. This type of sexual harassment has been termed as sexual harassment in public places or street harassment. Bowman defines it as:

Street harassment occurs when one or more unfamiliar men accost one or more women in a public place, on one or more occasion, and intrude or attempt to intrude upon the woman's attention in a manner that is unwelcome to the woman, with language or action that is explicitly or implicitly sexual. Such language includes, but is not limited to, references to male or female genitalia or female body parts or to sexual activities, solicitation of sex, or reference by word or action to the target of the harassment as the object of sexual desire, or similar words that by their very utterance inflict injury or naturally tend to provoke violent resentment, even if the woman did not herself react with violence. (1993, pp.575).

A non-profit organization Stop Street Harassment (2019) posits that street harassment entails “catcalling, stalking, gesturing, groping, exposing, or any other unwanted behaviors that attempt to sexualize the victim and make her feel unsafe or uncomfortable”. The potential victim of street harassment is any woman who is sexually developed, but not too old or beyond reproductive age, because stereotypically, an older woman is not considered a beauty standard (Bowman, 1993).

The incidents of streets harassments have been reported from both developed and developing countries that include the United Kingdom, the United States., Canada, Chile, Egypt, and India, among many others (DelGreco & Christensen, 2019). For example, the survey report Livingston (2015) of women in 22 countries revealed that over one-half of respondents reported being fondled or groped, more than 70% of the sample reported being stalked and one-half of respondents stated being fondled and groped. The various survey reports carried out across the globe indicated that at least 65% and sometimes up to 90% of the women were sexually harassed at the public place over their lifetime (Centre for Equity and Inclusion, 2009; Egyptian Centre for Women's Rights, 2013; Osmond, 2013; Stop Street Harassment, 2014).

Sexual harassment prevails in Pakistani society; women experience harassment at the workplace, in schools, universities, in public transports, in streets, and so forth. The most common instances of sexual harassment in Pakistan are lewd remarks, catcalls, whistling, unnecessary touching, ogling, and leering at women's bodies. Mazhar (2018) stated that 80 percent of women in Pakistan go through the torment of the harassment in their day-to-day life. The Gallup survey (2017) reported that 25% of women living in cities had been stalked by men on their way to home, office, and market. Harassment prevails in Pakistani society to the extent that every woman except the women of the harassers own households is seen as a sexual object that can be harassed and entertained. Unfortunately, people witnessing sexual harassment in public places usually remains silent and relish the moments. Even academics and researchers often ignore the issue for their research studies. This article aims to find out the answers to the following questions. (1) What are the causes behind the incidents of sexual harassment? (2) Why do many of the incidences of sexual harassment go unreported? (3) Why existing laws are unable to stop or reduce these incidences? To find the answers to these questions, this study relied on the existing literature about sexual harassment that includes, but not limited to, research articles, survey reports, and newspapers. The existing literature helped in understanding to achieve the aims of study that were to show the prevailing sexual harassment in Pakistan, its predicting factors, and

the reasons that often discourage victims to report the incidents of sexual harassment.

### **On patriarchy and the patriarchal nature of Pakistani society**

Gender inequality and violence against women prevail in patriarchal societies. Feminist scholars use the concept of patriarchy to elucidate gender inequality, oppression, and hierarchical social arrangements. It is comprised of two aspects, one is structural, and the other is ideological (Dobash & Dobash, 1979; Hadi, 2020; Millett, 1970; Sultana, 2012). The structural aspect refers to men's superior and women's inferior status in all societal institutions such as family, religious, legal, political, and economic institutions. The ideological element points to gender-biased values and norms of society that justify and reinforce men's superiority and women's inferiority in all social institutions of society. Hierarchical relationships between genders, especially between a husband and a wife make patriarchy noticeable. In this relationship, men have dominant and superior status as opposed to women who have a subordinate and inferior status in society and marriage. This dominant-subordinate typology of the hierarchical relationship between a husband and a wife creates space for coercion and force. When women challenge the inferior status and defy assigned gender roles, men coerce and exercise violence to control them. Feminist scholars posit that gendered social setup and unequal power structures produce violence within the family (Dobash & Dobash, 1979; Hadi, 2018a; 2018b).

Pakistani patriarchal society is no exception where power relations are hierarchical and unequal among genders and men have dominant status and authority in both private and public sphere. Pakistani society highly values the notion of honor and manhood, the elements of rigid patriarchal ideology. The concept of honor chiefly refers to the moral and sexual behavior of women and manhood mainly alludes to the control of men on moral and sexual conduct of female members of the family. In honor and manhood-valued societies, a woman is socialized to avoid the actions and behaviors that may put her family's honor at stake and a man is socialized to ensure that women of his family do not violate the norm and injure the family's honor. An appropriate or decent behavior of women is viewed that a man, as the guardian of the family, has control over his family's women and maintain his domination; whereas, the inappropriate and indecent behavior of women is perceived that a man has no control over women of his family and fail to defend the family's honor. This can be considered as a threat to his masculinity/manhood. In this scenario, any dishonorable conduct of a woman creates an environment that forces her male

family members to punish her to restore family's honor and prove their manhood else, they risk losing their social status and may be labeled as weak and unmanly.

A single description of the “typical” Pakistani women does not suffice because the social status of women is not homogenous in Pakistan due to the intersection of gender with other forms of exclusion. The nature and degree of women's oppression vary depending upon ethnicity, religion, social class, and rural/urban location. Patriarchal structures and ideology are stronger in the rural and tribal areas compared with large urban areas. Likewise, women in the middle and upper classes assume greater control over their lives; have more access to education and job opportunities relative to women of the lower class. Notwithstanding the differences in the social status of women, the majority of the women in Pakistan devote their whole lives to performing traditional gender roles being as wives and mothers.

Pakistan ranks very low on global indicators that measure gender equality. The Global Gender Gap Index 2021 developed by the world economic forum has ranked Pakistan as the fourth worst country regarding gender equality all over the world, flanked by two war-torn countries Syria and Iraq. Similarly, the UNDP-2021 gender inequality index (GII), a measure that reflects gender inequality in terms of reproductive health, empowerment, and labor market, ranked Pakistan 154 out of 189 countries. The widespread gender inequality is a breeding ground for violence against women. The most frequent but invisible form of violence in Pakistani society is domestic violence. Therefore, Thomson Reuters Foundation Annual Poll 2018 ranked Pakistan the fifth most dangerous country where women experience domestic violence and fourth concerning honor-based violence such as honor killing.

### **Sexual Harassment in Pakistan**

Sexual harassment is pervasive in Pakistani society and it seems that society has normalized it. The practice of sexual harassment such as constant staring, suggestive gestures, the deliberately touching body of women, making explicit obscene remarks are so common that probably many people do not view it as harassment rather they consider it a routine matter. A woman who comes out from her house, she undergoes the torment of harassment on the streets, at the workplace, at bus stops, in public transports, and so on. The prevalence of sexual harassment in Pakistani society reveals that every girl above the age of 12 would have been through the torment of sexual harassment.

## **Sexual Harassment at workplace**

Although women comprise half of the population, their participation in the workforce is only 22 percent of the total workforce. One of the main reasons for their lack of participation in the workforce is the women-unfriendly working environment (Hadi, 2018). Harassment at the workplace dishearten women to participate in economic activity, this reason has led many women to stay inside their homes. Women who dare to join the workforce are likely to encounter sexual harassment and society says nothing to the harasser, instead of blame the victim to be the main culprit behind such issues. According to AASHA (2002), the paid work environment is difficult and unsupportive for women in Pakistan. A large number of women experience quid pro quo and hostile environment at the workplace. The report estimated that nearly 80 % of women workers encounter sexual harassment in Pakistan and the percentage of the victims are higher in the formal sector including private and public organizations where more than 90 percent of women workers face this intolerable crime (cited in, Ali and Kramar, 2014). Despite the alarming frequency of harassment in the workplace, there is hardly any positive action at the institutional level to address it. The government rules have remained completely ineffective because of the overpowering social bias to blame women themselves for the problem.

## **Sexual Harassment at Education Institutes**

Girls enrolled in schools, colleges, and universities must have been through the torment of sexual harassment once in their lives since educational institutes are replete with the stories of the harassment. In the study conducted by Mehmood, Chong, and Hussain (2018), more than 60 percent of female students reveal that women encounter sexual harassment during their higher education period; among the harassers are also faculty members said by nearly 18 percent respondents. In Quaid-e-Azam University Islamabad, a professor harassed a girl student when she approached him in his office for rectifying a mistake he had made in her marks sheet (Junaidi, 2014); unfortunately, in most cases, the harassers get away with their crime at ease. For instance, students leveled the accusations of sexual harassment against a teacher at the University of Peshawar in 2011; a committee was formed to investigate the accusations but could not find any concrete evidence against the accused since nobody was ready to testify against the alleged harasser. It is said that harassers are among the power-brokers on campus and no one wants to have a problem with them (Usmani, 2011). Girls undergo sexual harassment not only within the premises of their campuses but also outside the premises of their institutions where boys and men are standing in front of the institutions to sexually harass girl students



and follow them till their homes. The instances of harassment occur even in the homes of students where private tutors often try to get physically close to girl students and harass them until girls muster up the courage to stop them or complain about them to their parents. In general, students refrain from direct confrontation with perpetrators fearing that it may lead to a loss of face or may jeopardize their educational career. Not only girl students but women teachers hired on low salaries in private institutes go through harassment with either male colleagues or principals. Law enforcement agencies rarely intervene in these matters unless asked for help by victims who are often too scared to ask for help.

### **Sexual Harassment at Sports Institutes**

Women also experience sexual harassment at sports institutes in Pakistan. However, in most cases, victims remain silent; if any woman dares to raise voice against the harasser, her morality is often called into question and her complaint is either dismissed instantly or inquiry committee is set up to investigate the issue, which is finding ways to protect the harasser. A former goalkeeper of Women's national hockey team leveled an accusation of sexual advances against the head coach of the team; subsequently, an investigation committee was set up to probe the accusation that declared the claims of women goalkeeper "false and unfounded." Younus (2018) asserted that the investigating committee comprised of at least a member who had refused from the outset to have any faith in the accusation of women goalkeeper that raised the question on the impartiality of investigation (Younus, 2018). The highly mediatized case of women cricketers who were sexually harassed by local club chairperson and a team selector is an epitome of how harassers are protected in sports institutes and how victims face dire consequences if they dare to raise voice against harassment. In June 2013, five women members of a regional cricket club leveled the accusation of sexual harassment against the local club chairperson and a team selector in a TV talk show. They accused that the club chairperson and a team selector demanded sexual favors in return for putting girls on the regional team or recommending them for the national team. Dawn (2013) reported that the cricket club officials denied the charge, accusing the women of "questionable behavior" and breach of discipline. Pakistan Cricket Board (PCB) set up an inquiry committee to investigate the issue that cleared officials of accusations and banned all five accusers from playing cricket for a few months. Subsequently, an official of Multan Cricket Club (MCC) filed a defamation case against the television channel officials and accusers seeking damages of twenty million Pakistani rupees that led a woman cricketer Halima to commit

suicide by drinking acid. This example indicates that those victims who muster up the courage to come forward against sexual harassment have to pay the price in one way or another in the patriarchal society of Pakistan. This kind of incidents discourages women to raise their voice against sexual harassment and encourage the perpetrators to continue with their criminal actions.

### **Sexual Harassment in Streets and Public Transport**

Sexual harassment of women in streets and Public transports is pervasive in Pakistan. It includes verbal and nonverbal harassment such as lewd remarks, catcalls, whistling, obstructing female commuters' way, touching, pinching, groping, and assault. In public transports, drivers and conductors also use obscene language before passengers and obscene songs are played in their vehicles. The intolerable behaviors of harassers make women insecure and uncomfortable and often restrict their mobility consequently limiting their access to educational and job opportunities and their socialization and recreation as well. For instance, nearly 70 percent of female students reveal that women encounter sexual harassment in public transport (Mehmood et al., 2018). Social Policy and Development Centre (SPDC) (2014) researched the occurrence of sexual harassment in public transport and connected spaces in Karachi. It revealed that more than 80 percent of working women and students and nearly 70 percent of homemakers experienced sexual harassment, at least once, while commuting during the last year. Another study carried out by the Aurat foundation along with other organizations (2018) in Lahore, revealed that there were significant safety concerns for women at both bus stops and on buses. According to the finding, more than 80 percent of women commuters reported experiencing harassment at bus stop and 90 percent of women commuters reported facing sexual harassment on buses. The perpetrators are primarily fellow passengers.

Women who experience sexual harassment in public transport 'prefer' to remain silent fearing that their reaction may bring loss of face and honor; the silence of victims is misunderstood and motivates further to harassers. When harassment reaches the point where victims cannot put up with it anymore, they come in direct confrontation with harassers, and with the intervention of other people, the issue is resolved one way or another way. If harassed women do not get help from other people, they are hurled with abusive language and character assassination remarks by harassers. The repeated harassment incidences at the buses force many women to commute in Rickshaw, the relatively expensive transport, but much safer than buses.

## **The Feminist Explanation of Sexual Harassment**

Most discussions and analyses concerning gender-based violence including sexual harassment focus on individuals, ignoring society. Various researchers supported the link between individual-level conduct, attitude, and experience of men and violence against women. Among the variables that identified to be linked with men's exercise of violence against women include but not limited to, power and resources disparity in marital relationships, endorsement of violence, childhood's experience of violence, excessive alcohol consumption, and drug abuse (Jasinski&Williams, 1998). However, Feminist scholars assert that these individual-level characteristics and the likelihood that violence will be the upshot of such individual factors thrive in patriarchal societies. The attitude and behavior of a person is the reflection of the society in which he or she resides. Ignoring society as the cause of that behavior and attitude perpetuates the status quo as well as the patriarchal system. Feminist theorists assert that the sexual harassment of women is the logical upshot of the prevailing gender inequality and sexism in a patriarchal society; it works as a social mechanism to assert the prevailing gender inequality (Gutek, 1985; Malovich & Stake, 1990; Pryor; 1987; Schacht & Atchison, 1993; Tangri & Hayes, 1997). In the patriarchal society of Pakistan, women experience sexual harassment, and people under the influence of patriarchy often blame women for being harassed. Even many women are of the view that it is up to the conduct of women; women who maintain their personal boundaries, no one can dare to trespass the boundaries. The approach that blames the victims rather than the system implies that sexual harassment can be curbed if women bring changes in their attitudes and behavior. Hence, it will not eliminate the mal-practice but discourages victims to report the incidents.

## **Why Cases of Sexual Harassment are Under-reported?**

Sexual harassment in Pakistan is like a white elephant in the room that no one sees. The problem is so entrenched that sexually harassing women is viewed as a form of recreational activity instead of a criminal activity focusing directly on the behavior and appearance of women rather than on the harasser. The patriarchal structure of Pakistani society deters women to speak up about harassment experienced by them. In most instances, victims feel compelled to remain silent owing to the fear that their complaint may embarrass them and their families, or cause trouble for them. Following are the three main factors that deter victims to report harassment:

**(1) Feeling of Judgment, embarrassment, or shame:** In Pakistani patriarchal society where family honor is associated with women's virtue, women are hesitant to discuss the incidents of harassment perceiving that it may damage their own character and the reputation of the family.

**(2) Fear of reprisal/retaliation:** Women in Pakistani society tend to believe that direct confrontations could possibly lead to a loss of face and retaliation from harassers. The form of retaliation can be the abrupt loss of their jobs, blacklist them, and give unfavorable reference information, which can make it difficult to find a new gainful job elsewhere. Women who are harassed at public places often deterred to report incidents fearing that harassers may harm them in other ways, for instance by throwing acids on their bodies since in many reported cases acid were thrown on girls and women on rejecting harassers' proposals of 'friendships'.

**(3) Gender-Biased Institutions and Weak Judicial System:** Due to gender-biased institutions and weak judicial systems, women do not come up with complaints of sexual harassment and accept it to be part of their lives. There is a zero-tolerance policy against sexual harassment in most organizations in Pakistan but this policy is not implemented in its essence. On the complaint of sexual harassment, senior management often suppresses the issue and does not allow it to be reported fearing that it will damage the image of the organization. As a result, victims are likely to be discouraged and believe that their complaint about harassment will not be addressed which in turn encourage the perpetrators to harass women.

## **Discussion and Conclusion**

Sexual harassment, the most prevalent form of violence, occur everywhere including, but not limited to, in the streets, in the market places, in buses, at bus stops, at workplaces. An unwanted or unwelcomed sexual misconduct intimidates, degrades, and humiliates women. It is an assault on their privacy and dignity and the violation of their basic rights. Within the last few decades, women in Pakistan have increasingly started to come out from the private sphere and begin to occupy the public sphere resulting in the increasing harassment to keep women stay inside their homes, hence it is an effort to perpetuate the status quo. This issue so badly affects women in Pakistan that it limits their mobility and in turn hinders them to avail educational and livelihood opportunities. In the absence of moral and practical support, victims' physical and psychological well-being is severely damaged, they feel ashamed and embarrassed and worry that they will be labeled as loose women and therefore

are forced to keep quiet. It is not just a personal injury to the affected woman but violates a woman's rights to equality.

Pakistan is bound by international laws like the Universal Declaration of Human Rights and the International Covenant on Civil and Political Rights. Pakistan also ratified the CEDAW the Declaration on the Elimination of Violence against Women that states that:

States should condemn violence against women and should not invoke any custom, tradition, or religious consideration to avoid their obligations with respect to its elimination; States should pursue by all appropriate means and without delay a policy of eliminating violence against women. (UN, 1993).

Besides, Pakistan's international commitment, there are two legal provisions— section 509 of the Pakistan Criminal Penal Code and the Protection Against Harassment of Women at the Workplace Act of 2010—that govern sexual harassment throughout Pakistan. However, the lack of implementation of the laws encourages harassers to continue their crimes and discourage victims to seek legal help. In a society where laws are not strictly implemented and have no support mechanism, criminals get encouraged to harass women continue knowing that their action may not put them in trouble; on the other hand, women, are often left helpless and hopeless and are forced to either remain silent or tackle the issue with the help of family and friends.

Pakistani society in general do not perceive the problem as emanating from a patriarchal system; most discussions psychologize and individualize gender issues and concentrate on education, self-help workshops, psychotherapy, and other programs for individual change. This study asserts that problems produced by social systems cannot be solved without altering misogynistic systems; the prevailing patriarchy society is to be blamed for the occurrence of sexual harassment since society, which objectifies women and quite often paints her as mere recipients of male desire.

The incidents of sexual harassment manifest the patriarchal system and mindset. The strict implementation of laws may lower the incidents of sexual harassment, but insufficient to handle the matter of the harassment in the country where almost 16 million school-age girls are not currently studying in schools. The state of women in Pakistan cannot be improved unless women get economic independence, greater access to education, increase participation in political activities, and get widespread awareness of socio-economic and political issues. The strengthening of the social, economic, and political status of women is indispensable to transform Pakistani society.

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## **Chapter 2**

# **The Us Foreign Policy Towards the Middle East in the Trump Period and the “Deal of the Century”**

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## **1. Introduction: Israeli-Palestinian Conflict in the US Foreign Policy**

The Israeli-Palestinian conflict has been one of the major issues and problems in terms of regional stability in the Middle East. Therefore, all the regional actors and global actors engaging in the region had to adopt a policy and stance about the issue. Historically, the Arab-Israeli conflict turned into the Israeli-Palestinian conflict after the long period of military struggles. In other words, the Israeli-Palestinian conflict cannot be considered a local conflict between two actors. The multi-actor and multi-dimensional aspect of the Israeli-Palestinian conflict requires a more complex foreign policy approach for each actor. The negotiation process and peace attempts replaced the period of military struggles, especially after the 1973 Arab-Israeli War. Acceptance of the PLO as “the sole legitimate representative of the Palestinian people” by the UN and regional institutions led to the Palestinianization of the conflict. On the other hand, the external actors began to play a more important role in the following negotiation phase. The US came into prominence as one of the great powers of the bipolar context of the Cold War and it emerged as the only superpower after the end of the Cold War. Thus, the US foreign policy towards the issue constituted one of the significant factors related to the developments during the negotiation phase. The US Presidents played the role of mediator or honest broker in the Israeli-Palestinian conflict in that period. The 1990s witnessed peace attempts under the framework of the Middle East Peace Process but they could not end in a comprehensive settlement of the conflict. In addition to the goals of a comprehensive settlement and regional stability, the security of Israel has long been one of the top priorities of the US foreign policy towards the Middle East, especially since the 1967 Arab-Israeli War during which Israel proved its military superiority and strategic importance in the region. It has long been argued that the power of the Jewish lobby in US politics was influential for the US foreign policy in the region. Despite some differences among the policies of the US Presidents towards the Israeli-Palestinian conflict, close relations between the US and Israel, and the primacy of Israel’s security remained as crucial factors in the US foreign policy agenda. For instance, the rocky relations between Obama and Netanyahu did not lead to radical shifts in traditional US foreign policy. However, the policies of the Trump administration went beyond the traditional US policy, and President Trump did not avoid taking bold steps in favor of Israel. Donald Trump aimed to put his promises during the election campaign into practice in that sense. This study will analyze the US foreign policy on the Israeli-Palestinian conflict during the Trump period and highlight to what extent it differed from the traditional US

foreign policy. The issue will be evaluated by taking into account the shifts in regional and international politics.

The negotiation process for the Israeli-Palestinian conflict started with the Camp David Accords with the participation of Egyptian and Israeli Presidents as well as the US President Jimmy Carter and it produced the first concrete result with the Egyptian-Israeli Peace Treaty in 1979. The peace attempts gained momentum with the secret negotiations in Oslo and the following Oslo process. In that period, mutual recognition of both sides and the Declaration of Principles increased expectations toward the settlement of the conflict. US President Bill Clinton pursued an active mediation policy to reach a comprehensive settlement of the conflict by encouraging the Israeli and Palestinian actors. The bilateral negotiations under the mediation of the US continued until the end of Clinton's second term but the Camp David Summit in 2000 could not produce the expected outcome in that regard. Clinton declared his basic parameters for the issue before the summit and left "the Clinton Parameters" as the legacy of his Presidency. His successor, President George W. Bush, seemed unwilling to active participation in the regional affairs in the Middle East and adopted a hands-off approach at the beginning of his term. However, September 11 attacks against the US led to a radical transformation in the US foreign policy towards the region. President Bush declared a global war on terror and this foreign policy shift led to operations of the US against Afghanistan and the Saddam regime in Iraq in the next years. The operation against Iraq increased instability in the Middle East. There were also important developments about the Israeli-Palestinian conflict during the Bush period. The Middle East Quartet was established in 2002 with the participation of the US, Russia, the UN, and the EU to "mediate Middle East peace negotiations and to support Palestinian economic development and institution-building in preparation for eventual statehood".<sup>1</sup> Despite the rising expectations depending on the possible contribution of the global powers and international institutions, the Roadmap declared by the Middle East Quartet could not lead to further improvements about the conflict. Bush was the first US President who openly declared the need and his support for a future Palestinian state ("Full Text of George Bush's Speech", 2002, para. 2); however, he did not prefer to pursue an active policy about the settlement of the conflict. As a result, September 11 attacks created a transformation in the US foreign policy and led to significant developments in the Middle East but the Bush period in the US did not lead to crucial improvements in the Israeli-Palestinian conflict.

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<sup>1</sup> "Middle East Quartet," The Office of the United Nations Special Coordinator for the Middle East Peace Process (UNSCO), available from <https://unsco.unmissions.org/mideast-quartet>

The election of Obama as the US President increased expectations not only for Americans but also for the Middle Eastern people. Obama's famous Cairo speech in 2009 was a great starting point for his term and it supported the first optimistic atmosphere (The White House, 2009). Despite this good start at the rhetorical level, the Obama administration could not put the promises into practice, particularly for Middle Eastern societies. The US under the leadership of Obama did not adopt the expected stance against the dictatorship regimes during the Arab Uprisings. The interests-based approach of the Obama administration created disappointments in some Middle Eastern societies and blocked the evolution of the process in favor of the democratization of the region (at least in some countries). In terms of the Israeli-Palestinian conflict, it was expected to see a genuine contribution of the new US administration to the negotiation process but Obama's attempts could not meet those expectations until the end of his period either. As an essential difference for the Obama period, the US-Israeli relations were not as good as before due to the problems and cooler relations between Obama and Netanyahu compared to the former periods. However, it should be noted that apparent problems and divergences between Obama and Netanyahu, the US did not refrain from supporting Israeli interests and the importance of Israeli security in the international arena. This situation proves the primacy of long-term strategic goals in foreign policy compared to personal relations or clash of some political choices. The representatives of the US supported the Israeli position in the UN sessions in that period as well. In one exceptional case, which was seen as a "last-minute message" from Obama, the US preferred to abstain from the UN Security Council vote and the resolution 2334 which called the Israeli settlements as "having no legal validity and violating international law" was adopted.<sup>2</sup> It should be underlined that the US abstention reflected the problematic relations between Obama and Netanyahu and it was a partial deviation from the US stance against anti-Israeli resolutions but the resolution was not legally binding; therefore, it cannot be regarded as a radical shift for the traditional US policy in favor of Israel. In other words, even the rocky relations between Obama and Netanyahu could not produce radical and concrete changes in the US foreign policy regarding the Israeli-Palestinian conflict except for a last-minute warning for the Netanyahu government. Consequently, increasing expectations parallel to the election of Obama in the US and changing regional context in the Middle

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<sup>2</sup> Security Council Resolution 2334, *Cessation of Israeli Settlement Activities in the Occupied Palestinian Territory, including East Jerusalem*, S/RES/2334 (Dec. 23, 2016), available from <https://digitallibrary.un.org/record/853446?ln=en>

East after the eruption of the Arab Uprisings did not lead to the expected outcomes about the Israeli-Palestinian conflict.

The emergence of the Arab Uprisings initially created a favorable regional context for Palestinians due to the rising power and influence of the Muslim Brotherhood in the region. In addition to the favorable regional context, the stalemate in the bilateral negotiations led to a tactical change on the Palestinian side. The Palestinian leader, Mahmoud Abbas, applied to the UN for full membership.<sup>3</sup> The Palestinian application was not put to a vote in the UN Security Council and the US declared its rejection of all kinds of unilateral initiatives of the Palestinians. As a result of the following attempt at the UN, the status of Palestine was enhanced to a non-member observer state by the General Assembly in 2012.<sup>4</sup> However, a Security Council resolution setting a time frame for settlement of the conflict and Palestinian statehood could not get the minimum nine votes in 2014 (“UN Security Council action”, 2014: para. 1). Before the US abstention at the very end of the Obama period, the US voted against the resolutions and maintained its traditional pro-Israel policy in that sense. Thus, the attempts at the UN could only contribute to limited improvements in favor of the Palestinians. The reverse wave of change in the Middle East after the initial phase of the Arab Uprisings created unfavorable results for the Palestinians as well. Donald Trump’s Presidency in the US created a new dynamic in favor of Israel and Trump’s policies even went beyond the traditional US foreign policy towards the Israeli-Palestinian conflict.

## **2. The US Foreign Policy in the Trump Period**

Donald Trump’s Presidency in the US created a window of opportunity for the Netanyahu government after the relatively worsening US-Israeli relations during the Obama period. During the election campaign and in the elections, Donald Trump could get the support of the Evangelical groups in the US. Moreover, he appointed some Evangelical members to the Cabinet positions. Due to the converging interests with Israel and the need for maintaining the support of Evangelical groups in addition to the impact of the Jewish lobby, the Trump administration was inclined to pursue a foreign policy in favor of Israel in the Middle East. Trump, himself, made bold claims about the issue during the election campaign. Jared Kushner, Trump’s son-in-law, worked as an advisor in the Trump administration. Kushner played an important role in the preparation

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<sup>3</sup> “Application of Palestine for Admission to Membership in the United Nations”, available from <https://digitallibrary.un.org/record/711167?ln=en>

<sup>4</sup>UN General Assembly Plenary, *General Assembly Votes Overwhelmingly to Accord Palestine “Non-Member Observer State” Status in the United Nations*. GA/11317, (Nov. 29, 2012), available from <https://www.un.org/press/en/2012/ga11317.doc.htm>

process of the peace plan, called the “Deal of the Century”. Trump appointed Kushner as a chief advisor “to oversee the US’s policy on Israel and Palestine” despite his lack of experience in the Middle East diplomacy (McGreal, 2020: para. 7). After Trump came to power in the White House, Trump administration began to put their policies into practice step by step. The US declaration of Jerusalem as the capital of Israel in December 2017 became the first critical action in the US foreign policy regarding the Israeli-Palestinian conflict in the Trump period. It was not only against the status quo in the region but also against the traditional US foreign policy towards the Middle East. The US decided to move its embassy to Jerusalem as a result of that decision. However, this decision could not get support from other actors including the US allies and the European states. On the contrary, the extraordinary meeting of the Organization of Islamic Cooperation (OIC) and the resolution adopted by the UN General Assembly<sup>5</sup> reflected a huge reaction against Trump’s decision. The members of the OIC declared East Jerusalem as the “Palestinian capital” and they rejected the last decision of the Trump administration (“OIC declares”, 2017: para. 1). More importantly, the decision of the Trump administration was considered against the former UN resolutions and the principle of the two-state solution so the leading European states and other regional and global powers did not support the US policy. As a result, the number of states declaring their support or moving their embassies to Jerusalem remained very limited.

Despite the criticisms against the Trump administration in the international arena, Trump did not avoid taking bold steps in favor of Israel. The Trump administration decided to end aid to UN Relief and Works Agency (UNRWA) supporting the Palestinian refugees by 2018 (DeYoung, Eglash and Balousha, 2018: para. 1). In March 2019, the US recognized Israel’s annexation of the Golan Heights (Holland and Mason, 2019: para. 1). This attempt also created a reaction from Syria and other regional and international actors. It can be claimed that the two-state solution was the main principle agreed upon by all the actors in the conflict but Trump’s policies also clashed with the principles adopted in the former negotiations. Recognizing the Israeli settlements, which were called “illegal” in the UN resolutions in the previous periods, in the West Bank as Israeli territory was the next step for legitimizing the de facto Israeli control on the ground and it took part in Trump’s peace plan, “Deal of the Century”. This last move was described as “putting the finishing touches on a house that American lawmakers, Republican and Democrat alike, spent dozen of years helping to build” rather than a break from the past (Thrall, 2020: para.

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<sup>5</sup> General Assembly Resolution ES-10/19, *Status of Jerusalem*, A/RES/ES-10/19 (Dec. 21, 2017), available from <https://digitallibrary.un.org/record/1468436?ln=en>



8). In other words, the peace plan of the Trump administration reflected continuity in the US foreign policy towards the Israeli-Palestinian conflict instead of a historic breakthrough. Netanyahu called Trump “the greatest friend that Israel has ever had in the White House” during the declaration of the peace plan (“Full Text of Netanyahu’s Speech”, 2020: para. 17). This expression gives clues about the conditions in the plan in favor of Israel. The timing of releasing the peace plan was also debated because of the impeachment trial of Trump in the US as well as the difficulties of Netanyahu government in the national elections depending on bribery and fraud claims against him (Heller and Lee, 2020: para. 11). It was also claimed to be “a way of distraction through foreign policy” to get some relief from the trouble in the domestic politics and “a PR campaign” rather than a peace plan (Boot, 2020: para. 2). Consequently, the peace proposal was the last ring of the chain as a part of a long-term strategy in the Trump period rather than an individual attempt so that it should be analyzed in relation with other policies starting with Trump’s election.

### **2.1 Is It Really the “Deal of The Century”?**

The “Deal of the Century” plan, which is officially named “Peace to Prosperity: A Vision to Improve the Lives of Palestinian and Israeli People”, was proposed by the Trump administration for the resolution of the conflict. First of all, any kind of deal leading to a comprehensive settlement of the Israeli-Palestinian conflict based on the consent of two sides deserves to be titled as “deal of the century” because of the central and historical importance of the Israeli-Palestinian conflict not only for the Middle Eastern societies but also for many people living in other parts of the world and affiliated with different religions, ethnic backgrounds, and political orientations. This deal may preferably be a result of bilateral negotiations so that it more or less reflects the claims and political considerations of both sides and it can be accepted by the domestic representative bodies as the other part of the Israeli-Palestinian conflict. However, the stalemate in the former negotiations and negotiation strategies leading to deadlock have already proved the difficulty of that option. Therefore, a unilateral plan or initiative can also be regarded as another option for resolving the conflict as long as it is recognized and confirmed by the other side. For example, the Arab Peace Initiative in 2002 was an important proposal prepared by the Arab states and offered Israel normalization of Arab-Israeli relations in exchange for the full withdrawal of the Israeli forces and establishment of an independent Palestinian state with East Jerusalem as its capital. Since Israel did not respond positively and it was not strengthened by further steps through negotiations, the proposal could not turn into a “deal”. The

peace plan of the Trump administration should also be evaluated from that perspective. Put differently, the so-called “Deal of the Century” is not a “deal” for now because a deal requires the consent of both sides but the Palestinian side rejected it. The Palestinians did not participate in the negotiations for the peace plan; obviously, this attitude increased the possibility of rejecting the proposal by the Palestinians. The Palestinian Authority not only rejected the peace plan but also declared to cut its ties with the US and Israel (Fahmy and Laessing, 2020: para. 1). The Palestinians, including the Palestinian Authority and Hamas, showed their dismissal through the declarations of the spokespeople and the protests of the people (Sawafta and al-Mughrabi, 2020: para. 1-2). From their point of view, the territories assigned to the Palestinians in the peace plan constituted “15 percent of the historic Palestine” and the Palestinian leader expressed their stance by saying that “Jerusalem and our rights are not for sale” (“Trump Middle East Plan”, 2020: para. 4). There were minor points in favor of Palestine like “minimum four-year freeze in Israeli settlement construction” (“Trump Reveals Israeli-Palestinian Peace Plan”, 2020: para. 6) but the most important points were in favor of Israel so that the Palestinians did not hesitate to reject the plan. In this part, I will analyze the details of the peace plan of the Trump administration and its implications for the next period.

## **2.2 Economic and Political Conditions of the Peace Plan**

Trump’s peace plan, “Deal of the Century”, included economic and political points to reach a comprehensive solution. The exclusion of the Palestinian actors from the preparation process led to conditions very much favorable for Israel. Nevertheless, the Trump administration aimed to increase the support base for the plan among the leaders of other Arab states such as Saudi Arabia, Egypt, and the United Arab Emirates. Three Gulf states, Oman, Bahrain, and the United Arab Emirates, attended the press conference in which the peace plan was released (Fahmy and Laessing, 2020: “Palestinian Rights”, para. 6). Their involvement in the process showed the disagreements of the Arab states even on the Palestinian issue. It was one of the striking aspects of the new peace proposal. Tamimi points out the key role of the support of the Arab states (Saudi Arabia, UAE, and Egypt), as well as the radical transformation in the Middle East starting with the “counter-revolution” in Egypt in 2013 (Tamimi, 2018: 71). The economic and political parts of the plan, have been released in different periods. The economic part was declared in June 2019 while the political part was released in January 2020 after a certain preparation process. A Saudi diplomat asserted the economic part of the plan as an opportunity and he addressed the package of 50 billion dollars which would be used for the

Palestinian people under the framework of the peace plan (“Saudi Official Says”, 2019: para. 6). The Palestinian leader, Mahmoud Abbas, and the Hamas chief Ismail Haniyeh convened in a meeting showing their common reaction against the plan and they mentioned the Manama Conference, in which the economic part of the plan was released in June 2019, as an attempt “to finish off the Palestinian cause under the cover of economic and financial benefits” (Spetalnick, 2019: para. 7). The peace plan rejected East Jerusalem as the capital of Palestine; instead, it proposed a Palestinian capital far from the city of Jerusalem. Interestingly, the Israeli settlers in the West Bank also rejected the plan because of their feelings of threat and security concerns from a future Palestinian state (Kershner, 2020: para. 4; Magid, 2020: para. 3). According to the plan, the US would recognize the Israeli sovereignty over the West Bank territories on which the Israeli settlements located and the Jordan Valley. The Israeli leader, Netanyahu, expressed their demand for immediate annexation of the Jordan Valley and the West Bank territories while declaring the peace plan. Netanyahu’s demand for immediate annexation resulted from his critical position in domestic politics depending on the corruption charges against him and the forthcoming elections. Although the US ambassador to Israel, David Friedman, said that there was “no need to wait to annex settlements” (“Ambassador Friedman”, 2020: para. 1), the Trump administration did not support the immediate annexation before the establishment of a committee on the issue and preparing the background (Verter, 2020: para. 11).

In terms of the Palestinian state proposed by Trump’s peace plan, it was far from satisfying the demands of the Palestinians even though it was called as the most important concession of Israel in that sense. The peace plan included very few characteristics attributed to the concept of state and it has nothing to do with the implementation of the right to self-determination. It was, rightly, called an attempt for “creating a discontinuous Palestinian archipelago state, surrounded by a sea of Israeli territory” (Thrall, 2020, para. 1). Because of the existence of many crucial limitations, it was called that “the creation of a state of Palestine devoid of any effective sovereignty” (Dubuisson, 2020: “The creation of a State of Palestine”). These limitations included the entry to the Palestinian territory through Israeli control posts, the control of the Palestinian airspace by Israel due to security concerns, and other security guarantees for the State of Israel. The entity depicted by the peace plan as a Palestinian state cannot be considered as an independent and sovereign state demanded by the Palestinians and this proposal was far from a genuine two-state solution. On the contrary, it meant to validate the Israeli claims in terms of the status of Jerusalem, the status of the Israeli settlements in the West Bank, territorial

debates, and the rights of the Palestinian refugees. Therefore, it was considered non-negotiable by the Palestinian actors. It was even claimed that the Trump administration aimed to “provide ideological grounds for the Israeli occupation” and intentionally proposed impossible conditions to the Palestinians (Bar’el, 2020: para. 1).

The UN’s special coordinator for the Middle East, Nickolay Mladenov, underlined the fact that “There is no Middle East peace process” (“Nickolay Mladenov”, 2020: para. 8). He implied the lack of political will on both sides to make new genuine attempts for a comprehensive solution. In sum, the changes in the regional context as the dynamic factor on the ground compared to other variables played a decisive role in the evolution of the Israeli-Palestinian conflict in the last decade. While the initial period of the Arab Uprisings created a window of opportunity for the Palestinians and they preferred to internationalize the issue by making an application to the UN, the following developments led to more favorable conditions for Israel and Israel and its allies aimed to turn this advantage into a permanent gain through a peace plan called Deal of the Century. Therefore, the changes on the ground determine the policies of the actors and the preferences and policies of the actors reflect the dynamics of the conflict. According to the results of the 2020 Presidential Elections in the US, Joe Biden will replace Donald Trump in the White House. Therefore, the policies of the Biden administration may also change the US foreign policy towards the Israeli-Palestinian conflict. It is not expected to see a radical shift during the Biden period in terms of adopting a pro-Israel stance about the conflict but the Biden administration will be more likely to use multilateral channels and international institutions instead of unilateral attempts used by Trump. Furthermore, regional alliances may also be reshaped in the next period and the US policies may lead to some tactical changes in the plans towards the Middle East. Put differently, the Biden administration may offer a “redeal” to the regional actors rather than maintaining the former policy based on Deal of the Century. As a result, the developments in the US domestic politics and the Middle Eastern context will not only affect the destiny of Trump’s peace plan but are also likely to change the relations between the US and the regional actors.

### **3. Conclusion**

The US foreign policy during the Trump period towards the Middle East, in general, and the Israeli-Palestinian conflict, in particular, reflected some deviations from the traditional US policy while maintaining the priorities and long-term strategies at the same time. Supporting Israel in the international

platforms, keeping close US-Israeli relations, and prioritizing the regional stability and security of Israel in the Middle East can be regarded as prime examples of continuity in that period. On the other hand, the Trump administration did not refrain from taking bold steps such as recognizing Jerusalem as the capital of Israel, moving the US embassy to Jerusalem, and recognizing Israel's annexation of the Golan Heights. Trump's peace plan, called Deal of the Century, became the last ring of the chain and aimed to reach a comprehensive settlement of the conflict with the help of regional allies. The conditions included in the peace plan mostly reflected the Israeli demands because of the close US-Israeli relations and the increasing amount of regional support for Trump's plan. Whereas the initial phase of the Arab Uprisings provided an opportunity for Palestinians in terms of seeking international support at the UN for their claims, the reverse wave of changes starting with the military intervention in Egypt led to a more favorable regional context for Israel and its allies. This regional context and the unconditional support of the Trump administration brought the peace proposal to the table. Due to the political and economic conditions mentioned in the peace plan, Palestinians considered it a non-negotiable plan and they strongly rejected it. Therefore, the peace plan could not turn into a deal until the end of the Trump period. Although the regional context and alliances have not changed radically in the last months, the results of the US elections may lead to tactical changes or policy preferences in the US foreign policy. The historical background of the Israeli-Palestinian conflict has already proved the difficulty of reaching a comprehensive settlement of the conflict. However, the role of external actors and the support of the great powers will certainly be as important as the political will on both sides. Consequently, the US will remain to be one of the prominent actors for the Israeli-Palestinian conflict in any case. Its preferences and policies will be an important part of the solution or problem in the next period.

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## **Chapter 3**

# **Testing Purchasing Power Parity Hypothesis for Türkiye with Wavelet Unit Root Test Perspective**

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## **1-Introduction and Literature Review**

The purchasing power parity (PPP) hypothesis is a hypothesis that states how the exchange rate is determined based on the law of one price, which means that the price of the same good in two countries will be the same when prices are expressed in the same currency, in the absence of transport and transaction costs. According to this hypothesis, the exchange rate between two currencies is determined by the change in the relative price levels of the two countries at any time. This hypothesis, which assumes that the nominal exchange rate between the two countries' currencies is to be adjusted according to the changes in the countries' price levels without changing the real exchange rate, has been one of the most studied hypotheses in the field of international macroeconomics.

It is generally accepted that the PPP hypothesis cannot be valid in the short run due to transaction costs and trade restrictions (Tastan, 2005, p. 2037). According to this hypothesis, which implies that the exchange rates are adjusted according to the equilibrium values until the purchasing power difference between the countries disappears, the exchange rate between the two countries is a stationary process that changes according to the relative prices (Adiguzel, Sahbaz, Ozcan, & Nazlioglu, 2014, p. 177). In this respect, it can be said that unit root tests examining the stationarity of the series are one of the appropriate tools for testing this hypothesis.

In this study, testing the validity of the PPP hypothesis is limited to Türkiye. There is no consensus in the literature on whether the PPP hypothesis is valid for Türkiye due to the period examined, the frequency of the data set (quarterly, monthly, or yearly), the type of the data set (time series or panel data), and the differences in the methods used. The results of the studies, including Türkiye, are presented in Table 1, and the detailed literature is given below.

With cointegration analysis, Telatar and Kazdagli (1998) examined whether the PPP hypothesis is valid in the long run for Türkiye's four major trading partners (France, Germany, the UK, and the USA) covering the period 1980M10-1993M10. While it is expected that the PPP hypothesis will be valid in countries with high inflation, unlike the literature, they concluded that it is not valid in Türkiye for the high inflation period examined.

Sarno (2000) extended the period of Telatar and Kazdagli (1998) as 1980M01-1997M12 and re-examined the PPP hypothesis for the same country group with nonlinear (ESTAR) unit root tests. As a result of this test, the PPP hypothesis is valid for the period and countries examined.

Yazgan (2003), like Telatar and Kazdagli (1998), tested the stationarity of real exchange rates using quarterly (1982Q01-2001Q04) data for Türkiye's hy-

perinflation period with a multivariate cointegration test. In this study, which examined Germany and the USA, it was concluded that the PPP hypothesis is valid for the currencies of both countries.

On the other hand, Alba and Park (2005) tested the German mark real exchange rate for the 1973M01-2004M10 period with the ADF unit root test and the Caner and Hansen (2001) unit root test, which takes into account the nonlinearity. According to the ADF unit root test result, the PPP hypothesis is found to be invalid in Türkiye; In the unit root test of Caner and Hansen (2001), based on the TAR model, one threshold is found to be valid for one regime, but not for the other.

Kalyoncu (2009) analyzed the stationarity of real exchange rates for the USA, Germany, Japan, France, the Netherlands, and the UK using quarterly (1980Q1-2005Q4) data. In the study where classical unit root tests such as ADF, PP, and KPSS are used, it is concluded that the PPP hypothesis is not valid for ADF and PP, except for the UK. According to the KPSS test, it has been concluded that the real exchange rate series for all countries are stationary; that is, the PPP hypothesis is valid.

**Table 1: Literature Review**

<b>Paper</b>	<b>Period</b>	<b>Country/ Country Groups</b>	<b>Method(s)</b>	<b>PPP Hypothesis: Val- id/Invalid</b>
Telatar and Kazdagli (1998)	1980M10-1993M10	France, Germany, the UK, and the USA	ADF, PP, Cointegration	Invalid for all countries.
Sarno (2000)	1980M01-1997M12	France, Germany, the UK, and the USA	DF, ESTAR	Valid for all countries.
Yazgan (2003)	1982Q01-2001Q04	Germany and the USA	ADF, Multi-variable Cointegration	Valid for all countries.
Alba and Park (2005)	1973M01-2004M10	Germany	ADF, Caner and Hansen (2001) Unit Root Test	Valid for one regime, invalid for another.
Kalyoncu (2009)	1980Q01-2005Q04	The USA, Germany, Japan, France, Netherlands, and the UK	ADF, PP, KPSS	Invalid except for the UK for PP with ADF unit root tests. It is valid for all countries according to the KPSS test.

Guloglu, Ispir, and Okat (2011)	1991M01-2008M03	Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Italy, Japan, Netherlands, Norway, Saudi Arabia, Spain, Sweden, Switzerland, the UK, and the USA	Panel KPSS Unit Root Test	Valid for all countries.
Gözgör (2011)	2003M01-2010M12	Switzerland, Eurozone, the UK, Iran, China, Romania, Russia, and the USA	Panel Unit Root Tests (Maddala and Wu (1999), Breitung (2000), Hadri (2000), Choi (2001), Levin et al. (2002) and Im et al. (2003))	According to the tests except for Hadri (2000) unit root test, it is valid for all countries.
Adiguzel et al. (2014)	2002M01-2012M05	Eurozone, Denmark, Norway, Sweden, Switzerland, and the UK	Ucar and Omay (2009) Panel Unit Root Test	Valid for Eurozone, Denmark, Norway, Sweden, Switzerland, and the UK; invalid for other countries.
Yıldırım (2017)	2001M03-2015M10	European Union, Russia, China, and the USA	Kapetanios et al. (2003), Kruse (2011) and Kılıç (2011) Unit Root Test	Invalid for all countries, according to Kapetanios et al. (2003) and Kruse (2011). For Kılıç (2011), it is valid for all countries.
Nazlioglu and Karul (2017)	2002M01-2016M12	Canada, Denmark, Eurozone, Japan, Norway, Saudi Arabia, Sweden, Switzerland, the UK, and the USA	Fourier Panel LM Unit Root Test	Invalid for all countries.
Bahmani-Oskooee and Wu (2018)	1994M01-2016M03	34 OECD Countries	Quantile-based unit root tests with both smooth and sharp breaks	Valid for Türkiye.
Li and Park (2018)	1994M01-2015M06	61 Countries	ADF, KSS, Nonlinear Quantile Unit Root Tests	Valid for Türkiye.

Doğanlar, Kızılkaya, and Mike (2020)	2002M01-2018M10	China, Eurozone, Russia, the UK, and the USA	ADF, PP, KPSS, Fourier ADF, Fourier KSS, Fourier KPSS, Fourier Quantile Unit Root Tests	Valid for all countries according to the Fourier quantile unit root test.
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Guloglu et al. (2011) examined the validity of PPP for Türkiye's 18 trading partners and the period 1991M01-2008M03. It has been examined with the panel KPSS unit root test, which considers multiple breaks, and unit root tests that consider multiple breaks and cross-section dependence. As a result of the tests, it is concluded that the PPP hypothesis is valid.

Gözüör (2011) analyzed the period 2003M01-2010M12 for eight trading partners of Türkiye with homogeneous and heterogeneous panel unit root tests. Except for Hadri (2000) panel unit root test, which assumes cross-section independence under the homogeneity assumption, it is found that the PPP hypothesis is valid.

Adiguzel et al. (2014) tested the validity of the PPP hypothesis for ten trading partners of Türkiye with the data of the 2002M01-2012M05 period with panel unit root tests (considering nonlinearity, structural breaks in smooth structure, and cross-section dependency). As a result of the test, it is concluded that the PPP hypothesis is valid for the Eurozone, Denmark, Norway, Sweden, Switzerland, and the UK. On the other hand, the PPP hypothesis is not valid for Canada, Japan, Saudi Arabia, and the USA.

Yıldırım (2017) tested the stationarity of the real exchange rate with the nonlinear unit root tests of Kapetanios, Shin, and Snell (2003), Kruse (2011), and Kılıç (2011). Kapetanios et al. (2003) and Kruse (2011) tests concluded that the PPP hypothesis is not valid in the study, in which the four major trading partners of Türkiye, the European Union, Russia, China, and the USA, are examined for the period 2001M03-2015M10; Kılıç (2011) concluded that the PPP hypothesis is valid.

Another study investigating the PPP hypothesis based on panel data is Nazlıoğlu and Karul (2017). The PPP hypothesis for Türkiye and ten trading partners (Canada, Denmark, Eurozone, Japan, Norway, Saudi Arabia, Sweden, Switzerland, the UK, and the USA) is tested with the Fourier LM type panel unit root test using the data for the period 2002M01-2016M12. As a result of the testing, they concluded that the PPP hypothesis is invalid.

As different time series and panel data methods are developed, the PPP hypothesis is retested with these new tools. One of these tools is quantile unit root

tests. Bahmani-Oskooee and Wu (2018) tested the stationarity of the real exchange rate for 34 OECD countries with the quantile unit root test in which smooth and sharp breaks are modeled. The study showed that the PPP hypothesis is valid for Türkiye for the period 1994M01-2016M03.

Li and Park (2018) tested the stationarity of the real effective exchange rates of 61 countries for the period 1994M01-2015M06 with the nonlinear quantile unit root test, which is the quantile version of the KSS unit root test. As a result, they stated that the PPP is valid for Türkiye in the examined period.

The validity of the PPP hypothesis is examined with the quantile unit root test by Doğanlar et al. (2020) with monthly data for the period 2002M01-2018M10. In this study, in which the stationarity of the real exchange rate is tested for Türkiye's five trading partners (China, Eurozone, Russia, the UK, and the USA), it is concluded that the PPP hypothesis was valid for all countries.

## 2. Methodology

Unit root tests are used to test the shocks to the variables are permanent or not, in other words, whether it tends to return to the mean. In the unit root literature, which started with Dickey and Fuller (1979), the search for unit root tests with better power and size properties continues. Most of the tests have been developed for the time domain. In these tests, the frequency domain information is ignored. A wavelet is a small wave that grows and decays within a limited period (Fan & Gençay, 2010, p. 1308). Wavelets contain both time and frequency information.

Fan and Gençay (2010) is the first study to propose a formal unit root test using wavelets. In the first step, the proposed unit root test uses the discrete wavelet transform to decompose the series variance from low and high-frequency components. The test statistic is calculated in the second step by dividing the low-frequency components' variance by the series' variance. In this respect, it can be said that the test is a wavelet-adapted version of the von Neumann (VN) variance ratio test.

For the time series  $y_t$  of length  $T$ ,  $T$  should be even to obtain wavelet coefficients ( $W_{t,1}$ ) that capture the high-frequency behavior of the series and the scaling coefficients ( $V_{t,1}$ ) which capture the low-frequency oscillations with the Haar discrete wavelet transform. The variance, defined as the total energy of the  $y_t$  series is equal to the sum of the wavelet and scaling coefficients. The equations for calculating the wavelet and scaling coefficients are expressed in (1) and (2).



$$W_{t,1} = \frac{1}{\sqrt{2}}(y_{2t} - y_{2t-1}) \quad , t = 1, 2, \dots, T/2. \quad (1)$$

$$V_{t,1} = \frac{1}{\sqrt{2}}(y_{2t} + y_{2t-1}) \quad , t = 1, 2, \dots, T/2. \quad (2)$$

The data generation process of the proposed test is described in (3).

$$\begin{aligned} y_t &= \mu + \alpha t + y_t^s \\ y_t^s &= \rho y_{t-1} + u_t \end{aligned} \quad (3)$$

Test statistics for demeaned and detrended series are calculated as in (4) and (5) to show  $H_0: \rho = 1$  unit root and  $H_A: \rho < 1$  stationarity.

$$\hat{s}_{T,1}^{LM} = \frac{\sum_{t=1}^{T/2} (V_{t,1}^M)^2}{\sum_{t=1}^T (y_t - \bar{y})^2} \quad (4)$$

$$\hat{s}_{T,1}^{Ld} = \frac{\sum_{t=1}^{T/2} (V_{t,1}^d)^2}{\sum_{t=1}^T (\tilde{y}_t - \bar{\tilde{y}})^2} \quad (5)$$

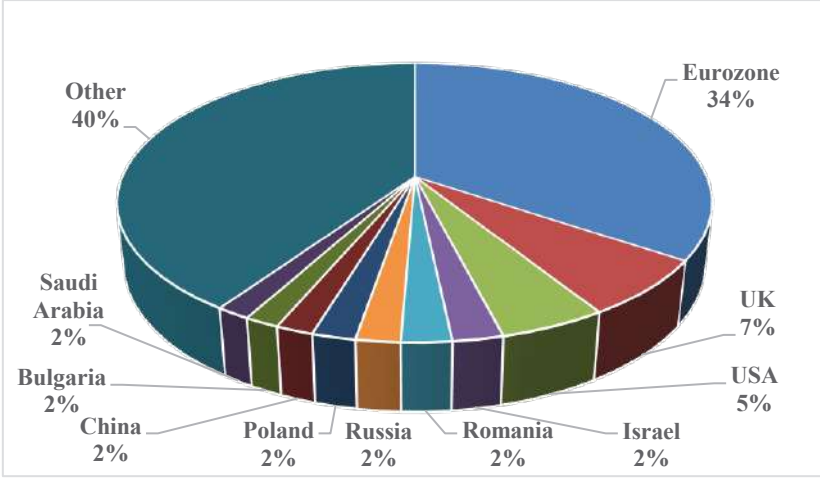
$\bar{y} = T^{-1} \sum_{t=1}^T y_t$  shows the sample mean, and demeaned series is calculated as  $y_t - \bar{y}$ .  $\tilde{y}_t = \sum_{j=1}^t (\Delta y_j - \bar{\Delta y})$  and  $\bar{\tilde{y}}$  shows sample mean of  $\tilde{y}_t$ . Detrended series calculated as  $\tilde{y}_t - \bar{\tilde{y}}$ . In expression  $\Delta y_t = y_t - y_{t-1}$  and  $\bar{\Delta y}$  sample mean of  $\Delta y_t$ .

### 3. Dataset and Descriptive Statistics

In this study, the validity of the PPP hypothesis for the top ten trading partners of Türkiye in 2018 (59.64% of total exports) with the monthly data for the pre-Covid-19 period 2002M01-2018M12 is examined. Countries included in the analysis Eurozone (*Euro*), the UK (*Pound*), the USA (*Dollar*), Israel (*New Shekel*), Romania (*Romanian Leu*), Russia (*Ruble*), Poland (*Zloty*), China (*Yuan*), Bulgaria (*Leva*) and Saudi Arabia (*Riyal*) with their shares in 2018 total exports are presented in Graph 1. export shares have been obtained from Turk-Stat. Despite being in the top ten, Iraq, the United Arab Emirates, and Egypt cannot be included in the study due to missing data.

The nominal exchange rates for the countries are obtained from the IMF as the dollar rate based on the period average. In the next step, the Turkish lira equivalents of all nominal exchange rates are calculated over the cross-exchange rate. Similarly, the Consumer Price Indices (CPI) required for the calculation of the real exchange rate are obtained from the IMF for nine countries (2010=100); The CPI for the Eurozone is taken from OECD.stat.

**Graph 1: Export Shares as of 2018**



The real exchange rate (RER) required for testing the PPP hypothesis is calculated in Equation (6).

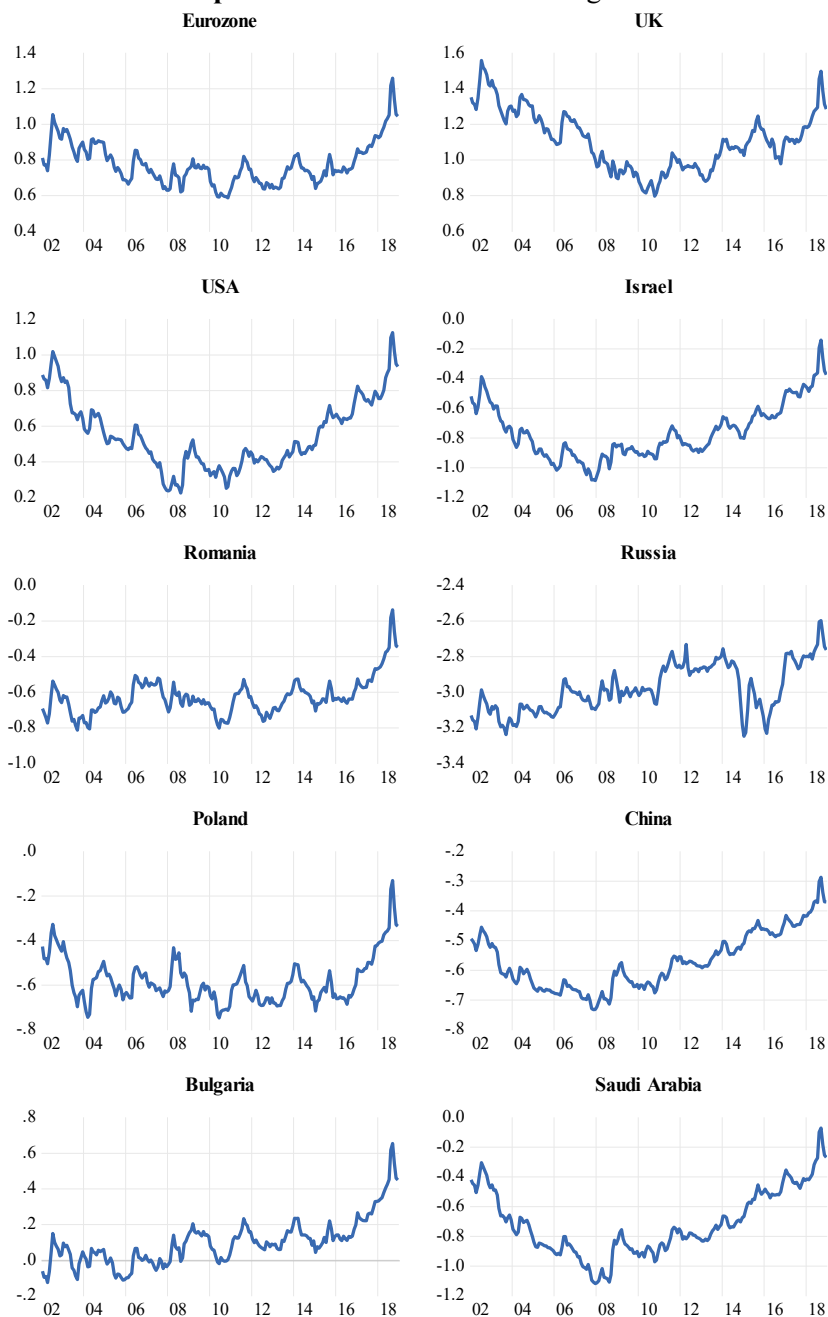
$$q = e + p^* - p \quad (6)$$

While  $q$  in (6) shows the logarithmic real exchange rate;  $e$  is the logarithmic nominal exchange rate between Türkiye and the relevant country,  $p^*$  is the logarithmic CPI of the relevant country, and  $p$  is the logarithmic CPI of Türkiye.

Descriptive statistics for real exchange rates are presented in Table 2. When Table 2 is examined, the maximum value of the real exchange rate average is in the UK, with 1.110; the minimum value is -2.980 in Russia. In terms of standard deviation, which is a measure of the volatility of the data set, the country with the lowest standard deviation is China. It is seen that the country with the highest standard deviation is Saudi Arabia. When evaluated in terms of kurtosis, it is seen that the kurtosis coefficients of the Eurozone, Israel, Romania, Poland, and Bulgaria are above 3.

The results of the Jarque-Bera test are given in Table 2. While the null test hypothesis shows that the data set fits the normal distribution, the alternative hypothesis does not fit the normal distribution. When the results are examined, it is concluded that the RER series is not normally distributed for the Eurozone and nine countries according to the p-values of the Jarque-Bera test. Graph 2 shows the trend of the real exchange rate of the Eurozone and nine countries in the period of 2002M01-2018M12.

**Graph 2: Trend of the Real Exchange Rate**



**Table 2:** Descriptive Statistics\*

	Eurozone	UK	USA	Israel	Romania	Russia	Poland	China	Bulgaria	Saudi Arabia
<b>Mean</b>	0.779	1.110	0.551	-0.757	-0.627	-2.980	-0.579	-0.569	0.097	-0.714
<b>Median</b>	0.754	1.103	0.504	-0.799	-0.639	-2.996	-0.603	-0.585	0.084	-0.762
<b>Maximum</b>	1.259	1.558	1.126	-0.141	-0.138	-2.599	-0.130	-0.286	0.654	-0.071
<b>Minimum</b>	0.587	0.797	0.224	-1.086	-0.813	-3.248	-0.747	-0.733	-0.127	-1.118
<b>Std. Dev.</b>	0.118	0.166	0.196	0.184	0.103	0.136	0.104	0.096	0.130	0.220
<b>Skewness</b>	1.061	0.367	0.631	0.730	1.446	0.255	1.291	0.498	1.259	0.469
<b>Kurtosis</b>	4.580	2.491	2.728	3.123	7.153	2.307	5.218	2.489	5.852	2.579
<b>Jarque-Bera p-value</b>	59.473 <sup>a</sup> 0.000	6.788 <sup>b</sup> 0.034	14.157 <sup>a</sup> 0.001	18.254 <sup>a</sup> 0.000	217.662 <sup>a</sup> 0.000	6.295 <sup>b</sup> 0.043	98.514 <sup>a</sup> 0.000	10.644 <sup>a</sup> 0.005	123.038 <sup>a</sup> 0.000	8.980 <sup>a</sup> 0.011
<b>Period</b>	2002M01 2018M12	2002M01 2018M12	2002M01 2018M12	2002M01 2018M12	2002M01 2018M12	2002M01 2018M12	2002M01 2018M12	2002M01 2018M12	2002M01 2018M12	2002M01 2018M12
<b>N. Obs.</b>	204	204	204	204	204	204	204	204	204	204

\*a, b and c indicate 1%, 5%, and 10% significance.

#### 4. Empirical Results

The stationarity of the RER, and hence the validity of the PPP hypothesis, are evaluated with different types of unit root tests to compare the results. These different unit root tests are traditional (ADF, PP, and KPSS) and wavelet unit root tests based on the variance ratio.

Table 3 shows the results of traditional unit root tests based only on the time domain. The results seem consistent when the ADF, PP, and KPSS unit root tests are generally compared.

**Table 3:** Traditional Unit Root Test Results\*

Country:	ADF		PP		KPSS	
	C	C+T	C	C+T	C	C+T
Eurozone	-1.718 [2]	-1.676 [2]	-1.865 (5)	-1.820 (5)	0.362 <sup>b</sup> (10)	0.363 <sup>a</sup> (10)
UK	-1.673 [2]	-1.260 [2]	-1.897 (2)	-1.515 (3)	0.598 <sup>b</sup> (11)	0.410 <sup>a</sup> (11)
USA	-1.162 [2]	-1.280 [2]	-1.402 (2)	-1.370 (6)	0.432 <sup>c</sup> (11)	0.423 <sup>a</sup> (11)
Israel	-0.810 [2]	-1.898 [2]	-1.108 (5)	-1.972 (8)	0.690 <sup>b</sup> (11)	0.376 <sup>a</sup> (11)
Romania	-1.175 [2]	-2.344 [2]	-2.070 (2)	-2.705 (2)	0.616 <sup>b</sup> (10)	0.184 <sup>b</sup> (10)
Russia	-2.485 [2]	-3.483 <sup>b</sup> [2]	-2.046 (14)	-3.014 (12)	1.055 <sup>a</sup> (10)	0.098 (10)
Poland	-2.795 <sup>c</sup> [1]	-2.842 [1]	-2.493 (2)	-2.229 (0)	0.251 (10)	0.248 <sup>a</sup> (10)
China	-0.282 [2]	-2.144 [2]	-0.522 (5)	-2.271 (7)	1.063 <sup>a</sup> (11)	0.378 <sup>a</sup> (11)
Bulgaria	-2.035 [1]	-3.540 <sup>b</sup> [1]	-1.310 (6)	-2.966 (3)	1.341 <sup>a</sup> (10)	0.148 <sup>b</sup> (10)
Saudi Arabia	-0.736 [2]	-0.551 [2]	-0.968 (2)	-1.862 (6)	0.673 <sup>b</sup> (11)	0.401 <sup>a</sup> (11)

\*Values in square brackets indicate the number of lags determined by the Schwarz Information Criteria. The number of optimum lags was calculated with the formula  $12 * (T/100)^{1/4}$  suggested by Schwert (1989) and taken as 15. The values in parentheses represent the Newey-West bandwidth calculated using the Bartlett kernel estimator. a, b, and c indicate 1%, 5% and 10% significance. While the hypothesis for the KPSS test is "Stationarity," it is "There is a unit root" for other tests.

First, according to the ADF unit root test, in the only constant (C) model Poland's RER is stationary. For Russia, and Bulgaria, it is concluded that the unit root hypothesis can be rejected in the constant and trend (C+T) model. There-

fore, it can be said that the PPP hypothesis for the ADF test is valid only for Poland, Russia, and Bulgaria in these models.

According to the results of the PP test, only constant and constant with trend models show that the RER is not stationary for all cases. Therefore, the PPP hypothesis is invalid for the Eurozone and nine countries.

Finally, according to the KPSS unit root test, the PPP hypothesis seems valid for the only constant model for Poland and constant with trend model for Russia.

When the results of the traditional unit root tests are evaluated in general, it can be said that the PPP hypothesis is not valid for the period and countries examined according to the traditional unit root tests.

**Table 4: Wavelet Unit Root Test Results\***

Country:	Wavelet Unit Root Test	
	C	C+T
Eurozone	-67.207 <sup>a</sup>	-50.711 <sup>b</sup>
UK	-76.050 <sup>a</sup>	-81.310 <sup>a</sup>
USA	-25.356 <sup>c</sup>	-25.666
Israel	-16.340	-19.160
Romania	-58.550 <sup>a</sup>	-56.480 <sup>a</sup>
Russia	-543.624 <sup>a</sup>	-908.005 <sup>a</sup>
Poland	-36.080 <sup>b</sup>	-35.370 <sup>c</sup>
China	-35.723 <sup>b</sup>	-54.560 <sup>a</sup>
Bulgaria	-8.668	-14.170
Saudi Arabia	-11.040	-12.590

\*The bandwidth was calculated as 20 with the Haar wavelet. a, b and c indicate 1%, 5% and 10% significance.

In Table 4, the results of the wavelet unit root test based on the variance ratio are given. The null hypothesis of this test, developed by Fan and Gençay (2010), is "*There is a unit root*," while the alternative hypothesis is "*There is no unit root*." As mentioned, this test includes both time and frequency domain information, unlike traditional unit root tests, which only contain time domain information.

According to the wavelet unit root test results, the RER series contain unit root for both only constant and constant with trend models for Israel, Bulgaria, and Saudi Arabia. In this respect, it can be said that the PPP hypothesis is not valid for these countries in the period examined. It is concluded that the PPP hypothesis is valid for the Eurozone and other countries due to the stationarity

of the RER. Unlike other countries, the PPP hypothesis is valid for the only constant model for the USA.

Therefore, it can be said that serious changes are observed in the results with the addition of frequency domain information as well as time domain information to the test process. This is of great importance for policymakers to make the right decisions.

## **5. Conclusion**

In this study, the validity of the purchasing power parity (PPP) hypothesis is investigated for Turkey's major trading partners. For this purpose, the wavelet unit root test proposed by Fan and Gençay (2010) is used in addition to the traditional unit root tests. According to traditional unit root tests for the 2002M01-2018M12 period, most countries' real exchange rate (RER) series is not stationary. Therefore, the PPP hypothesis is not valid.

According to the wavelet unit root test, which includes both time and frequency information, the PPP hypothesis is valid for Israel, Bulgaria, and Saudi Arabia. For the USA, it is valid for constant with trend model. The RER tends to return to mean for the currencies of these three countries over time, and the shocks to these currencies are temporary.

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## **Chapter 4**

# **Political Ideology and Preference for Organic Products**

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## 1. Background

Political identities are becoming increasingly salient in everyday choices, including choices of products we buy. According to Edelman's 2021 Earned Brand Survey conducted across 14 countries with 14,000 participants (Edelman, 2021), more than half of consumers take into consideration whether the values reflected by the product, brand, or the manufacturing firm are aligned with their own values when purchasing a product. Nearly a quarter of consumers prefer to buy from brands that support their beliefs, and they are willing to pay more for those products. These findings reveal an ongoing trend: The same survey shows that 30 percent of consumers place more emphasis on brands than they did three years ago. This trend is also observed in actual purchase data (Schoenmueller et al., 2022).

Political consumerism can be broadly defined as consumer behavior guided by ethical, environmental, or political views of consumers. A match between the values a brand stands for and consumers' own views may promote brand preference, while a conflict may lead consumers to not buy, or boycott a brand. More specifically, political consumption practices may result from attitudes toward sustainability issues and reflect beliefs about the responsibilities of the various actors involved in the production and consumption of the product.

Political ideology is generally measured on a spectrum from liberal to conservative. In the United States, this demarcation corresponds to that between Democrats and Republicans, with Democrats tending toward liberal ideology and Republicans toward conservatism. Previous research has documented correlations between various personality traits and political orientation. Liberals are more open-minded, creative, curious, and inquisitive, whereas conservatives tend to be more orderly, conventional, and organized (Carney et al., 2008).

Conservatives generally prefer to maintain the status quo. For example, Chan and Ilicic (2019) show that conservatism is associated with stronger brand loyalty. Khan et al. (2013) find that consumers with a conservative ideology tend to prefer traditional, well-accepted brands and are less willing to try new products. Kim et al. (2018) hypothesize that conservatives are more sensitive to status maintenance due to a higher preference for social stability and use laboratory studies to show that they are more likely to purchase luxury products for status maintenance.

Due to stronger motivations to engage in "system justification," i.e., a tendency to view the existing state of affairs as legitimate and just, conservative consumers are less likely to complain or dispute (Jung et al., 2017). In contrast, liberals are more inclined to purchase and boycott consumer products for

political reasons (Jost et al., 2017). As another manifestation of conservatism's tendency for system justification, Ordabayeva and Fernandes (2018) show that consumers with conservative ideology believe that the existing hierarchy in the social structure is legitimate and when given the chance, they tend to choose vertically differentiated products that signal their higher position in this hierarchy, while liberals opt for horizontal differentiation by choosing products that are not necessarily of higher quality but otherwise unique.

Farmer et al. (2021) show that conservatives, because of their lower tolerance for ambiguity, tend to prefer utilitarian options that can be more easily supported by objective utilitarian justifications. In promoting recycling behavior, Kidwell et al. (2013) show that liberals are more likely to respond to messages based on fairness whereas with conservatives, messages emphasizing duty and obligation have a stronger effect.

Evidence suggests that congruence of brand messages with one's political views can influence charitable giving (Winterich et al., 2012) and even alter the subjective experience of the product. In laboratory studies, Tal et al. (2017) found that participants rated food products as less palatable if they were told that the manufacturing company supported the political party they opposed.

Regarding preference for organic products, previous research suggests that biospheric values, reflecting concern for the impact of consumption choices on the environment and animal welfare, are the main driver behind the intention to prefer organic products (Steg, Dreijerink, and Abrahamse, 2005; van Doorn and Verhoef, 2015).

Given conservatives' tendency toward system justification which implies adherence to existing hierarchies and the acceptance of inherent power structures as fair, this article proposes that consumers with a conservative ideology would give less priority to biospheric values that emphasize better treatment of nonhuman species and would therefore be less likely to prefer organic products. Accordingly, a positive relationship between having a liberal ideology and organic consumption is predicted. The remainder of the article presents empirical findings from actual purchase data, that support this hypothesis and examines demographic characteristics that predict a stronger role for ideology in organic product preference.

## **2. Empirical Analysis**

The empirical analysis employs data from the 2018 AC Nielsen Homescan panel that records item and shopping occasion-level grocery purchases from a total of 61269 households chosen via stratified sampling across 2668 county regions in the United States. The data includes the county of residence of panel

households and other demographic information including the age, education level and the yearly income of the household heads, and the size of the household. In addition, information about the characteristics of the items purchased is provided, including brand and product name, price, size in ounces, and whether the product is labeled "organic."

The analysis covers seven product groups where organic options account for relatively sizeable shares within the total category purchases. These are cereal, eggs, fresh meat, fresh produce, milk, pasta and yogurt. For each household, purchases over the year are totaled in each category, both overall and for organic purchases separately. These totals are used to obtain the share of organic product purchases in each category.

This data is matched with county-level data on presidential election voting percentages for the Democrat Party from the most recent election year, the 2016 election. As such, the vote percentage of Democrats in the household's county of residence is taken as a continuous measure of household's liberal leaning. To analyze the relationship between liberal political ideology on the propensity to consume organic the following regression equation model is employed:

$$organic\_share_{hc} = const + \beta_d democ_h + \beta_a age_h + \beta_u univ_h + \beta_i income_h + \beta_h hhsz_h + \varepsilon_{hc} \quad (1)$$

In the model, *organic\_share* denotes the share of organic purchases in product category *c* for household *h*. The right hand side of the equation includes *const*, the regression constant. The main independent variable of interest is *democ*, the percentage of Democrat votes in household *h*'s county.

The model controls for a set of key demographic characteristics. The age of the household head is represented by the variable *age*. When the household includes both a male and a female head as in the case of a married couple the age of the older head is taken into account. Household size is given by the variable *hhsz*. Education level is captured by the dummy variable *univ* which takes the value of 1 if either household head (i.e., male or the female) has a university degree. The variable *income* represents the total yearly income of the household.

The mean zero regression error term is denoted  $\varepsilon_{hc}$  and the model is estimated using ordinary least squares regression.

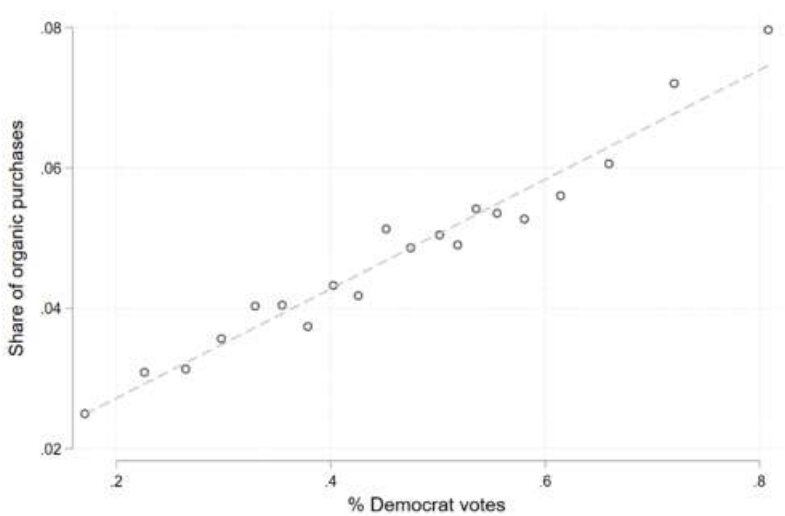
Table 1 presents the summary statistics of the variables used in the study. Across the product categories organic products account for 4.8% of households' total purchases on average. The share of Democrat votes for the counties households are sampled from is 46.2%.

**Table 1:** Summary statistics

	Mean	Std Dev.
\$ share of organic purchases	0.048	0.155
Age	55.853	12.708
Univ. graduate	0.559	0.497
Yearly income (in 1000\$)	62.340	29.295
Household size	2.486	1.330
Share of Democrat votes	0.462	0.161

Figure 1 shows a binned scatterplot of the relationship between the Democrat / liberal leaning and the propensity to buy organic.

**Figure 1:** Binned scatterplot analysis



The graph shows a steady, linear relationship between liberal ideology and organic consumption. Organic purchases are less than 4% among households from counties where the Democratic Party receives less than 30% of the vote. Organic consumption increases uniformly in regions where the Democratic vote share is higher, rising to as high as 8% in the most liberal-leaning regions where Democrats receive 80% of the vote.

This pattern is corroborated by the formal regression estimates in Table 2. Column 1 reports the coefficient of a univariate model with the share of the vote for Democrats as the only independent variable. The coefficient estimate suggests that the propensity to consume organic food increases by 0.78% when the proportion of liberal voters increases by 10%.

In Column 2, the demographic variables mentioned in Equation 1 are added as controls. The coefficient estimates for these control variables are consistent with findings from previous research (Guler, 2022). Age has a negative impact on the likelihood of consuming organic. A generational difference of twenty years translates into a 1.4% difference in the share of organic purchases. Considering that the mean organic consumption share is 4.8%, this is a considerable effect size. Additional members in a household would imply lower per capita disposable income and negatively affect the likelihood of choosing organic options, which are generally more expensive. The estimates are in agreement with this expectation and shows that organic consumption decreases as household size increases.

**Table 2:** Regression results

	(1)	(2)
% Democrat	0.0780*** (0.00156)	0.0637*** (0.00157)
Age		-0.000700*** (0.0000213)
Household size		-0.00366*** (0.000208)
Univ. graduate		0.0156*** (0.000541)
Income		0.000312*** (0.00000938)
No. obs.	377969	377969
R <sup>2</sup>	0.00660	0.0177

Standard errors in parentheses. Coefficient estimates from OLS models.

Data includes purchase records of 61269 households in seven product categories. \* p<0.10, \*\* p<0.05, \*\*\* p<0.01

Education and income also affect organic consumption positively. More affluent households and households with higher levels of education are more likely to purchase organic products. A university degree suggests a 1.56% increase in organic share, and a \$10 thousand increase in annual income is expected to increase the share of organic purchases by 0.3%.

Controlling for these demographic variables does not substantially change the coefficient estimate of the political ideology variable. In this richer model with controls, the extent of liberal leaning as captured by the share of



Democratic votes in the local county again has a significant effect on organic consumption. After controls, each 10% increase in liberal leaning is expected to increase the proportion of organic purchases by 0.63%.

## 2.1 Moderators of Political Consumerism

Copeland et al. (2020) conduct a meta-analysis to study the profile of consumers who are more likely to prioritize political considerations in their consumption decisions. Their results suggest that higher levels of education, interest in politics, skepticism of institutions, strong commitment to an ideology, and use of social media predict higher levels of political consumerism.

Table 3 provides estimates from a model that allows the effect of liberal leaning to vary by age, education and income levels. This model lays out the demographic moderators of political consumerism as manifested in the choice for organic consumption. The model that includes interaction terms with the political ideology variable and the demographic variables indicated above is written as follows:

$$\begin{aligned} organic\_share_{hc} = & const + \beta_d democ_h + \beta_{da} democ_h * age_h + \\ & \beta_{de} democ_h * univ_h + \beta_{di} democ_h * income_h + \beta_a age_h + \beta_e univ_h + \\ & \beta_i income_h + \beta_h hhsz_h + \varepsilon_{hc} \end{aligned} \quad (2)$$

According to the estimates in Table 3, younger age, a university degree, and higher income indicate a stronger effect of liberal attitude (% Democrats) on preference for organic consumption. The main effect of liberal leaning does not change significantly in this specification compared to the estimate from the main model reported in Table 1, while the main effects of age, education, and income decrease significantly. In particular, for education and income, the main effects are no longer statistically significant at the  $p=0.05$  level when interactions of these variables with political ideology are taken into account. Consequently, rather than being direct, the effects of income and education on organic preference appear to be largely mediated by political ideology.

**Table 3: Moderator analysis**

	(1)
% Democrat	0.0587*** (0.00818)
% Democrat x age	-0.000853*** (0.000123)
% Democrat x college	0.0277*** (0.00337)
% Democrat x income	0.000602*** (0.0000559)
Age	-0.000303*** (0.0000613)
Household size	-0.00349*** (0.000209)
Univ. graduate	0.00300* (0.00163)
Income	0.0000299 (0.0000276)
No. obs.	377969
R_sqd	0.0187

Standard errors in parentheses. Coefficient estimates from OLS model.  
 Data includes purchase records of 61269 households in seven product  
 categories. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

### 3. Conclusion

This article presents an analysis of how organic product preferences are influenced by political ideology. Previous research has found that individuals with liberal ideology are more likely to support fair treatment of nonhuman species than conservatives, who generally prefer the status quo and do not challenge the existing system and its hierarchies. Based on these findings, the article suggests that individuals with liberal attitudes are more likely to prefer organic products that support biospheric values.

As political polarization increases, it is likely that the effects of political ideology on consumer preferences will increase over time and extend to more product categories. Future research can examine these trends and explore the effects of political ideology on consumption decisions in other industries.

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## **Chapter 5**

# **Reverse Innovation: An Evolution From Innovation to Innovation in Developing Countries<sup>1</sup>**

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## **1. INTRODUCTION**

Researching the role of research and development (R&D) and innovation in developing economies as emerging markets is an important element. Industrially advanced economies have been central to the global diffusion of innovation, with Vernon (1979) proposing "product life cycle theory" in his work (Cantwell, 1995). According to this traditional understanding, new products and technologies are first developed and released to the market in developed economies. Later, it is seen that these products are put on the market and commercialized in less developed countries as they become increasingly outdated. For this reason, it is thought that the flow of innovation, both in terms of technology and the market, is from developed countries to developing countries (Von Zedtwitz et al., 2015: 2). However, it has been argued that the product life cycle theory has lost its validity in recent years, and even today, it is seen that innovations emerging in emerging markets are increasingly popular in developed markets (Petrick and Juntiwarakij, 2011: 24).

The focus of innovation in the global economy seems to be changing in recent years due to the rise of emerging economies such as China and India and the "flattening" of the world. Poor, emerging markets no longer just borrow innovations from developed countries; from time to time, they also add innovations to the rest of the world, including developed countries. This is called "reverse innovation", which refers to the first adoption of an innovation in a poor country before it is adopted in rich countries. Examples of reverse innovation still seem rare and it is difficult to say whether this will change significantly in the future. Therefore, this study is about an emerging phenomenon whose future potential is uncertain. However, reverse innovation is a promising area for research by international business and strategy professionals, as it provides an opportunity to enrich and expand mainstream theories in a number of areas (Govindarajan and Ramamurti, 2011: 191).

Reverse innovation, a new phenomenon, is the subject of this study. For this purpose, a wide literature review is included in the study and examples of reverse innovation from the world are included with its advantages and disadvantages. In addition, the role of reverse innovation in the development of emerging economies is discussed.

## **2. CONCEPTUAL FRAMEWORK AND LITERATURE REVIEW**

Innovation today constitutes one of the most important factors of the competitive position of business units and the economy, as well as modernity. To continue to develop and maintain an advantage in the market, businesses increasingly need to focus on radical innovation (Ostraszewska and Tylec,



2015: 57). On the other hand, the biggest feature that makes developed countries superior to developing countries is their ability to transform this innovation into technology. In this sense, Innovation is also an important opportunity and driving force in the development of poor countries (Govindarajan & Trimble, 2013).

The concept of "innovation", which is generally used in the sense of "innovation" in Turkish, was first used by the German economist Joseph Schumpeter in his work "The Theory of Economic Development" published in 1912. According to Schumpeter, this concept is expressed as "the fundamental power of economic development" (Dinler, 2016: 3). Joseph Schumpeter mentions that there are five different elements on the basis of Innovation. These are the use of new production processes, the creation of new products, new markets, new inputs and new organizational structures (Yaşlıoğlu, 2019: 1179). The realization of all these processes forms the basis of innovation.

Basically, the concept of innovation refers to a process that covers the transformation, adaptation, implementation and integration of new ideas, new markets and applications that arise in the business into a new product or service. Rather than discovering or inventing something new, innovation covers the whole of an economic and social system that emerges depending on differentiating and changing the outcome of that idea, rather than all the activities from the formation process of an idea to its arrival on the market (Akın and Reyhanoğlu, 2014: 25). When the word innovation was first mentioned, it was considered as the opposite of imitation. It has been argued that innovation, which was perceived as a bad thing at first, is as important a development as innovation over time and may even be more profitable than innovation in some cases. Improvement provides competitive advantage by not only imitating but also adding creativity to the imitated situation (Shenkar, 2011: 34). On the other hand, innovation is a process that includes products, processes and business models that can be legally imitated (Flannery, 2010). It is seen that many businesses and brands that can be considered as innovative today and operating worldwide, initially set out with imitative ideas (Aksel et al., 2013). For these reasons, it is accepted that innovation is the most important element in the process of re-development of a product and its promotion as innovation.

According to Schumpeter, innovation is the process of commercializing a new invention (Schumpeter, 2003). In this respect, innovation is also defined as transforming ideas into a product or form that can be marketed by making them concrete (Kanchan and Gupta, 2009: 502). On the other hand, according to Schumpeter, innovation is a "new production function" (Schumpeter, 1939: 84)

and a dynamic force that ensures the continuous development and transformation of social, institutional and economic structures (Akbey, 2014: 7).

Until today, many definitions similar to the one made by Schumpeter regarding innovation have been made (Büyük and Gümüştekin, 2017: 2). Roberts (1987) describes the innovation process as all efforts to come up with new ideas and incorporate these ideas into business processes. Porter (1991) states that the most basic factor that determines the competitiveness of a country depends on the innovation capacity of its industry. According to him, innovation is what makes it competitive with rich countries.

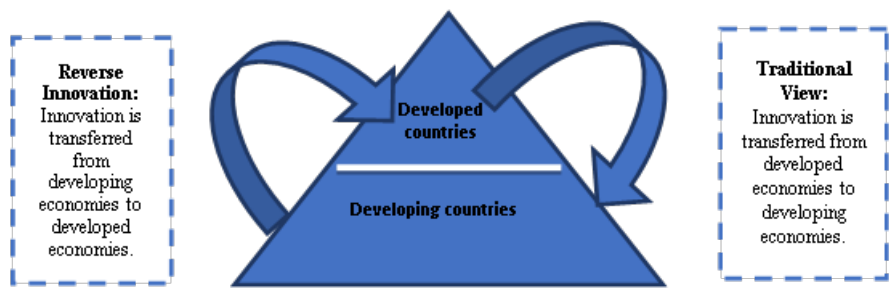
Bower and Christensen (1995) developed the "disruptive innovation theory" in their work. The theory is to a product that is significantly lower in performance but first class in meeting the basic need; advocates lower cost ownership. Hart and Christensen (2002) refer to disruptive innovations from emerging markets as the "great leap". Prahalad (2012) proposed the concept of "innovation streams" and defined them as innovations developed for BoP markets (with annual household income exceeding \$5 trillion) and then moving to developed markets. Brown and Hegel (2005) propose the concept of "blowback innovations". They defined it as innovations realized by multinational companies in developed markets in response to the competition created by multinational enterprises in emerging markets. Immelt et al. (2009) introduced the concept of reverse innovation (IR) and explained IR by positioning it in a different place from other innovations.

The ever-increasing internationalization in companies and the increase in the decentralization of R&D and other elements caused by it have led to the reverse transfer of innovation from the subsidiaries of multinational companies, especially in developed countries. Often, this reverse transfer of innovation allows access to a variety of local knowledge and facilitates the coordination of a strategy to go global. Therefore, multinational companies are forced to reconsider their innovation strategies in order to create, transfer and use the knowledge that is increasingly dispersed in the global operations of the companies. Considering all these factors, innovation is very important for the strategy of the multinational company, and the most difficult aspect of this is reconciling the needs of local innovation with the demands of global innovation (Borini et al., 2016:177). In this respect, on the contrary, innovation has an intermediary position in the transfer of local and global elements such as knowledge, technology, R&D and brand. It is a leading factor in the development and growth of global trade.

Reverse innovation (IR) emerges as a new global growth strategy, where multinational companies innovate in emerging markets and then offer the profit

potential of the innovations they create there, not only to similar markets, but also to developed markets (Melodia, 2019:1).According to leading business strategist Vijay Govindarajan, IR represents one of the biggest opportunities for corporate growth in America in the next few decades. IR will cause a major transformation in almost every industry, including energy, health, transportation, housing and consumer products (Lohia and Taneja, 2013: 1084).

**Figure 1 : Reverse innovation**



**Source:** Govindarajan and Ramammurti, 2011: 192.

As reverse innovation is a relatively new concept, both theoretical and practical documentation on the subject is mostly descriptive (about 75 percent of all articles) and theoretical (the other 25 percent) (Melodia, 2019: 2). When we look at the articles on this subject, it is seen that we come across as conceptual, case studies and examination of concrete IR examples. In Table 1, the literature summary of the studies conducted in this field is given.

**Table 1 : Reverse innovation (IR) literature summary**

Author(s)	Year	Journal	Title	Result
Malodia et al.	2019	Journal of the Academy of Marketing Science	Reverse innovation: a conceptual framework	It deals with the concept of IR theoretically and aims to contribute to the literature for future studies.
Immelt et al.	2009	Harvard Business Review	DisruptiveInnovation: How Ge Is DisruptingItself?	By introducing the concept of IR, it tries to explain its different aspect from other innovation concepts..
Bardakcı et al.	2019	Pamukkale Journal Of Eurasian Socioeconomic Studies	The Hidden Treasure at the Bottom of the Pyramid: A Review About Reverse Innovation	By introducing the concept of IR, he emphasizes that developing countries should develop products

				for emerging economies instead of products they produce for western markets, and the first stage of this is with IR. In addition, examples of IR occurring in China, India and Africa are included.
Ostraszewskave Tylec	2015	International Journal of Business and Management	Reverse Innovation – How It Works	It explains the theoretical aspects of the IR concept, its role in formulating the company's strategy, and its impact on the development of emerging economies.
Alghamdi	2019	Multi-Knowledge Electronic Comprehensive Journal For Education And Science Publications (MECSJ)	Reverse Innovation and Emerging Markets: Issues and Trends	It discusses the issues and trends posed by IR in emerging markets. The findings of the study show that IR is effective in focusing multinational companies on developing countries to generate more income.
Hadengue et al.	2017	International Journal of Emerging Markets (IJOEM)	Reverse innovation: a systematic Literature review	It provides an advanced theoretical and practical framework for the IR concept. The aim of the study is to increase the interest in IR, and this study is the first comprehensive literature review on this subject.
Govindarajan and Ramamurti	2011	Global Strategy Journal	Reverse Innovation, Emerging Markets, And Global Strategy	They suggest that IR has implications for general innovation patterns, internationalization, the management of foreign companies, and foreign capital inflows, so multinational companies and those

				interested in global strategy should retest this concept.
Büyük and Gümüstekin	2017	International Journal of Tourism, Economic and Business Sciences,	Reverse Innovation: Can Innovation Flow From Turkey to Developed Countries?	It proposes alternative techniques to explore the potential of Turkey's IR capability and to penetrate new markets. It is seen that Turkey has the ability to innovate against emerging markets. Establishing participatory decision mechanisms and networking structures that will activate national/regional/local dynamics/capabilities, industrial clustering, technopark and similar formations, university-industry cooperation is encouraged.
Yaşlıoglu	2019	International Journal of Social Studies	Reverse Innovation: Examples from Turkey and the World	It aims to introduce the concept of reverse innovation into Turkish and to contribute to the Turkish literature. Since the concept is a new concept in Turkish literature and it is original, it contributes to the literature.
Von Zedtwitz et al.	2015	The Journal of Product Innovation Management	A Typology of Reverse Innovation	The ability to exploit the potential of reverse innovation in small-scale units generally increases the probability of a firm's success in global innovation.
Adriaens et al.	2013	Ross School of Business Working Paper, University of Michigan	Reverse Innovation for the New Mobility	They explore the relevance of IR and the new mobility opportunity by publicly promoting the spillover effects of knowledge

				transfer and economic development through local firms and broader internationalizing supply chains. It also highlights ways to incorporate the potential impact of IR designs and business models on the adoption of Western innovations in emerging economies.
Borini et al.	2014	International Journal of Business and Emerging Markets	Reverse innovation as an inducer of centres of excellence in foreign subsidiaries of emerging markets	They explore how autonomy and integration affect reverse innovation in foreign subsidiaries in Brazil. A survey was applied to 172 foreign subsidiaries in Brazil. The effect of autonomy and integration effect on autonomous (formation) centers in the development of reverse innovation is confirmed. In addition, the necessity of reverse innovation in multinational companies is emphasized in order to differentiate from developed countries..
Karabulut	2017	International Journal of Commerce and Finance	Can Reverse Innovation Accelerate The Growth Of Global Companies?	It aims to explain the importance of reverse innovation for the growth of global companies. reverse innovation affects the growth of global companies in both developing and developed countries. For this reason, it is recommended that global companies open

				<p>R&amp;D centers in developing countries and conduct research to adapt new products to their needs. When these products are successful, they can offer them to other developing and developed countries to continue growing in the long run. It has been concluded that reverse innovation can accelerate the growth of global companies.</p>
Shinozawa et al.	2018	Yoshida receives a Grant in Aid for Scientific Research	Determinants of reverse innovation in SMEs: findings from multivariate analysis in Japan.	<p>Economic growth in developing countries has exceeded that in developed countries over the past few decades. This study expands our knowledge about reverse innovation by performing quantitative data analysis. Using unique survey data from 290 SMEs in Japan, the research explores how Japanese SMEs (i) develop new products using overseas knowledge and (ii) promote new “modified” products in their own market in Japan. They analyze the survey from sample SMEs in Japan using the Chi-Square test and multinomial logit regression. Empirical analysis results show that IR products focus more on product localization rather than price reduction. The</p>

				findings contradict the conventional claim that IR is the introduction of low-cost products into emerging markets first, followed by expansion of the same product to developed countries.
Lohia and Taneja	2013	Global Journal of Management and Business Studies.	Role of Reverse Innovation in Business: A Case of Few Companies	With the IR method, which is to innovate in developing countries and to bring and sell these products to developed countries, product diversity at cheaper prices, increase in employment opportunities, technology development, etc., for both developing countries and developed countries. provides many benefits. For this reason, the IR generation model is gradually being adopted in the world. It is expected that the IR model will be used in all production areas in the next 10 years.

**Source:** Created by the authors.

### 3. EMERGING MARKETS: ADVANTAGES AND EXAMPLES

The strong growth of emerging economies, especially China and India, has made the competitive environment even more difficult. However, some ambitious businesses also recognize that developments in such markets provide them with a valuable source of opportunity. The higher economic status of the emerging middle class means that there are many needs to be filled in these countries. The existence of these gaps in emerging markets shapes the needs of consumers to some extent and can create opportunities in other countries. Gaps relate to (Strategic Direction,2017:25):

- *Performance:* Customers demand a reasonable trade-off between acceptable performance standards and reasonable price.



- *Lack of infrastructure*: It prevents the production of innovative products in developing countries.
- *Sustainability*: There are deficiencies in issues such as water and air pollution.
- *Weak regulatory systems*: This can speed time to market, but can have negative effects on quality and safety standards.

The gaps created by these features in developing economies offer an opportunity to realize reverse innovation. Conversely, innovation basically requires the realization of at least three stages. The first is the adoption of an innovation in a developing country market such as China or India. The second is the transfer of this innovation to other emerging markets. The third and final stage is the transition to the developed country markets selectively. Both local firms and multinational corporations from developed countries can take part in all three phases, but their strengths and weaknesses differ considerably. Since the local companies that carry such innovations abroad are multinational companies, they are called "emerging market multinational companies" (Govindarajan and Ramammurti, 2011: 196).

Emerging markets encompass the majority of the world's population and therefore have a large consumer population. Multinational companies benefit from these countries through reverse innovations. Reverse innovations through a series of positive developments such as institutional reforms, infrastructure improvement, democracy, communication and information technologies and international business agreements are very attractive for developed markets and attract consumers (Alghamdi, 2019: 2).

Emerging markets are also transferring increased exports, improved balance of payments, improved foreign exchange reserves, decreased unemployment, decreased imports, improved economic position and higher technologies from multinational companies. Multinational companies can be more productive than their local counterparts because they use advanced technology and international experience. Moreover, these companies have positive effects on local firms such as making them more competitive, forcing local people to apply modern techniques and technologies, and employing trained labor force. For these reasons, emerging markets and multinational enterprises or investors benefit greatly from each other (Alghamdi, 2019: 3). Innovations in emerging markets can be transferred to developed countries for different reasons. These reasons and examples are summarized in Table 2.

**Table 2 : Why innovations can be transferred from developing to developed countries**

	<b>Transfer Mechanisms</b>	<b>Examples</b>
<b>1</b>	Innovations developed in emerging markets may already be marketed among poor people in rich countries.	The microfinance system invented in Bangladesh also works for the inner-city poor in rich countries like the USA.
<b>2</b>	The dramatic 70 to 90 percent cost and price cuts to succeed in emerging markets could help boost demand in rich countries.	Lowering prices to 15 percent of initial levels has increased demand for ultrasound machines in the US.
<b>3</b>	The technology of "good enough" products developed for emerging markets may evolve over time to meet high-end applications in rich countries.	Portable ultrasounds developed for China by the General Electric company could later be used for high-end radiology and obstetric applications.
<b>4</b>	New features built into the product in emerging markets, such as robustness, portability or ease of use, can create new market segments in wealthy countries.	Making EKG machines portable and more compact has created new market segments for General Electric in the USA.
<b>5</b>	Emerging markets can leapfrog into cutting-edge technologies, especially if they have large domestic demand, are unhindered by legacy technologies, and face fewer regulatory hurdles.	Emerging markets have advanced capabilities in industries such as wireless banking, unconventional energy and electric cars, which have importance and value in developed country markets.

**Source:** Govindarajan and Ramammurti, 2011: 197.

Through reverse innovation transferred from developing countries to developed countries, the products are transformed into technology, R&D etc. It is seen that many elements offer various benefits both in macro and micro sense. These are (Lohia and Taneja, 2013: 1083);

- More industrialization will offer more multinational companies, an increase in foreign direct investment, advanced R&D facilities and high employment opportunities using the latest technology and engineering.
- It will lead to the overall development of the entire ecosystem, which includes suppliers, technology vendors, educational institutions that support, empower and facilitate growth.
- It brings countries and global markets closer together by removing global borders in order to make the concept of “one world, one market” a reality. Conversely, innovation will provide more impetus to globalization, while making cross-border manufacturing and marketing viability reasonable and effective.
- It will provide consumers with better products and a variety of options to choose from at reasonable prices.

- It will promote sustainable technological infrastructure and industrialization that will facilitate advanced engineering.

As the most general example of reverse innovation, the design of affordable laptops produced by Asus, a Taiwan-based company, and the sale of this product first in developing markets, and then its marketing in developed country markets with improved technology are shown (Yaşlıoğlu, 2019: 1182). Immelt et al. (2009) state that General Electric company promotes and sells health care products in developed countries after developing and succeeding in developing countries such as China and India. On the other hand, it is known that a few large US companies first developed/produced some of their products in China, then introduced and sold these products in the USA. From this point of view, it can be said that reverse innovation will take place in the form of changing roles between primary and secondary markets. General Electric's medical devices and Tata's Nano car are examples of reverse innovation extending from India to developed countries (Cunha et al., 2014: 206). Besides the Tata Nano, General Electric's ultrasound and Asus' laptops, the Grameen Bank (microfinance) system, Embraer's regional jets, the famous Chinese brand BYD's electric car, Bharti Airtel's cheapest cordless phone and Nokia's cheap mobile phones, a coffee machine called "telve" produced by Arçelik in Turkey, etc. It is known that many reverse innovation examples emerged in developing markets and transferred to developed markets (Gümüstekin and Büyük, 2017). In Table 3, a summary of the examples that can be considered as reverse innovation in the world is given.

**Table 3 : Examples of reverse innovation**

Country	Developing Company	Product	Explanation
Chinese	General Electric	MAC400-ECG Device	It is sold to more than 200 countries.
Taiwan	Asus	Laptop	It aimed to enable school students in poor countries to acquire low-cost laptop computers.
Chinese	General Electric	Portable Ultrasound Device	It has been seen that these devices, which were developed in China, were marketed all over the world over time.
Turkey	AirTies	Wireless Internet	AirTies, which sells more than 10 million devices worldwide, designs its own products.
Beijing	nokia	Mobile phone	The phones, which were developed in Beijing, were sold to the entire European market over time.

Kenya	Ushahidi	digital program	It was used to measure the effects of the disaster in the Kenyan elections and the Haiti earthquake, then it was used in the USA.
Turkey	Yemek Sepeti	Online food sales	It was purchased by a world-renowned German business called Delivery Hero.
Mexico, Brazil Argentina	Wall Mart	Store Chain	He developed small retail stores in the USA and transformed them into a large grocery market.
Turkey	Arcelik	Ground-Coffee Machine	It has found buyers in the European market with the ease of use it provides.
Bangladesh	Grameen Bank (microfinance) system	Bank	Established in Bangladesh to turn the poor into entrepreneurs, the bank operates in 81 countries.
India	Tata Engine	Tata Nano-Car	The cheap car model, which was developed in India, is sold in the whole world market.
Turkey	Casper	Mobile phone	The first domestic phone manufacturer in Turkey, the company expands its market share and exports to different countries.
Chinese	BYD	Electric car	It has managed to become one of the top vehicle selling companies in China.
India	PepsiCo	Lentil Meal	U.S. consumers, who have never tasted it before, have increased demand for this dish.

**Source:** (Govindarajan & Trimble, 2013), (Gümüştekin & Büyük, 2017), (Yaşlıoğlu, 2019), (Cunha et al., 2014) were created by the authors.

#### 4. CONCLUSION

Economic, social, technological etc. Innovation, which can be expressed as the process of transforming any new idea or product that will emerge in many areas into products with high added value, manifests itself mostly as a strategy of distributing or marketing these innovations in emerging markets in developed markets. The existence of a large, growing and unused customer base in emerging markets and the desire of these countries for sustainable growth and their search for new markets offer great opportunities for developed economies. On the other hand, increasing awareness of emerging markets and increasing social development with increasing globalization and technological improvement play an important role in increasing innovative ideas. In addition to all these, the high difference between the income levels of individuals between emerging markets and developed markets makes low-cost reverse innovation essential for these countries. For this reason, it will be important to

develop “reverse innovation” activities, which will enable an innovation to be adopted in developing markets before rich countries.

The scarcity of resources in emerging markets and the growing growth of these market structures every year make it necessary to present innovative ideas to consumers. Therefore, as these markets grow, their innovation capacities increase and they have to be open to the development of newer ideas and technologies. On the other hand, the scarcity of resources in these markets imposes a greater burden on costs compared to other developed countries. For this reason, developing markets need to increase their innovation capacity and produce products with high added value in order to reduce this cost burden and to catch up with developed economies. In this way, emerging markets will be able to increase their competitiveness against developed markets.

It is known that developed countries adopt an innovation-based growth strategy. These countries sell the products with high added value, which they have produced as a result of high R&D activities, to developing markets, thus achieving high growth rates. Achieving high growth rates and sustainable development in their developing markets will be possible by increasing their innovation activities where they can substitute their own products for these products. In this way, emerging markets will experience a positive transformation in all macro elements from foreign trade to economic growth, from unemployment to inflation. In order to achieve this transformation, it will be vital for politicians or managers in emerging markets to take into account global market trends, encourage reverse innovations and focus on transferring such products to be developed in emerging markets to global developed markets.

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## **Chapter 6**

# **An Evaluation of the Spatial Dynamics of Regional Poverty in Turkey**

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## **Introduction**

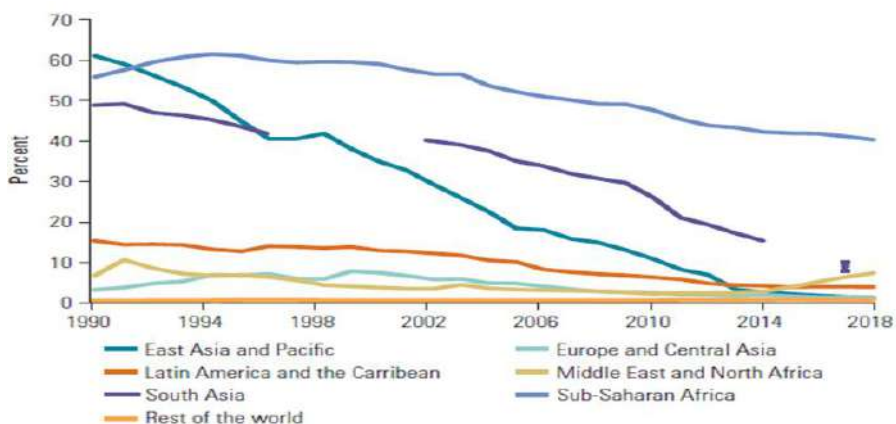
Poverty is a severe social and economic problem that affects most of the world's population. Poverty has multidimensional social, political and economic effects on human welfare such as lack of income, lack of education, low life expectancy, social exclusion, unemployment and lack of participation in decision-making processes. From this point of view, the eradicating of poverty and hunger has been determined as the key target in the Millennium Development Goals adopted by the United Nations (UN) in September 2000. There is a global consensus that requires an understanding of basic causes and dynamics in tackling poverty. In this context, it is important to determine the determinants of poverty and to reveal its economic and social effects on countries. Over the years, the problem of poverty has continued to maintain its importance. The first of the 17 sustainable development goals determined by the United Nations in the 2030 sustainable development agenda is to reduce all kinds of poverty by focusing on poverty.

Although research on poverty has a long history, there is no accepted and valid definition. Different dimensions of poverty were discussed in the definitions made in many different studies, but a clear definition could not be made. Poverty was initially understood as an economic phenomenon that refers to the situation where the income of individuals/families is below socially acceptable living standards. The World Bank defines poverty in economic terms based on the cost of goods and services needed to meet basic livelihood needs. According to this definition, the poor are considered as those whose income is below a certain poverty line, and this limit was determined as \$1.90 per day in 2015 according to 2011 purchasing power parity (PPP) (Ayoo, 2022). The international poverty line (IPL) has been established using national poverty lines for some of the world's poorest economies (Ferreira et.al. 2016; Ravallion, Chen & Sangraula 2009). An estimated 736 million people live below the \$1.90 IPL in 2015. (World Bank, 2018). As of 2017, 9 percent of the world's population lives in low-income countries, 41 percent of people live in lower middle-income countries (LMIC) and 35 percent in upper middle-income countries (UMIC). In further studies, it has been argued that the IPL value of \$1.90 is not sufficient to define whether individuals are poor or not. When calculating this limit, some of the world's poorest countries are taken as a basis (Ferreira et al. 2016). In conclusion, if \$1.90 defines the cost of basic needs in some of the world's poorest countries, then it can be seen as an absolute minimum threshold for defining poverty in all countries. In countries with higher economic development, it has been argued that \$1.90 is not an appropriate limit due to the relatively high cost of meeting minimum needs (Fantom and Serajuddin 2016). Considering that most of the

extremely poor people live in middle-income countries, the use of the \$1.90 IPL limit is far from reality. To partially address this concern, the World Bank has developed a new set of poverty lines that are higher in value and more appropriate to current economic conditions. The new limit is set as \$3.20 per person per day for LMICs based on the 2011 PPP and \$5.50 for UMICs (World Bank, 2018). As of 2019, the international poverty lines have been revised in terms of the 2017 PPP. The \$1.90 limit goes to \$2.15, the \$3.20 limit for LMICs is \$3.65; the limit from \$5.50 on UMICs has also been raised to \$6.85. (World Bank, 2022)

Sen (1985), on the other hand, put forward the concept of entitlement and capability poverty and argued that poverty is not only related to low income. The capacity approach constitutes the theoretical infrastructure of the human development approach, which has been included in the human development reports published by the UN every year since 1990. Sen argues that poverty should be defined in terms of capacities rather than consumables. According to Sen, factors other than income, especially access to education and health services, as important components of human development, should be taken into account in the conceptualization of poverty. According to Amartya Sen, who places the capacity approach at the center of her understanding of development, development is the process of expanding the real freedoms that people have. Focusing on freedoms in this approach goes beyond the understanding of development, which identifies development with the growth of Gross National Product (GNP), increase in individual incomes, industrialization, technological progress or social modernization (Sudhir and You, 1997). The effect of Amartya Sen's capacity approach on poverty analysis is to strengthen the understanding of the nature and causes of poverty and deprivation by directing attention to the goals that people want to achieve from various means, especially income, and therefore to the freedoms necessary to achieve these goals (Sen, 2004).

The World Bank introduced the social poverty measure, a way of measuring poverty as countries grew. In this context, the definition of social poverty was made for the relatively poor who could meet their needs but could not reach the average welfare level in society. The social poverty line consists of 50% of the country's median income, with \$1 per day according to purchasing power parity. The social poverty line is calculated separately for each country. Unlike IPL, although SPL varies between and within countries over time, it is a measure suitable for global comparisons since it is defined as the same for all countries (World Bank, 2018).

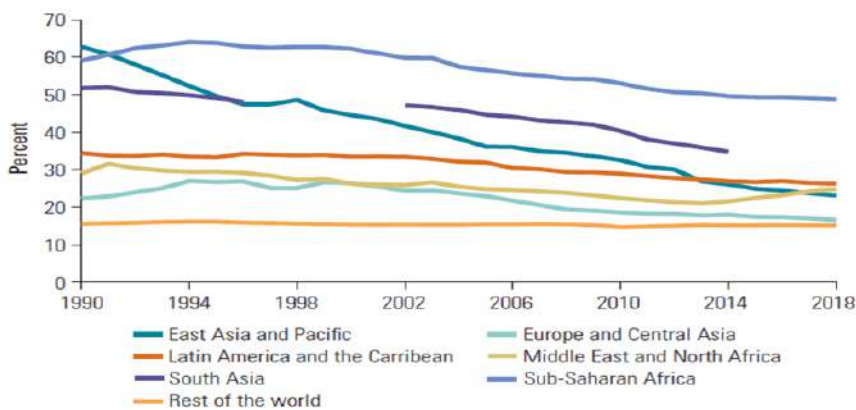


**Figure 1. Trends in Poverty Rates at the US\$1.90-a-Day Poverty Line, by Region, 1990–2018**

*Source:* PovcalNet (online analysis tool), World Bank, Washington, DC, <http://iresearch.worldbank.org/PovcalNet/>.

Figure 1 shows the rates of the extreme poor in each region for the period 1990–2018. Poverty estimates for South Asia are not reported for 1997–2001 and after 2014 due to the lack of population coverage. For Sub-Saharan Africa, the rates are worrying. In the Middle East and North Africa, the rate of extreme poverty rose from 2.3 percent in 2013 to 3.8 percent in 2015; then it almost doubled to 7.2 percent in 2018. It is thought that the basis of this situation is the conflicts in Syria and the Republic of Yemen.

The poverty measurements made by the World Bank were calculated with a one-dimensional approach based on the monetary threshold until 2018. A multidimensional measure of poverty (MPM) approach was adopted in the World Bank report published in 2018. In this new measurement method, 6 indicators (consumption or income, educational attainment, educational enrollment, drinking water, sanitation, and electricity) are paired with the three dimensions of welfare, the monetary standard of living, education, and basic infrastructure services (World Bank, 2020).



**Figure 2. Societal Poverty Rates (SPL), by Region, 1990–2018**

*Source:* PovcalNet (online analysis tool), World Bank, Washington, DC, <http://iresearch.worldbank.org/PovcalNet/>.

The values in Figure 2 represent the population-weighted average of the social poverty rates at the economic level by region. Estimates for South Asia are not reported due to a lack of population coverage during 1997-2001 and after 2014. An analysis of the figure shows that social poverty is at its highest level in Sub-Saharan Africa and has stagnated in this region over the last decade. Europe and Central Asia show one of the lowest values at around 17 percent. In high-income economies that fall into the 'rest of the world' category, 15 percent of the population lives below the SPL, on average about US\$24 a day. In the Middle East and North Africa, social poverty is increasing in line with the increase in extreme poverty in the region. East Asia and the Pacific show the greatest progress in reducing social poverty, while Latin America and the Caribbean are on a stagnation course.

### **Spatial Causes of Poverty**

Since poverty is a multidimensional concept, it is difficult to explain its causes under a single heading. In the literature, the causes of poverty have varied from country to country and within the country over time and have been associated with many concepts. However, the systematic study of poverty is lacking from the perspective of geography. A geographical perspective focusing on the human-land relationship focuses on regional analyzes based on spatial characteristics. (Zhou&Liu, 2022) The academic community has long recognized the importance of investigating the spatial dynamics of poverty from the perspective of geography. However, compared to economic and sociologically based studies, studies on the systematic examination of poverty from the perspective of

geography are extremely limited. Considering the systematic, regional and spatial analysis advantages of geography, it is important to examine the problem of poverty from the perspective of geography to better serve the sustainable development goals by 2030.

In the 1990s, Krugman focused on the spatial dimension of economic activities and explored the link between poverty and the environment (Krugman and Venables, 1995; Krugman, 1991, 1995; Fujita et al., 1999). These researches formed the basis of the spatial poverty theory and carried the research to a new dimension. Since the mid-1990s, the World Bank has started to focus on the spatial distribution and differentiation of global poverty (World Bank, 2018).

According to the spatial poverty theory, the geographical lack of capital is the basis of the poverty trap (Jalan and Ravallion, 1998). For this reason, the poor population is clustered in remote geographical regions where there are insufficient natural resources. For example, there are studies showing that the main cause of poverty in Zimbabwe is the remote geographical location (Bird and Shepherd, 2003). However, even in developed countries such as the United States and England, rural poverty and geographic location are closely related and the poverty rate increases with distance from metropolitan areas (Partridge and Rickman, 2008).

Geographical factors that influence poverty include location, resource endowment, ecological environment, public service, regional policy, and culture. In addition, topographic condition, slope, surface fragmentation, distance/travel time to public resources or services, altitude and land use type are also closely related to poverty. (Zhou&Liu,2022) It is claimed that complex topography has a positive driving effect on the spatial distribution of poverty-stricken countries around the world (Zhou and Xiong, 2018). Natural conditions, on the other hand, play a scale-independent role in the emergence of poverty (Cheng et al., 2018). Natural disasters perpetuate poverty and make it harder for the poor to get out of poverty. Globally, natural disasters condemn approximately 26 million people to extreme poverty each year (Rozenberg and Hallegatte, 2016).

## **Literature Review**

According to the World Bank (2020) report, it is stated that individuals in the bottom 40 % of the income distribution live in rural areas. In this sense, areas with a high risk of poverty worldwide can be expressed as rural areas.

In their case study in rural China, Jalan and Ravallion (1997) found evidence of a spatial poverty trap in 6-year household panel data. Ravallion and Wodon (1999) found significant geographic effects on living standards after controlling for a wide range of non-geographical features using survey data for Bangladesh.



Bird and Shepherd (2003) suggested that rural areas are more likely to be pockets of geographic poverty due to disadvantages such as harsh climate, limited water supply and steep terrain. Bigman et.al. (2000) estimated poverty indicators for 3871 rural and urban communities in Burkina Faso and conducted a simulation analysis to show the spatial distribution of poverty in the country.

Following these studies, it was argued that studies to identify the spatial poverty trap based on household survey data would not be sufficient to make policy inferences (Minot, 2000; Elbers et al., 2003).

While the development of poverty mapping technology creates a new opportunity to overcome these problems; A new methodology has been developed by combining census and survey data to provide statistically reliable estimates of poverty at low geographic levels. Poverty estimation and geographic description are the basis of the poverty map (Hentschel et al., 2000). This methodology, coupled with spatial statistical methods, has been gradually used to explore the spatial dimension of poverty (Okwi et al., 2007). He examined the relationship between the poverty rate and geographical conditions in rural areas of Kenya. To investigate the effects of geographical factors on poverty, the spatial regression technique was used by using variables such as slope, distance from public resources, and demographic factors. Studies have shown that poor regions tend to cluster spatially, as expected. This situation makes us think that geographical effects arising from structural forces such as agroecological environment, physical infrastructure, or feedback between households cannot be ignored. As a result, it was seen that the determinants of poverty were not homogeneous spatially (Epprecht et al., 2011).

Researchers, who argue that increasing resource allocation, especially in smaller geographical areas, is an effective way to reduce poverty, adopted the method of targeting poverty geographically. Geo-targeting covers regions and individuals. Theoretically, he argues that the best way to help the poor is to transfer limited funds to the poor. However, this method is difficult to implement in most countries due to the high costs of administration and data collection (Bigman and Fofack, 2000). On the other hand, it has been stated by some researchers that the poor are generally concentrated in a certain area, and regional targeting has also been accepted as an effective way of directing the flow of poverty reduction funds (Schady and Norbert, 2002; Crandall and Weber, 2004). China has achieved its target of targeting poor households. In the studies, it was concluded that the distribution of the Chinese rural poor exhibits a different spatial agglomeration characteristic. Lack of natural resources, poor geographical conditions, and a fragile ecological environment are the main drivers behind persistent poverty (Liu et al., 2017, 2018; Zhou et al., 2018).

Since the socio-economic characteristics of the society are related to the spatial characteristics, it is inevitably that the determinants of poverty and the solution proposals to be developed for these problems are in a close relationship with spatial policies.

### **A Different Perspective on Poverty in Turkey: Spatial Poverty**

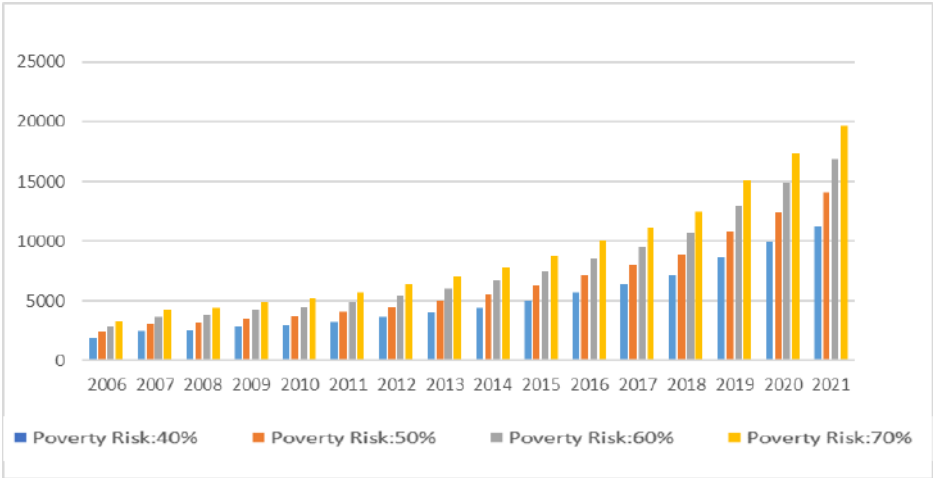
Turkey is a strategically important, middle-income country, a founding member of the OECD, a member of the G20 and a candidate country for the EU. It is one of the few OECD countries where inequality in income distribution has gradually decreased and poverty has decreased significantly, simultaneously with the growth spurt experienced in the 2000s (OECD 2012).

In 2000, the World Bank prepared the report “Turkey: Economic Reforms, Living Standards and Social Welfare Study” based on the results of the 1994 Household Income and Consumption Expenditure Survey. In this study, poverty rates and poverty profile were examined by calculating the poverty lines in Turkey. In 2002, an evaluation was made on the profile, causes and consequences of poverty at the urban and rural level in Turkey with the joint study of TUIK and the World Bank. Statistics on relative poverty with international comparability, based on income and living conditions survey results in 2006, have been published since then. This research has been prepared by considering the standards of the European Union statistics office (Eurostat). Relative poverty in Turkey is defined by TUIK as “individuals who have income and expenditure below a certain limit according to the general level of society”. The second criterion used in poverty surveys conducted by TUIK is the poverty line. Equivalent Households calculated 4 different relative poverty lines according to disposable individual median incomes (40, 50, 60 and 70 percent of median income). The population under these determined limits is defined as the population at risk of poverty. The third criterion calculated by TUIK is the poverty rate. The poverty rate is obtained by dividing the equivalent household disposable income below the poverty line by the total population. The fourth and final criterion is the poverty gap. This criterion gives information about the degree of poverty. A person's poverty gap is equal to the difference between their poverty line and their income. The average poverty gap in the society is calculated as the ratio of the average poverty gap in the society to the poverty line. If this value is close to 100, it means that the degree of poverty is high (TUIK).

Poverty gap = ((Poverty threshold-Median income of poors by EII)/Poverty threshold) \*100

Purchasing power parity is used in international comparisons to eliminate price level differences between countries. Regional purchasing power parity is used in the analyzes based on the Income and Living Conditions Survey (ILCS). Thus, it provides

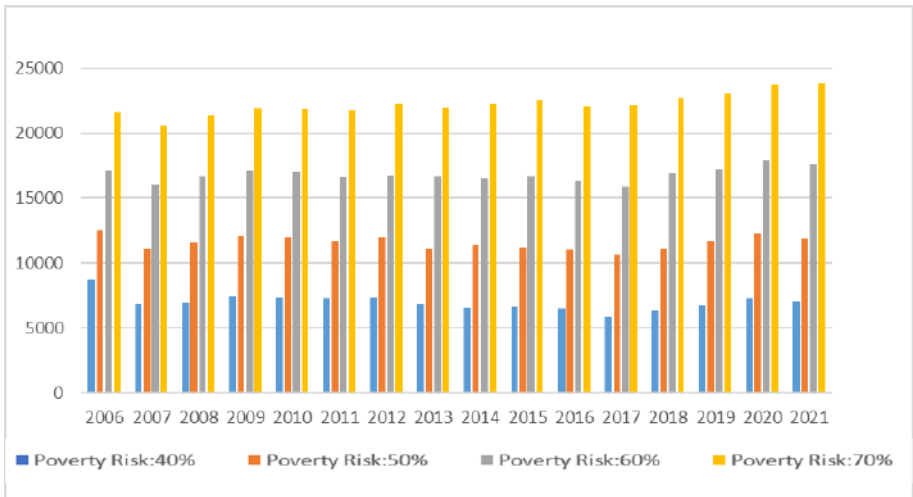
the opportunity to reveal the differences in the purchasing power of the Turkish lira in various regions of Turkey, as well as to eliminate the price level differences between regions and to compare the regional income information in real terms.



**Figure 3. Change in Poverty Line in Turkey by Years (TL)**

Kaynak: [www.tuik.gov.tr](http://www.tuik.gov.tr)

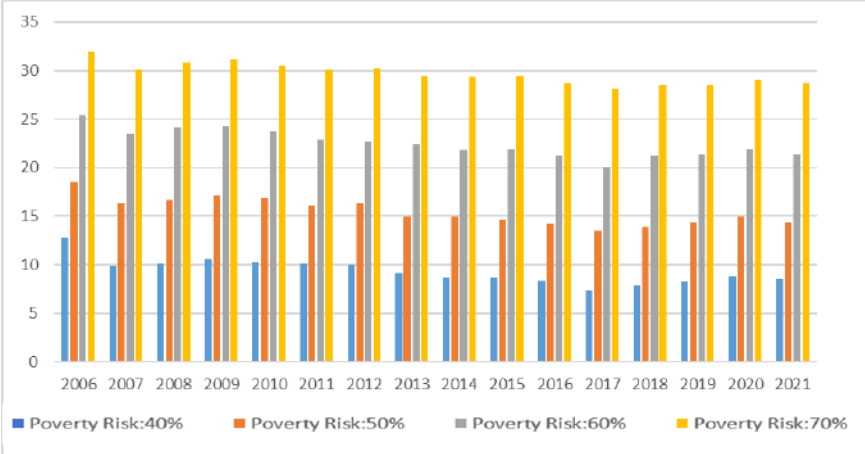
As can be seen in Figure 3, the year with the highest poverty line compared to the previous year was 2007 with 29.4%. This is followed by 2019 with 21.4%. According to the results of the latest ILCS research, the change in the poverty line has increased by 13.2% as of 2021 compared to the previous year.



**Figure 4. Number of Poor People by Years in Turkey (Thousand)**

Kaynak: [www.tuik.gov.tr](http://www.tuik.gov.tr)

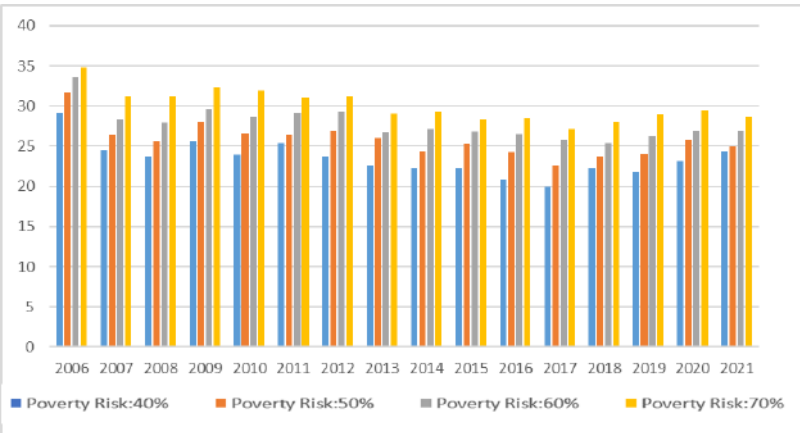
Compared to the previous year, the year with the highest increase in the number of poor in Turkey is 2020. According to the latest research conducted in 2021, the number of poor decreased by 3%, 2.7%, 1.6% and 0.36%, respectively, according to the poverty risk grouping.



**Figure 5. Poor Rate in Turkey by Years (%)**

Kaynak: [www.tuik.gov.tr](http://www.tuik.gov.tr)

Individuals with income below the limit determined according to the general level of society in Turkey are considered relatively poor. According to Figure 5, the poverty rate decreased by 0.6 points compared to the previous year and became 14.4, based on 50% of the equivalent household disposable median income for 2021.

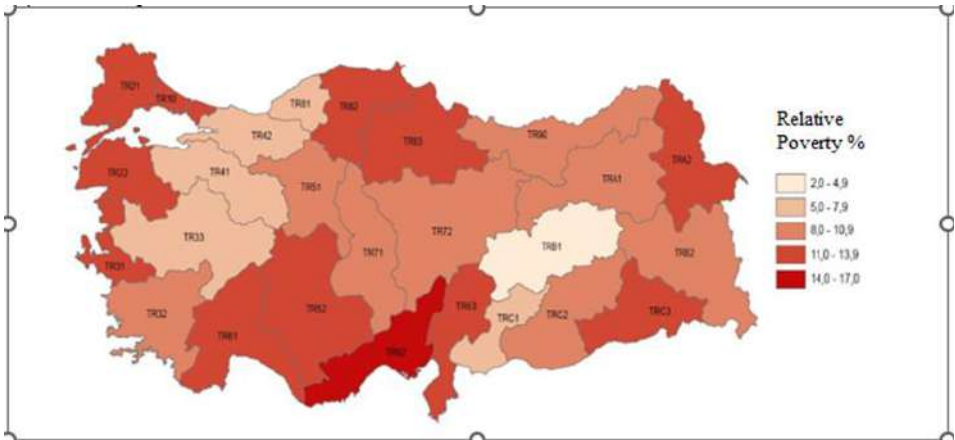


**Figure 6. Poverty Gap in Turkey by Years (%)**

Kaynak: [www.tuik.gov.tr](http://www.tuik.gov.tr)

The poverty gap shows the difference between the determined poverty line and the income of the person. The poverty gap ratio is calculated by dividing this difference by the total number of poor people and dividing it by the number of the poor. This ratio shows the income needed to lift the poor out of poverty. Considering 50% of the median income, it is observed that the poverty gap in Turkey has decreased when 2006 is taken as a basis. In Figure 6, the years with the highest poverty gap are 2008 and 2020.

Turkey is a country with regional diversity in terms of economic development. Regions are diverse in their manufacturing activities and have varying degrees of economic growth. For this reason, monitoring regional poverty in Turkey is of great importance in the development of policies to combat poverty. The literature has focused on regional determinants of poverty reduction from “patterns of growth” and “initial conditions”. Growth theory patterns assume that intersectoral growth, unlike aggregate growth, can affect poverty reduction and the poor. For example, growth in labor-intensive sectors will have a more poverty-reducing effect than growth in capital-intensive sectors (Loayza and Raddatz, 2010). Initial conditions such as education levels, demographics, migration patterns and death rates are also important for growth.



**Figure 7. Poverty rate (%) by 50 percent of median income, NUTS Level 2, 2021**

Kaynak: [www.tuik.gov.tr](http://www.tuik.gov.tr)

The regions with the highest relative poverty rate according to the border calculated according to 50% of the equivalent household disposable median income are TR62 (Adana, Mersin) with 14.4%, TRC3 (Mardin, Batman, Şırnak, Siirt) and TRA2 with 13.7%. (Ağrı, Kars, Iğdır, Ardahan). NUTS Level 2 regions

with the lowest relative poverty rate are TRB1 (Malatya, Elazığ, Bingöl, Tunceli) with 2.2%, TR41 (Bursa, Eskişehir, Bilecik) with 6.5% and TRC1 (Gaziantep) with 7.7%. , Adiyaman, Kilis).

It is not correct to say that despite the relative decrease in poverty in Turkey over the years, regional differences have disappeared. It is known that poverty rates are above the Turkey average, especially in the East and Southeast regions. TRB1 Region stands out as a region where poverty is relatively low, unlike the surrounding regions. The poverty line is relatively low in the TRB upper region, which includes the TRB1 Region. Due to this situation, it can be concluded that it is more possible to live with a lower income in the TRB region.

### **Conclusion**

Poverty and efforts to reduce poverty have been topics that have attracted the attention of the academic community for many years. Many different disciplines have conducted research with different perspectives on poverty alleviation and poverty reduction. Preliminary studies in this area focused on defining and determining the dimensions of poverty. Although the important role of geographical environment in poverty has been recognized, systematic research on the geography of poverty is still insufficient. Although more importance has been given to the spatial definition of the poor population over time, the underlying mechanism of poverty has not been fully understood. In addition, theoretical studies on spatial poverty are also extremely limited. Most of the existing studies are also based on multidimensional theories of poverty. Most of the geographical factors remained only in the background of poverty studies. Considering the regional and systematic characteristics of the poverty problem; it is inevitable that poverty should be analyzed in terms of geography.

According to the income and living conditions survey, the average annual equivalent household disposable income in Turkey as of 2021 is 37,400 TL. In terms of NUTS 2 Level, it is seen that the western provinces have higher annual average equivalent household income than the general average of Turkey, while the eastern regions are below the average. When we look at the poverty rate, it is noteworthy that the poverty rate is not as sharp as the break in income compared to 50% of the median income at the regional level.

When poverty is considered depending on geographical conditions, reasons such as insufficient infrastructure, lack of human capital, migrations, inadequacy of employment opportunities deepen poverty. The fact that Turkey has geographically diverse geographical regions that are socially, culturally, and economically diverse requires it to adopt a multidisciplinary approach in the fight against poverty.

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## **Chapter 7**

# **Ecological Footprint and Its Importance in Terms of Sustainability**

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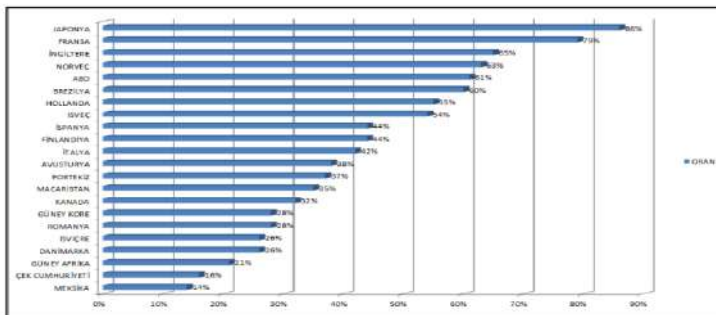


## 1. Introduction

Within the scope of this study, after the definition of the concept of sustainability and the events that cause harm to sustainability are mentioned, the ecological footprint is emphasized. The definition and types of ecological footprint have been supported by the sources in the literature. It has been explained how important sustainability is for the future and what steps should be taken for this. In this context, sample sections about what companies-businesses do in terms of sustainability around the world are given.

### 1.1. Sustainability and Sustainable Development

Many definitions have been made over the concept of sustainability. Sustainability meets definitions such as "to exist", "to continue", "to maintain", "to bear with", "to provide", "to support". It is the ability of the system or method to maintain itself independently, to sustain itself, to bear the burden of something. If anything is sustainability as a result of the activities, it includes the possibility of recycling (Şen et al., 2018).



**Figure 1:** Sustainability Rankings of Companies by Country

Source: KPMG, 2008; Kaymak and Çerikcioğlu, 2017

When the table in Figure 1 is examined, it is concluded that companies in Japan, France, England, Norway and the United States are the countries that implement sustainability programs in the most extent. These countries are known to be quite successful in terms of economic development level. It can be considered as a very interesting result that Canada, which has a strong economy, ranks 15th in terms of the presence of sustainable companies (KPMG, 2008; Kaymak and Çerikcioğlu, 2017).

Long and expensive transmission lines provide thermal and hydropower unit output to homes where it is used for cooking, heating, and cooling. Because of the emissions from gasoline and diesel fuel, there is a progressively huge influ-

ence on air quality. Large landfills are required to dispose of the garbage generated by the massive use of non-biodegradable plastics. Inconceivable amounts of garbage are produced. An environmental or ecological footprint considers both the earth's natural total supply and consumption for its products and services. By accomplishing so, it is believed that the whole population adheres to a particular lifestyle typified by a particular set of individuals. The ecological footprint, which encompasses significantly more than greenhouse gas (GHG) releases, gauges the strain we place on the environment. It assesses the quantity of natural resources we utilize and contrasts it with their availability. The amount of useful land and water resources (forests, croplands, and fishing industry) required to support human consumption patterns and absorb the trash and GHG emissions people produce are calculated using this footprint (What is Ecological Footprint vs Carbon Footprint, 2022; What is Ecological Footprint, 2022).

## **1.2. Overview of the Literature**

With the rise in average heat over the last period, particularly since the 1970s (Climate Change, 2014). Since 1970, more energy has been stored in the seas and atmosphere (EPA, 2013), and polar ice sheets have begun to melt as a result (Rhein and Rintoul, 2013). According to reports, human activity has grown, leading to higher greenhouse gas concentrations, which is responsible for around 95% of the world's warming (IPCC, 2006; National Research Council, 2010).

Lin and Moubarak (2013) have looked for solutions to minimize emissions of carbon dioxide using the Logarithmic Mean Divisia Index technique, which links energy consumption with CO<sub>2</sub> emissions. Other academics have investigated how elements like energy tolerance and industrial processes impact energy use and CO<sub>2</sub> emissions using techniques like Kuznets and Factor decomposing. Chapagain et al. (2006) have evaluated the impacts of evaporation of permeation rainfall for cotton development (green water usage), removal of surface or groundwater for irrigated or operation (blue water have been using), and water contamination during development or operational processes. The end outcome was measured in terms of the amount of dilution required to integrate the pollutants. Chico et al. (2013) described the WF assessment of five fabrics used in the production of jeans that comprise two distinct fibers. Cotton fiber manufacture was found to be the most water-intensive stage. Recently, shale gas energy has drawn the attention of governments seeking to decrease emissions of greenhouse gases. Weber and Clavin (2012) used a Monte Carlo probability approach to analyze six distinct energy usage choices for manufacturing that

depend on drilling and natural gas. Industrial locations have been encouraged for sustained socioeconomic growth with the various advantages: Community assistance and accomplished industrial acts within scheduled operating. Dong et al. (2013) investigated the carbon footprint of a single industrial building in China, focusing on the chemical and general equipment industries.

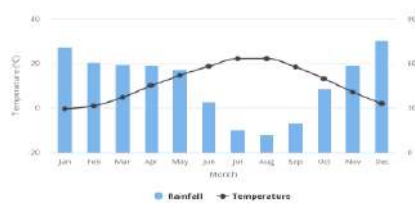
Kercher et al. (2010) looked at how to change tourist behavior to lessen negative environmental consequences. From the typical international visitor to the least effective, they divided travelers into four categories. Although most aware of global warming and climate change, the typical universal traveler category was lowest likely to change its travel habits. In contrast, travelers who were less active looked to be inclined to travel less.

## **2. Environmental issues harmful to sustainability.**

There are many obstacles to achieving ecological sustainability. Global climate change, depletion of the ozone layer, decrease and pollution of soil and water resources, decrease in biological diversity can be listed as sustainability barriers.

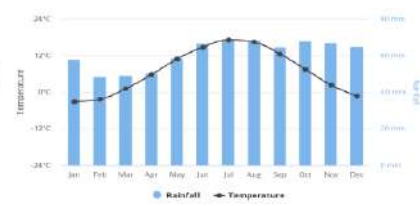
**2.1. Global Climate Change:**Harmful gas emissions resulting from industrial developments are stored by the atmosphere. With the developments in the industrial field that are emerging day by day, the use of oil, coal and natural gas has increased and forest areas have been destroyed. As a result, changes have occurred in the physical and chemical structure of the atmosphere. The gases that make up the atmosphere are nitrogen (78.09%), oxygen (20.09%) and argon (0.93%), together with their ratios. However, even though carbon dioxide, methane gas, carbon monoxide, nitrogen oxide and ozone gases, which are called greenhouse gases, have low rates, the world climate is shaped by these gases. The most important cause of greenhouse gas formation is water vapor. The most important factor in the formation of hot weather is that greenhouse gases hold water vapor more than cold weather. At the same time, carbon dioxide gas in the atmosphere has risen to high levels with industrialization. The gases produced by the combustion of fossil fuels such as coal, oil and natural gas mix with carbon dioxide and oxygen. Transportation, industry, destruction of forest areas and animal waste cause carbon dioxide emissions globally (Hardy, 2003; Özsoy and Dinç, 2016).

Average Monthly Temperature and Rainfall in Turkey from 1901-2016



**Figure 2:** Monthly Average Temperature and Precipitation Rates in Turkey Between 1901-2016 Source: Climate Change Knowledge Portal, 2019.

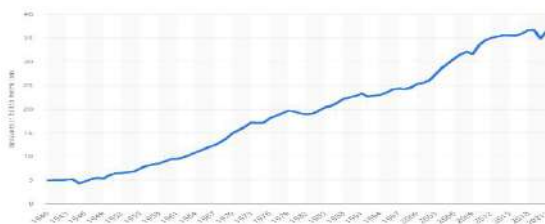
Average Monthly Temperature and Rainfall of Europe for 1901-2016



**Figure 3:** Monthly Average Temperature and Precipitation Rates in Europe between 1901-2016 Source: Climate Change Knowledge Portal, 2019.

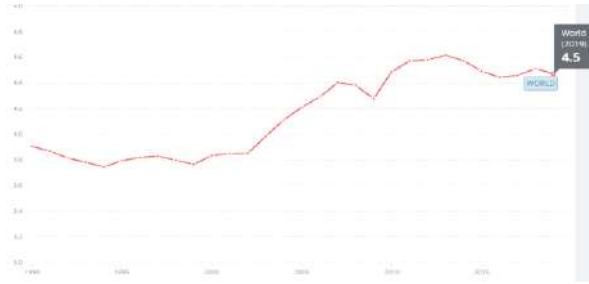
When we look at the tables in Figure 2 and Figure 3, it is seen that the average temperature and precipitation level of Turkey on a yearly basis is lower than that of European countries. Especially in Turkey, compared to European countries, while the temperature level remains lower in the summer months, there is a big difference in the precipitation level. The precipitation level in Turkey remains quite low. According to the data in WWF's 2018 Annual Report; Since 1880, when temperature measurements started to be made, 2018 has been determined to be the fourth warmest year (WWF, 2019; Climate Change Knowledge Portal, 2019).

**2.2 Depletion of Ozone Layer:**There are two types of ozone layer. Benevolent ozone is located 20-30 km above the earth's surface and protects every living thing from the harmful effects of sunlight. Malicious ozone are gases that harm plants located closer to the earth and generally cause respiratory diseases. Chlorofluorocarbon gas, which causes depletion of the ozone layer, was used in the 1930s to be utilized in refrigerators and ventilation. Chlorofluorocarbon gas has a higher effect on increasing world temperature than carbon dioxide gas. Although it is not used due to its harmfulness, its effect is still felt today (Akre et al., 2012; Özsoy and Dinç, 2016)



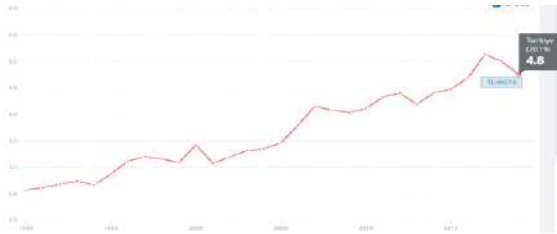
**Figure 4:** Annual CO2 emissions worldwide from 1940 to 2020(in billion metric tons) Source: <https://www.statista.com/statistics/276629/global-co2-emissions/>

Since 2000, the amount of carbon dioxide (CO<sub>2</sub>) released into the atmosphere by industry and fossil fuels has significantly grown, achieving a record high of 36.7 billion metric tons of CO<sub>2</sub> in 2019. In the past, significant global occurrences have reduced emissions. Global carbon dioxide emissions decreased through around 460 million metric tons as a result of the 2009 downturn. However, the reducing emissions in 2020 dwarf this. Extreme lockdowns were imposed on nations all around the world, drastically reducing industrial and transportation activity. The primary driver of the increase in CO<sub>2</sub> emissions is the energy industry, and as economies and people expand, it is anticipated that global energy consumption will climb even further in the ensuing decades (see Figure 4; Annual CO<sub>2</sub> emissions worldwide from 1940 to 2020, 2022).



**Figure 5:** The World Bank, CO<sub>2</sub> emissions (metric tons per capita) Source: <https://data.worldbank.org/indicator/EN.ATM.CO2E.PC?contextual=default&locations=TR>

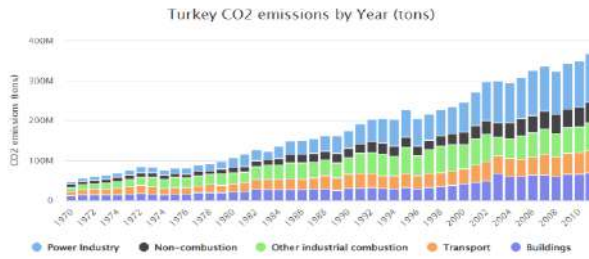
These numbers only consider CO<sub>2</sub> emissions; they do not include all greenhouse gas emissions. Later in this nation profile, one may discover information on total and other greenhouse gas emissions. Numerous people are interested in learning how our nation is doing with regard to lowering emissions of CO<sub>2</sub> and other greenhouse gases (see Figure 5; The World Bank, 2022).



**Figure 6:** CO<sub>2</sub> emissions (metric tons per capita) – Turkiye, Source: <https://data.worldbank.org/indicator/EN.ATM.CO2E.PC?contextual=default&location s=TR>



Figures for annual greenhouse gas emissions are frequently used to evaluate countries' contributions to changing climate. However, this statistic frequently represents disparities in population levels throughout the world. This graphic depicts per capita emissions to help comprehend the 'footprint' of the average individual in a specified nation (see Figure 6; CO<sub>2</sub> emissions, 2022). CO<sub>2</sub> emissions grew by 5.25 percentage points over the previous decade, totaling 18,366,770 tons more than in 2015, when Emissions of CO<sub>2</sub> were 349,755,970 tons. CO<sub>2</sub> emissions per capita in Turkey are 4.61 tonnes per person (depending on a demographic of 79,827,871 in 2016), a rise of 0.16 above the number of 4.45 tons per person reported in 2015; this indicates a 3.5% rise in CO<sub>2</sub> emissions per person (see Figure 7; Climate Change Knowledge Portal, 2019; Turkey CO<sub>2</sub> Emissions, 2022).



**Figure 7:** Turkey CO<sub>2</sub> Emissions, Source: <https://www.worldometers.info/co2-emissions/turkey-co2-emissions/>

As seen in Figure 6, a significant increase in CO<sub>2</sub> emissions has been observed in Turkey between 1990 and 2014 and this acceleration continues (see Figure 7; Climate Change Knowledge Portal, 2019; Turkey CO<sub>2</sub> Emissions, 2022).

### 2.3. Decrease and Pollution of Soil and Water Resources

Water is the only asset that all beings on earth need. The availability of sufficient and good quality water is a fundamental element of ecosystems, humanity and sustainability. Today, it is used in urban use, energy, irrigation and production activities. Today, limited water resources are seen due to unnecessary and excessive water consumption used in such activities. Approximately 700 million people in the world suffer from water shortages in 43 different countries, while 2.7 billion people live in basins that experience water scarcity for at least 1 month a year (WWF, Reducing Footprint, 2019; opinions-ideas from the author).

## 2.4. Decreased Biodiversity

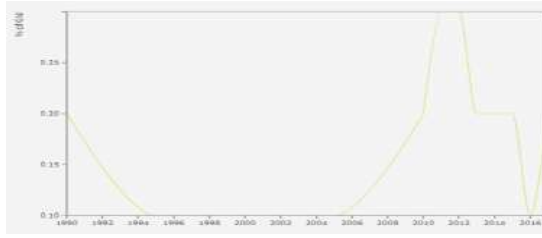
The concept expressed as biodiversity includes ecosystem and genetic diversity. In order to ensure biodiversity, it is important to preserve the diversity and survival of species. As expressed in Figure 8, all organisms living in different species in the world are interconnected. All living beings rely on their surroundings to provide them precisely what they require, such as food, water, and shelter. Their surroundings include physical variables including such soil, oxygen, and heat, as well as other species. Living species that cannot produce their own sustenance must feed on other organisms. Other connections among living creatures comprise symbiotic connections and competing for supplies. The history of biological diversity dates back to 3.5 billion years and human beings damage this structure due to excessive and unnecessary consumption of natural resources (Kaymak and Çerikcioğlu, 2017; Freitas and Silva, 2022; Interdependence of Living Things, 2022).



**Figure 8:** The Core of Sustainability (Freitas and Silva, 2022; Interdependence of Living Things, 2022)

Sustainability has a significant impact on all organizational decision-making. Prioritizing sustainability gives the environment a long-term commercial edge and motivates consumers to choose a partnership.

**2.5. Depletion of Natural Resources:** The monetary equivalent of consuming natural resources is expressed as a percentage of gross national income and is calculated in terms of Gross National Product (GNP). This calculation gives important data in terms of measuring the welfare level and the depletion share of natural resources. Natural resource depletion, including ecosystem and biodiversity losses, identifies deficiencies for sustainability. (Rençber, 2018; Human Development Report, 2018).



**Figure 9:** Percentage Consumption Rates of Natural Resources, Source: Human Development Report, 2018.

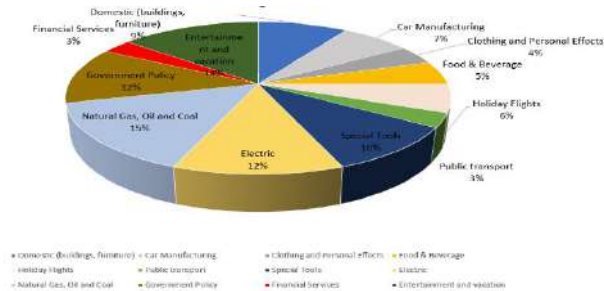
It is known that a number of the nation's resources are finite. Individuals are entirely dependent on fossil fuels, iron and other commodities, minerals, and occasionally such fundamental essentials as sand to keep the modern world operating. Such resources run out faster as the number of users rises. The Earth also meets human requirements by providing renewable energy sources including such wood, clean water and air, healthy soils, and freshwater salmon for sustenance. Water is an essential requirement, and each person stimulates the economy. Fresh water concerns are far more serious. Upwards of 800 million individuals do not obtain enough food to satisfy their physiological demands on a daily basis. Conversely, 650 million are fat. Nowadays, individuals are starving not due to a lack of food, but mostly because the global economy allocates it inequitably (Resources and Consumption, 2022).

### 3. Ecological Footprint

It is the area of fertile land and water that is biologically necessary for an individual, community, or activity to produce the resources it consumes. These areas also include areas necessary for the absorption of carbon dioxide. Global hectares (gha) are used to express the ecological footprint

The capacity of the geographical region to produce using renewable natural resources is called biocapacity. There are two criteria that affect biological capacity. These; the area of agricultural land within the borders and how much water the lands produce. Energy capacity is also in the form of “gha”, which is the expression of ecological footprint. The total amount of resources and demand obtained from different land types are expressed in numerical values. The concept of footprint also reveals the level of ecological deficit. It is extremely important to learn about the course of the future of the world and to work in this context. Determining the amount of our resource and how quickly it is consumed is the first step to close the gap. Ecological footprint is a tool for calculating the environmental dimension of sustainable development (Galli et al., 2012).

**3.1. Carbon Foot Print:** Carbon footprint is expressed as the amount of carbon dioxide that an individual creates in nature as a result of her vital activities. The carbon footprint is measured in cubic meters and tons. It is seen that human beings create in every moment of life and cause irreparable damage to natural habitats. In fact, it is impossible to deny the strong and clear connections between emissions of greenhouse gases and climate change. The average global surface heat is rising, major weather occurrences are getting worse, ocean volumes are rising, and there is degradation. These environmental dangers are all a result of human activities. An individual may aid in the overall decrease of greenhouse gas emissions by reducing their carbon footprint. Everybody could make a difference in the battle against climate change through making simple changes. Additionally, it goes beyond the environment. People who reduce their carbon footprint could have healthier lives and spend less money. These advantages of minimizing overall carbon footprint also imply you're doing the part to battle global warming, whether it is through lower emissions, a better diet, or lower energy costs(Tour, 2015; How to reduce your carbon footprint – 20 top tips, 2022). The carbon footprint is the primary carbon footprint, which is a measure of carbon dioxide emissions from the generation of energy used in shelter and transportation, and the value of each element of life. It is examined in two different categories, the secondary carbon footprint, which is an indirect indicator of the emissions it causes throughout its life cycle. A carbon footprint is the entire amount of greenhouse gas (GHG) emissions created by a persons, company, activity, or product, both directly and indirectly. 1 It is estimated by adding the emissions from each step of a product's or service's life cycle (material production, manufacturing, use, and end-of-life). Several GHGs might well be released during a product's lifespan, or lifespan. It is possible to say that the secondary carbon footprint contains the primary carbon footprint. Food or products imported from abroad are transported by air, land, sea and rail until they reach the consumer (IPCC, 2006; Argun et al., 2019; Carbon Footprint Factsheet, 2022).



**Figure 10:** The elements that make up the carbon footprint and their ratios  
Source: modified by author from Argun et al., 2019.

Considering that the wastes arising from the deterioration or consumption of these products are taken to the storage and disposal areas by the same transportation routes, the secondary carbon footprint is very important. It is known that a person's secondary carbon footprint is equal to 54% of the total carbon footprint. However, today, the secondary carbon footprint cannot be calculated exactly. The elements that make up the carbon footprint of the average person are given in Figure 10 (IPCC, 2006; Argun et al., 2019; Carbon Footprint Factsheet, 2022). When the items to be done to reduce the carbon footprint are listed (How to reduce your carbon footprint – 20 top tips, 2022; Tour, 2015; Bekiroğlu) :- Trees are living things that produce oxygen and absorb carbon dioxide. After absorbing the carbon, it reduces the carbon dioxide rate that will release the remaining oxygen back to the nature. In this way, it contributes positively to the greenhouse gas effect.- Ensuring energy efficiency is a very important step in reducing the carbon footprint. As the consumed energy decreases, it is foreseen that the carbon emission will decrease as well. In this way, a decrease may be experienced in the cost items of the enterprises.- Being able to choose public transportation instead of personal vehicles in order to reduce the carbon footprint related to transportation is a step towards sustainability.- Preferring products and services with low carbon emissions helps to reduce carbon emissions. Preferring options in energy class A and above are among the examples.-Preferring renewable energy sources instead of fossil sources used in energy production prevents 0.6 kg of carbon dioxide from reaching the atmosphere.

**3.2. Water Foot Print:** The entire quantity of resources utilized to generate products and services that are then consumed by people or society, or used by producers to generate goods and services. The water footprint displays not only the total amount of water utilized, in addition to the water's color (green, blue, or gray), as well as its timing and location. In this regard, a product's water footprint is a multifaceted indication. (WWF, Reducing Footprint, 2019; Turan, 2017).

**3.3. The Importance of Ecologic Foot Print:** The main problem of the ecological footprint is the question of how much of nature we use compared to the nature we have. By asking herself this question, the person provides an "ecological facts checklist" in the questioning process. The ecological footprint determines the area to obtain food, provide resources, provide energy, eliminate waste, and reabsorb carbon dioxide through photosynthesis. In short, human needs (food, substance and energy consumption) create demand, while the ab-

sorption of waste creates supply and the calculation is made in this context. Ecological footprint is an important issue that should be transferred to students. Problem solving and thinking skills of students help them to understand the environmental impact of ecological footprint. In addition, using the learned information in individual and social preferences is an educational tool. The concept of ecological footprint is based on the idea that a certain amount of space or one or more ecosystem categories is needed to be used to provide consumption-related resource flow and waste pool for each substance and energy consumption item. Therefore, the land use results for each particular consumption category must be calculated to determine the total land area required to support a particular consumption pattern (Wackernagel and Rees, 1996; Akkor, 2018; Ecological Footprint, 2022).

**3.4. Ecologic Foot Print in Turkey:**It is important to see which consumption categories our Personal Footprint originates from, in order to understand the relationship between our daily activities and the use of natural resources. The biggest share of Turkey's ecological footprint is personal consumption with 82% and it is 2.26 gha per person. The important point is that it is included in the "personal consumption" classification, not the *investment* classification, as it reaches the end user. This classification and definition of this are presented as below (Monfreda et al., 2004; White, 2007; Türkiye'nin Ekolojik Ayak İzi Raporu -WWF, 2012, Akkor, 2018; Ecological Footprint, 2022; Footprint balance sheet of Turkey, 2022);

(i) *Food*: With 52% of the total, food consumption makes up the biggest portion of the personal ecological footprint (1.18 gha per person). Food demands account for the vast majority (82–83%) of the resources given by agricultural land, grazing land, and fishing grounds. Food production accounts for one of the largest stockholders in the Carbon and Built Area Footprints (17% and 16%, correspondingly).

(ii) *Products*: The strategies applied for products, with 17% of the overall Footprint, are the greatest contributor after food (0.47 gha per capita). The Footprint of the Products, in contrast extreme, contributes the most to the Carbon Footprint (0.28 gha/person) with 21% and the Forest Footprint (0.09 gha/person) with 43%.

(iii) *Transportation*: Personal transport has a 12% portion of the total footprint, eliminating transportation. This works out to 0.33 gha per individual. With a 22% built area footprint share and a 19% carbon footprint contribution, transportation is the highest contributor to both categories. Despite the fact that

83% of the demand for fishing areas comes from consumption of food, 10% of the demand is for transporting.

(iv) *Services*: With a 5% share, services have a relatively small yet substantial presence in the overall Footprint. With a 10% share, the construction region is where the service sector has the most influence. On the other contrary, the Carbon Emissions of Services is, at 9%, just a little bit higher than the Household Carbon Emissions. The Services have a 5% footprint on forests, and a 1% footprint on other areas.

(v) *Housing*: 5% of Turkey's total Footprint consists of resources used for living spaces. Housing Footprint accounts for approximately 8% of our Footprint in both carbon and forest categories. About 6% of the Built Area Footprint is used for housing. Residential Footprint is very low in other categories, close to zero.

In addition to the ecological footprint, the carbon footprint caused by fossil fuels should also be taken into account. Fossil fuels such as coal, oil and natural gas are produced from the earth's crust and are non-renewable energy sources. Measures should be taken against carbon dioxide emissions and efforts should be made to reduce carbon emissions. With the increase of biological productive forest areas, the rate of carbon dioxide to be absorbed decreases. Nationwide Ecological Footprint assessments, when applied worldwide, indicate ecological overreach on the most massive scales; when applied domestically, they identify the causes and places of overshoot, as well as the culpability of national ecological deficiencies. Ecological Footprint reports quantify the area necessary to supply supplies and absorb garbage without jeopardizing such regions' ability to continue providing services (Monfreda et al., 2004, Akkor, 2018; Monfreda et al., 2004).

### **3.5. Difference Between Ecological Footprint and Carbon Footprint?**

Two metrics that represent resource use and the effects of human activity on the environment are the environmental footprint and carbon footprint. All human actions, the resources used, and the waste produced through these operations are all described within the ecological footprint. The carbon footprint, on the other perspective, solely considers actions that contribute to greenhouse gas emissions. These comprise things like burning fossil fuels and using electricity, among other things. Furthermore, carbon footprint provides the raw quantity of carbon dioxide emissions in tons annually as a consequence. On the contrast, ecological footprint provides the quantities of land and surface water space required to replenish the used resources. As a result, there is additional distinction involving ecological footprint and carbon footprint. Moreover, the carbon foot-

print strives to lessen the environmental effect through minimizing global warming and avoiding disasters such as climate change. In contrast side, the ecological footprint considers all environmental issues and strives towards long-term growth (What is Ecological Footprint, 2022; Difference Between Ecological Footprint, 2022).

### **3.6. Environmental Peace and Quality**

The whole of the communication between living and non-living things in the world is called the ecological system. As the largest ecosystem in the world, the seas, forests, streams, atmosphere and soil form the living spaces of living things. The ecological balance has settled on a vitally important order in the relations and interaction network between both living and non-living things. A change in any part of this natural structure also affects the other. The system is adversely affected by this process. Therefore, it is necessary to live in peace within the system. The natural balance does not actually need peace. Human is the party that needs to achieve this balance. Therefore, she should do this for herself and take responsibility. Linking environmental and peace concerns normatively emphasizes the necessity to shift policy-making away from the conventional security mindset of maintaining the status quo for the benefit of a single state and toward a more expansive understanding of safety as long-term sustainable worldwide international development, including socioeconomic, national guard, financial, and environmental issues all at the level of high political life(Kaypak, 2013; Peace and The Environment, 2022).

### **4. Applications of Company-Business**

An emissions reduction scheme seeks to make up for carbon dioxide and emissions of greenhouse gases. In order to balance carbon footprints, an increasing amount of carbon compensation businesses have joined the increasingly well-liked worldwide trend of investing in ecological initiatives. Forthcoming emission levels could be decreased by making investing in renewable energy technology, spreading more trees, or purchasing and compensating carbon dioxide emissions using programs for emission reduction, which is the main objective of companies that sell carbon offsets. Compensation suppliers come in a wide variety in regards of their rates and fields of expertise, and their actions are affected by their location. Some of these companies are listed and declared as below;

*Koton* :Koton brand has announced that it produces 20% of the polyester fabric it uses for the 2019 Koton Recycled Swimwear Collection from pet bottles collected from the sea. For each square meter of the fabrics, 15 plastic bot-



tles extracted from the sea were used. Within the scope of the collection, it contributed to the removal of 45,000 pet bottles from the sea by using 3000 meters of fabric (Durukan, 2019).

*Dimes* :The fruit juice brand Dimes, which has been working in the field of sustainability since 2016, renewed its support for the *Little Things Renew Nature* project, which has been carried out by Tetra Pak for 12 years with the contributions of the Ministry of National Education. 2nd, 3rd, 4th and 5th grade students were informed about the use and recycling of natural resources within the scope of education programs. In this way, it is aimed to raise individuals who learn environmental awareness at a younger age and to protect the sustainable value chain (Bayındır, 2017).

*Adidas* :In 2018, Adidas produced more than five million shoes containing recycled plastic waste. As a target for 2019, the company announced that it plans to more than double this number. They also cleaned up plastic waste from many beaches, such as the Maldives, before reaching the oceans. In addition to the shoes, Adidas has produced the Champions League jersey for FC Bayern Munich from recycled material. Additively, taking a step towards sustainability, the use of plastic bags has been discontinued since 2016 (Adidas, 2019).

*The North Face* :The North Face: International clothing brand The North Face announced its collection named "Bottle Source" as a sustainability project. Within the scope of the project, T-shirts and bags were produced using recycled plastic bottles.40% of the products consist of materials obtained from recycling, while 60% consists of cotton. In addition, it is aimed to support the project by making a donation of one dollar for each purchased product. The North Face has taken an important step in creating environmental awareness with plastic bottles collected from national parks (Sustainable Brands, 2018).

*Volvo* :Car brand Volvo made many plastic parts of the XC60 T8 Twin Engine with recycled parts and introduced it to the market in 2018. Volvo7 has announced that it aims to use 25% recycled materials for every new car it will produce from 2025. The carpet inside the vehicles is made from fibers from pet bottles and recycled cotton from clothing manufacturers' scraps. In addition, the seats consist of pet fibers obtained from plastic bottles. With this production, Volvo Cars was awarded in the category of "European Plastics Recycling Awards" in 2018 (Çalışkan, 2019).

*IKEA*:IKEA makes green investments in all of its business and operations. First of all, 50% of the wood used in the production line uses sustainable forest trees. It uses 100% of the cotton it buys from cotton fields. In addition, there are a total of 700,000 solar energy panels in ikea's stores. Finally, the company stated that they aim to be completely renewable. Major actions were taken to

provide 100% renewable energy for purchased electricity (The climate footprint, 2022; Sustainability – caring, 2022).

*Unilever:* Unilever has not only made green investments. It has embraced sustainability as a part of the company. In this sense, the United Nations awarded the company the World Champion award in 2015 (EkoIQ İklim Değişimi, 2022).

*Panasonic:* Although Panasonic is not in the headlines with this aspect like other companies, it has many applications in this sense. The company, which strives to produce both efficiency and environmentally friendly products, has realized its goal of leaving a less carbon footprint by moving its production facility here since its employees are located in a more suburban area (Panasonic, 2022).

*IBM:* Since the 1960s, IBM has set this situation as the company's target. In the 1990s, a sustainability report was published and IBM made a name for itself in reducing its ecological footprint with smart buildings and green logistics. With open, AI-powered solutions and platforms and extensive industry expertise, IBM can help you plan a sustainable and profitable path towards your goals in five key areas: climate risk management, infrastructure and operations, supply chain, electricity supply, energy and emissions management and sustainability.

*Nike:* Nike company was deemed worthy of the award for the company that produces the greenest clothing and shoes in 2015. While the energy humans consume at home and the number of miles humans drive account for a large portion of each person's carbon footprint, individuals also have other decisions that have an effect on the world, such as the things humans purchase. The same goes with sneakers. Nike is dedicated to providing environmentally footwear solutions and athletic shoes as a result. When a Nike sneaker or footwear design is labeled "Sustainable Components," it signifies that at least 20% of the shoe's weight was made out of recyclable components (Sustainable and Eco-Friendly, 2022).

*Henkel :* Henkel, a laundry and home care brand, has collaborated with an organization called "Waste Free Ocean" to combat plastic waste in the seas. It is announced that the main purpose of this cooperation is to clean and recycle plastic waste in the oceans and lakes of the world. The bottles of the detergent brand "Lovables", which it launched in 2018, are made of 100% recycled material. Henkel has thus taken a step towards recycling more than one million plastic bottles (Henkel, 2018).

*Myro:* The approach of the deodorant brand Myro was to create both ecological and gender awareness. Myro reveals 50% less plastic than a standard deo-

dorant. In addition, products are produced without being subjected to animal experiments during the production phase. The brand aims to prevent the destruction caused by many harmful chemicals with its recyclable spare deodorant capsules (Topçu, 2018).

*KFC* :Food brand KFC is served in packages made of rice paper at its branches in Hong Kong. By not using bread, they aimed to make an environmentally friendly move with rice paper wrapped around two chicken pieces (Koç, 2018).

*Coca-Cola* :The Coca-Cola brand stated that it works in three main areas for its environmental management approach. These; basic energy management and climate protection, water management, sustainable packaging and waste. They state that these processes are a step towards reducing the use of resources in their packaging, as well as being sustainable. According to Coca-Cola, they work with stakeholders to ensure packaging is suitable for recycling. They also announced that they are working on producing bottles with herbal extracts(Cola, 2019).

*Schneider Electric*-Schneider Electric is a global corporation that offers an Internet of Things-enabled portfolio of products to improve efficiency and sustainability. Schneider Electric, a worldwide leader in energy conservation and automating having operations including over 100 nations, provides comprehensive energy alternatives to drive digital revolution in order to reach productivity and sustainability objectives (Top 10 Globally Leading Companies, 2022; Green Jobs, 2022).

*ProcessMAP*:Corporation is a prominent supplier of cloud-based corporate technology solutions for risk assessment in areas like as worker health and safety, the environment and environmental sustainability, and organizational regulation. The business provides a suite of Sustainability Management Software that allows businesses to effectively analyze and develop their sustainability KPIs. The program automates the procedure for collecting, verifying, analyzing, and delivering on organizational-wide sustainability parameters. It helps businesses to, among other things, assess sustainability metrics, commercialize carbon footprinting, improve customer interaction, and have access to informative data and insights objectives (Top 10 Globally Leading Companies, 2022; Green Jobs, 2022).

*Microsoft*: Microsoft reached carbon neutrality primarily through expenditures in offsetting which concentrate on preventing pollutants rather than erasing carbon which has already been released. Nevertheless, they are renewing their activities in 2020 with an ambitious aim to reduce Microsoft's own carbon

emissions in order to achieve carbon judgemental through 2030 (Green Jobs, 2022; Top 10, 2022).

*Shell*: Shell has set a net-zero objective through 2050 and has boasted about its carbon offsetting plan. And including boosting gas supplies, lowering oil sales, and extending into the renewable energy industry, Shell would utilize a variety of greenhouse gas techniques to minimize its own operating emissions (Green Jobs, 2022; Top 10, 2022).

*JetBlue* claimed in 2020 that it has achieved its goal of becoming carbon negative on all internal routes. JetBlue was the first commercial carrier in the United States to undertake to this critical and quantifiable stage in lowering its influence on global overheating previously this year, and it is now the first airline in the United States to accomplish decarbonisation on all internal flights (Green Jobs, 2022; Top 10, 2022).

*Delta Air Lines* has been a large purchaser of carbon offsets. The worldwide aviation sector is one of the most challenging to decarbonize due to its inherent complexity (Green Jobs, 2022; Top 10, 2022).

*Disney*: The Walt Disney Group is currently a prominent player in the global environmental marketplace, and it plans to expand its offset purchase program to tackle indirect pollution from its activities. The carbon emissions is an essential element of the Ecological Footprint, a method established by the Global Footprint Network to assess the amount of nature required to provide individuals or the business. Despite their importance, carbon footprints are challenging and difficult to measure precisely due to a lack of understanding and data about the procedures which play a key role to emissions of greenhouse gases (Green Jobs, 2022; Top 10, 2022).

*General Motors* intends to be carbon free in all of its worldwide products and operations through 2040. To meet its goals, the world's largest carmaker plans to decarbonize its portfolio by transitioning to zero-emissions automated vehicles, procuring renewable energy, and utilizing minimal offsets or lines of credit (Green Jobs, 2022; Top 10, 2022).

## **5. Discussion and Conclusion**

Sustainability is the ability and capability of the system or method to maintain itself independently, to sustain itself, to bear the burden of something. Sustainability suffers due to the destruction caused by human beings to nature. Because nature does not need any external power to regenerate. The ecological order provides this. However, this order has started to deteriorate with mankind. Today, these applications can be preferred more in close consumption, cosmetics, energy production and many areas, and more contributions can be made to

sustainability. When the studies on sustainability are examined, it is understood that national and global companies in developed economies are increasing their social responsibility investments day by day. In the world where the population is increasing uncontrollably, we should be able to leave a more organized ecosystem for the population that continues to increase with these practices regarding the consumption of natural resources. Thus, much more progress will be made by continuing the implementation of practices aimed at reducing the ecological footprint. Every step taken to be aware of the ecological footprint and to reduce carbon emissions is a step to be taken for the world. Therefore, taking action in the light of the information given and taking a step for the future is important for generations. The work of big brands for sustainability is actually proof that this process is not difficult. The use of recyclable materials in the production phase brings at least 50% energy savings. Reducing the ecological footprint is important for climate change, for water pollution, for biodiversity reduction. In fact, one step provides a chain of benefits by bringing together more than one step. The contribution of future advancements in industries where certifications for lowering emissions are achieved should not be overlooked. Our country's industries must move quickly to incorporate Carbon Management into their business structures. The appropriate judgments on this topic, which appears to be an impediment for the sectors, may convert it into a stride forward for them.

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## Chapter 8

# The Importance of “The Turkish Trade Registry Gazette” in Terms of Business and Accounting History Research

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## 1. INTRODUCTION

Nowadays, business and accounting history studies are given importance by national/international accounting history researchers and attract more researchers in the process. Business and accounting history of the Turkish Trade Registry Gazette (<https://www.ticaret sicil.gov.tr/> 10.02.2022) with over 16 thousand issues, 5.5 million pages and 18.2 million announcement in its publication life from 21.02.1957 to the present. In terms of research, it records the last 65 years of the Republican Period. Considering the current situation in terms of business and accounting history, it seems that business and accounting history studies can be carried out on the transactions subject to the announcement with the content analysis method regarding the types of announcements. Research to be carried out on the basis of announcements in the Turkish Trade Registry Gazette; It is important in terms of providing information about the macro and micro economic structure of the period and the dominant business culture. We believe that comparisons can be made on a regional basis with various quantitative analysis methods to be applied to announcements, and that announcements can be the main or additional source for biographical studies.

In the study, literature about the “trade registry and Turkish Trade Registry Gazette” is given, then, brief information about the Turkish Trade Registry Gazette is given, and the importance of the Gazette in terms of business and accounting history studies is emphasized.

## 2. LITERATURE

In order to access the national literature based on the "trade registry and Turkish Trade Registry Gazette", the Turkish Republic Higher Education Institution Thesis Center, ULAKBİM-TR Index and Dergipark were scanned on the basis of ULAKBİM. International literature was accessed through Web of Science databases. In addition, using Google Scholar, searches were carried out for other national and international studies available on the internet.

When the national studies made by directly involving the "trade registry and Turkish Trade Registry Gazette" as the subject are examined; it can be said that the studies carried out within the scope of "Law" gained weight. These studies, theses (Akça, 2020; Güneş, 2020; Darı, 2019; Demir, 2019; Aktepe, 2017; Demirel, 2016; Yıldırım, 2014; Develi, 2013; Bilge, 1998; Gül, 1996; Özbey, 1992) and articles (Karaahmetoğlu, 2021; Ergene, 2021; Karaege, 2020; Özsungur, 2018; Dinç, 2017; Özsungur, 2017; Özsungur, 2014a; Özsungur, 2014b; Ayhan, 2012) can be classified under headings. Since there is an access limit to the theses written by (Bilge, 1998) and (Özbey, 1992), these theses have

not been examined. For international studies, searches were carried out within the scope of Web of Science. The query word used while scanning is "trade registry". Within the scope of Web of Science, 6 studies were accessed. However, among these 6 studies, it was seen that there were studies that were not directly related to the trade registry, and the studies that were directly related (Apan and Vlad, 2016; Apan, 2016; Baumgarte, 1992) were continued.

Table 1 and Table 2 show us the literature based on trade registry and Turkish Trade Registry Gazette.

**Table 1: Theses based on Trade Registry and Turkish Trade Registry Gazette**

Type of Study	Author	Type <sup>1</sup>	Title	Summary
Theses	Akça (2020)	Master	The Authorization Of Trade Registry Director To Examine Transactions Subject To Registration Of The Joint Stock Company	The structure of the registry directorates, its operation and the principles that dominate the trade registry, then the general principles, types and provisions of the relevant registration to the trade registry are explained in the joint stock company and matter of facts subject to registration stated in the TCC numbered 6102 in joint stock companies were examined.
	Güneş (2020)	Master	The Registration And Announcement Of Trade Register Effect On The Third Persons	The meaning, content, quality and theoretical basis of registration and announcement in the trade registry for third parties are explained and at the same time, the meaning and application of registration and announcement in the trade registry for third parties are examined in detail.
	Darı (2019)	Master	Inspection Duty And Authority Of The Trade Registry Manager	It is aimed to reveal the common and different aspects of the trade registry in general, by comparing its historical development, the characteristics of the registry and some similar registries. The study also examined in detail the trade registry organization, the position of the trade registry director, his duties and powers, obligations and the legal consequences related to them. In general, the responsibility of the trade registry manager for the damages arising from the keeping of the registry, as well as the responsibility of the State and the relevant chamber, which is directly responsible for the damages, are among the other topics examined.
	Demir (2019)	Master	The Deficiencies Of The Mersis Project In The Context Of The Transactions Carried Out In The Trade Registry Directorates And The Areas That Need Improvement	It is aimed to determine the effects and deficiencies of the MERSIS Project on the trade registry transactions carried out in the trade registry directorates established within the chambers of commerce or the chambers of commerce and industry. As a result of the research, it was emphasized that the permit, approval, collection processes of different institutions should be carried out through the system, especially by ensuring inter-institutional coordination, and the existence of such a system should be seen as an important opportunity in order to prevent bureaucratic paperwork.

<sup>1</sup> There is no doctorate theses study in Turkey.

Aktepe (2017)	Master	Legal Effects Of Registration To The Commercial Register	It is aimed to examine the legal effects of registration in the trade registry on third parties and related parties. In the study, the definition of the concept of trade registry, its legal nature and functions and trade registry transactions are explained; The effects of registration in the trade registry were examined in terms of those concerned; The effects of registration in the trade registry for third parties were discussed; The positive and negative effects of registration in the trade registry were examined and the evaluation of the trade registry was included in the context of the principle of trust in the registry.
Demirel (2016)	Master	Trade Registry	The development of the trade registry in comparative law and Turkish law, the Central Registry System (MERSİS), cooperation between international registries, the operating stages of the registry, the duties and powers of the registry manager, the legal consequences of the registration to the trade registry on third parties and those concerned, and the losses arising from the keeping of the registry. The issues of responsibility arising from it have been examined in the light of different approaches in the doctrine and the decisions of the Supreme Court. In addition, in order to ensure the confidence in the accuracy of the dicil information and to fully realize the transaction security, a detailed examination has been carried out on the "trust in appearance principle" and the joint and strict liability of the state-related chambers of commerce and industry for the damages arising from the keeping of the registry. The study also includes detailed information about the conditions of this responsibility, the compensation case and the recourse mechanism.
Yıldırım (2014)	Master	Legal Effects Of Commercial Register	The legal effects of the trade registry were examined by comparing the provisions of the (old) Turkish Commercial Code No. 6762 and the (new) Turkish Commercial Code No. 6102. The legal consequences of registration with the trade registry on legal action and third parties and registration persons have been examined in detail.
Develi (2013)	Master	Legal Results Of Registration To Commercial Register	The legal consequences of registration with the trade registry on third parties and those concerned, the place of the principle of trust in the registry in our legal system, the responsibility of the state and the bodies that keep the registry registry, the legal nature of this responsibility and the recourse mechanism to be operated against those who are at fault in causing the damage have been examined in detail.
Gül (1996)	Master	The Trust Principle To Trade Registry In Positive And Normative Law	The acceptability of the "Reliance on the Registry Principle" has been examined within the scope of its theoretical and philosophical foundations, and legal opinion theory has been emphasized.



**Table 2: Articles (National and International) based on Trade Registry and Turkish Trade Registry Gazette**

Type of Study	Author	Title	Summary
Articles (National)	Karaahmetoğlu (2021)	Thrd Person In The Trade Registry As Part Of Tax Office	The legal concept of 'third party' in the trade registry records has been examined specific to the tax office.
	Ergene (2021)	Recognition And Legalisation Of Foreign Certificates Of Succession For Registration At The Turkish Trade Registry Offices	Recognition and legalisation of foreign certificates of succession for registration at the Turkish trade registry officeshas been examined.
	Karaege (2020)	The Effect Of Commercial Register Records On Third Parties	The relation between “trust in appearance” principle and positive and negative effect of commercial registerhas been examined.
	Özsungur (2018)	The Registration Of The Distant Of Uncertificated Securities In Joint Stock Company To Trade Registry Issue	Notification of unregistered securities to be registered by the enforcement office, by explaining the effects of registration, doctrine, foreign law, the purpose of the legislator, EBC (Execution and Bankruptcy Law), cognitive instructions and their connections.
	Dinç (2017)	Trade Registry According To Turkish Commercial Law No 6102 And Trade Registry Regulation	The organization of trade registry and the concept of the trade register in the context of the aforementioned legislationhas been examined. Then, respectively he has been discussed and researched on these concepts: 1. Commercial register of the properties, 2. The process of the registration, 3. The functions of the trade register. The concept of liability from the actions which is about the trade register has also been addressed in his article. While these studies are conducted, the Supreme Court’s decisions and doctrines about trade registry has also been examined and discussed. And his thoughts on trade registry has been declared.
	Özsungur (2017)	Ordinary Partnership Concept And Registration Of Commercial Enterprises With A Company Structure Without Legal Personality Of Trade Companies To Trade Registry Offices	Various types of ordinary partnerships, the problem of ordinary companies, the status of the “ordinary partnership” of the legal entity in practice were tried to be explained legally and the fact of registration in the trade registry and the legal entity ordinary partnership registered in the trade registry when requested were emphasized in this context.
	Özsungur (2014a)	The Problem Of Registration And Publication Effects In Commercial Register	The effects of registration and publication has been examined with doctrine, foreign law and legislation.

	Özşungur (2014b)	Registration Stages And Types Of Registration To Commercial Registry Offices	Registration to commercial register stages and types are clarified with applicable legislation and references from foreign legislation.
	Ayhan (2012)	Commercial Business, Trader, Trade Registry , Trade Name And Unfair Competition.	The topics of commercial business, trader, trade registry , trade name and unfair competition has been examined.
Articles (International)	Baumgarte (1992)	Trade Registry As Source Of Information-What Prosecutors Can Learn From The Handelsregister	The role of the trade registry as a source of information for the prosecutor has been examined.
	Apan (2016)	The System Of Interconnection Of Trade Registries In The Eu Member States As Instrument Facilitating Foreign Direct Investments (Fdi)	The public nature of the data provided by the trade registry from an institutional point of view, on the basis that the Romanian Trade Registry is a public institution with legal personality under the Ministry of Justice has been analyzed.

When the literature on the “trade registry” is examined, it can be said that the studies are mainly "law". It should be brought to the attention of researchers that studies on the trade registry in terms of business and accounting have not been carried out, especially the experience (minimum 65-year registry records) existing within the Turkish Trade Registry Gazette. The aim of this study is to bring to the attention of researchers the importance of the Turkish Trade Registry Gazette in terms of business and accounting history studies.

### 3. THE TURKISH TRADE REGISTRY GAZETTE

In the 4th paragraph of the 35th article of the Turkish Commercial Code No. 6102, the provision "announcement is made with the Turkish Trade Registry Gazette, which is specific to the announcement of registry records throughout Turkey" is included. The Turkish Trade Registry Gazette, on the other hand, is issued by the Union of Chambers and Commodity Exchanges of Turkey numbered 5174 and the Union of Chambers and Commodity Exchanges of Turkey within the scope of subparagraph (m) of Article 56 of the Law on Chambers and Commodity Exchanges. Over 16 thousand issues have been published in the publication life that has passed since 21.02.1957, when the first copy of the Turkish Trade Registry Gazette was published by the Union of Chambers and Commodity Exchanges of Turkey. These numbers consist of 5.5 million pages and contain 18.2 million

announcements (<https://www.ticaret sicil.gov.tr/> 10.02.2022).As of 10.02.2022, there are 238 Trade Registry Offices in total, located in provinces and districts. The names of the directorates are included in Appendix 1.

The content of the announcements in the trade registry gazettes is as follows in article 12 of the Turkish Trade Registry Gazette Regulation, which was announced in the Official Gazette No. 25548, which entered into force on 9.8.2004:

*Article 12 – Announcements ordered by the law, by-laws and regulations regarding the issue that makes registration to the trade registry obligatory, as well as announcements given by courts, official offices and public legal entities regarding commercial affairs are published in the gazette.*

*Court decisions regarding bankruptcy and concordat may be announced in the gazette by bankruptcy officers.*

*Announcements that are not compulsory to be published and special announcements may be published in the gazette within the framework of the conditions to be determined by the Directorate, provided that they come after the announcements that must be published.*

More detailed explanation of the types of announcements and the fees for the announcements are presented as follows (<https://www.ticaret sicil.gov.tr/> 10.02.2022):

**Table 3:Types of Announcements and Fee Schedule**

<b>TURKISH TRADE REGISTRY GAZETTE ANNOUNCEMENT FEE TARIFF</b> <b>(Effective Date: 04.01.2021)</b>		
	<b>TYPES OF ANNOUNCEMENTS</b>	<b>Fee</b>
<b>1</b>	Company Announcements (Per-Word)	0,77 TL
<b>2</b>	Company Establishment Announcements (Per-Word)	0,35 TL
<b>3</b>	Cooperative Announcements (Per-Word)	0,40 TL
<b>4</b>	Cooperative Establishment Announcements (Per-Word)	0,25 TL
<b>5</b>	Announcements for Women's/Disabled Initiative Cooperatives (Establishment and Other)	Free
<b>6</b>	Commercial Startup Announcements for Real Persons (Fixed)	100,00 TL
<b>7</b>	Companies and Real Persons Established with Technogirisim Capital Support (Per-Word and Per-Gazette)	0,01 TL
<b>8</b>	Abandoning Trade, Ex officio Registration and Correction Announcements	Free

**Source:** <https://www.ticaret sicil.gov.tr/view/menu/goster.php?Guid=47789513-d647-11e9-bb16-54213e5f8f01> (10.02.2022).

The classification of sample announcements texts for announcements groups is given in the table below:

**Table 4: Classification of Sample Announcements Texts Related to Announcements Groups**

1- Examples of Invitation to Meeting and Postponement Announcements
a. Announcement of Call for General Assembly Meeting – <u>Incorporated Company</u>
b. Announcement of Call for General Assembly Meeting– Limited Company
c. Announcement of Postponement of the General Assembly Meeting
d. Announcement of the Hearing Day of the Case for Cancellation/Boundary of the General Assembly Meeting
e. Announcement of Cancellation of General Assembly Meeting Call
2- Examples of Merger Process Announcement
a. Announcement of Merger Process Investigation Right Announcement
b. Announcement of Call to Creditors Due to Merger – Transferee
c. Announcement of Call to Creditors Due to Merger – Transferred
3- Announcement Examples for Division
a. Announcement of the Right to Investigate the Division
b. Announcement of Call to Creditors Due to Division – Transferee
c. Announcement of Call to Creditors Due to the Partition – Divided
4- Announcement of Call to Creditors Due to Capital Decrease
5- Announcement of Call to Creditors Due to Liquidation
6- Announcement Examples Regarding Capital Commitment
a. Announcement of Call to Pay Capital Commitment (born from the articles of association)
b. Announcement of Call to Pay the Capital Commitment (with the main capital system)
c. Call to Pay Capital Commitment (registered capital system) Announcement
d. Announcement of Notice of Reinstatement (Iskat)
e. Announcement of Cancellation of Shares as a Result of Reinstatement (Iskat)
* As the Priority Right Announcement is subject to registration as per paragraph 3 of Article 461, sample announcement text has not been prepared.
7- Announcement of Call to Creditors Due to the Sale of Company Commodities (Execution-Bankruptcy art.280)
8- Call to Creditors Due to Transfer of Assets (Debts art. 202)

**Source:**<https://www.ticaret sicil.gov.tr/view/hizlierisim/goster.php?Guid=4d57d0fc-8b72-11e9-a292-54e058904e0d> (10.02.2022).

As can be seen in Table 4, the subjects of announcements for businesses are quite extensive. Announcements should be seen as an important data center for both business and accounting history research.

#### **4.THE IMPORTANCE OF THE GAZETTE IN TERMS OF BUSINESS AND ACCOUNTING HISTORY RESEARCH AND ANNOUNCEMENTS SAMPLES**

The announcements in the Turkish Trade Registry Gazette are archived from 21.02.1957 to the present. Announcements as seen in Figure 1; It is classified on the basis of the trade registry directorate, the business registry number, the business title, the date of publication of the announcement, the number of the announcement, the page number, the type of announcement, and the gazette. It can be downloaded in the relevant Gazette (pdf) format. Considering the current situation in terms of accounting history, business and accounting history researches can be carried out on the transactions subject to the announcement with the content analysis method regarding the types of announcements. For example, when the Registry Office is selected as "Erzincan" and the registration number is "Sümerbank Aş-Erzincan Branch." when "3036", which is the registration number of the company, is written, there are 68 announcements, from the "Invitation to the General Assembly Meeting" announcement dated "01.07.1964", which is the first record, to the "Bank (Decisions, Representation and Other)" announcement type, dated 31.12.2001, which is the last record. Registry Gazette Announcements can be accessed in (pdf) format. Announcements accessed in pdf format allow all kinds of analysis.

Considering that the announcements in the Trade Registry Gazette include businesses in the service, trade and manufacturing sectors (on the basis of provinces and subject groups), it is clear that important information about the last 65 years of the history of the Republic of Turkey is archived and is an untouched spring for business and accounting history researchers. is considered by us. In addition, we believe that when the gazette announcements are entered, information about the macro and micro economic structure of the relevant period and the prevailing business culture can be reached.

**Figure 1:Announcements Search**

**Source:** <https://www.ticaret sicil.gov.tr/view/hizlierisim/ilangoruntuleme.php> (10.02.2022).

**Figure 2:A Sample for Announcement of Call for General Assembly Meeting –Sümerbank Inc. (Erzincan)**



**Source:** Türkiye Ticaret Sicil Gazetesi, 1 Temmuz 1964, Sayı:2198, Sayfa:4.

Since the announcements are given on a provincial basis, it seems possible to conduct quantitative research on a regional basis and to historically identify regional differences regarding businesses and fields of activity. The regional establishment, transfer, division or liquidation situations of the enterprises seem to be comparable with the content analyzes of the announcements.

In terms of biographical studies, we think that who the senior managers of the enterprises were at the relevant date, what kind of duties they held and what

kind of decisions were announced in the trade registry gazette will also be important for business and accounting history researchers. In terms of biographical studies, it seems inevitable to include gazette announcements as an additional source and main source.

## **5.CONCLUSION AND RECOMMENDATIONS**

The Turkish Trade Registry Gazette, which has more than 16 thousand issues, 5.5 million pages and 18.2 million announcements in its publication life since 21.02.1957, records the last 65 years of the Republic Period in terms of business and accounting history research. The fact that the gazette announcements texts can be accessed in the order of the announcement date and in (pdf) format from the date of the first announcement to the present should be seen as an important opportunity offered to business and accounting historians by the Union of Chambers and Commodity Exchanges of Turkey. By the way of the scientific content analysis of the announcements texts, business-based historical research will be possible. In addition, the announcement texts should be seen as an important source for accounting history researches including accounting issues (foundation, merger, division, capital reduction, liquidation, capital commitment, sale of company commodities, transfer of assets, call to creditors, abandonment of trade, etc.). Printed versions of the gazette's issues from the first day to the present should be kept in the “**OKTAY GÜVEMLİ ACCOUNTING AND FINANCIAL HISTORY FOUNDATION**” library and made available to interested researchers.

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## APPENDIXES

### Appendix 1: Trade Registry Offices in Provinces and Districts

No	Trade Registry Offices in Provinces and Districts	No	Trade Registry Offices in Provinces and Districts	No	Trade Registry Offices in Provinces and Districts	No	Trade Registry Offices in Provinces and Districts	No	Trade Registry Offices in Provinces and Districts
1	ADANA	4	BOLU	9	KIRIKHAN	1	KÜTAHYA	19	TEKİRDAĞ
2	CEYHAN	4	GEREDE	9	REYHANLI	1	GEDİZ	19	ÇORLU
3	KOZAN	5	BURDUR	9	ERZİN	1	SİMAV	19	HAYRABOLU
4	ADİYAMAN	5	BUCAK	9	ISPARTA	1	TAVŞANLI	19	MALKARA
5	AFYONKARAHİ SAR	52	BURSA	99	YALVAÇ	14	MALATYA	195	ÇERKEZKÖY
6	BOLVADİN	5	GEMLİK	1	MERSİN	1	MANİSA	19	TOKAT
7	ÇAY	5	İNEGÖL	1	ANAMUR	1	AKHİSAR	19	ERBAA
8	DİNAR	5	KARACABEY	1	ERDEMLİ	1	ALAŞEHİR	19	NİKSAR
9	EMİRDAĞ	56	MUSTAFAKE MALPAŞA	10	MUT	15	DEMİRCİ	199	TURHAL
1	SANDIKLI	5	ORHANGAZI	1	SİLİFKE	1	GÖRDES	20	ZİLE
1	AĞRI	5	YENİŞEHİR	1	TARSUS	1	SALİHLİ	20	TRABZON
1	DOĞUBAYAZIT	5	İZNİK	1	İSTANBUL	1	SOMA	20	OF
13	AMASYA	60	ÇANAKKAL E	10	İZMİR	15	TURGUTLU	203	TUNCELİ
14	GÜMÜŞHACIKÖ Y	61	BİGA	10	BAYINDIR	15	KAHRAMANM ARAŞ	204	ŞANLIURFA
1	MERZİFON	6	GELİBOLU	1	BERGAMA	1	AFŞİN	20	BİRECİK
1	SULUOVA	6	ÇANKIRI	1	MENEMEN	1	ELBİSTAN	20	SİVEREK
1	ANKARA	6	ÇORUM	1	ÖDEMİŞ	1	MARDİN	20	UŞAK
1	POLATLI	6	ALACA	1	TİRE	1	NUSAYBİN	20	KARAHALLI
19	ŞEREFLİKOÇHİS AR	66	SUNGURLU	11	TORBALI	16	KIZILTEPE	209	VAN
2	HAYMANA	6	DENİZLİ	1	SELÇUK	1	MUĞLA	21	ERCIŞ
2	BEYPAZARI	6	BABADAĞ	1	ALİAĞA	1	BODRUM	21	YOZGAT
2	ANTALYA	6	BULDAN	1	KARS	1	FETHİYE	21	YERKÖY
23	ALANYA	70	SARAYKÖY	11	KASTAMON U	16	MİLAS	213	BOĞAZLIYAN
2	MANAVGAT	7	TAVAS	1	İNEBOLU	1	MARMARİS	21	SORGUN
2	KUMLUCA	7	ACIPAYAM	1	TAŞKÖPRÜ	1	MUŞ	21	ŞEFAATLİ
26	ARTVİN	73	DİYARBAKİ R	12	TOSYA	16	NEVŞEHİR	216	ZONGULDAK
2	ARHAVİ	7	EDİRNE	1	KAYSERİ	1	ÜRGÜP	21	DEVREK
2	BORÇKA	7	KEŞAN	1	BÜNYAN	1	NİĞDE	21	ALAPLI
2	HOPA	7	UZUNKÖPRÜ	1	DEVELİ	1	BOR	21	ÇAYCUMA

30	AYDIN	77	ELAZIĞ	12	YAHYALI	17	ORDU	220	KARADENİZ EREĞLİ
31	NAZİLLİ	78	ERZİNCAN	12	KIRKLARE Lİ	17	FATSA	221	AKSARAY
32	SÖKE	79	ERZURUM	12	LÜLEBURGA Z	17	ÜNYE	222	BAYBURT
3	KUŞADASI	8	PASINLER	1	BABAESKİ	1	RİZE	22	KARAMAN
3	DİDİM	8	OLTU	1	KIRŞEHİR	1	ÇAYELİ	22	KIRIKKALE
3	BALIKESİR	8	ESKİŞEHİR	1	KAMAN	1	PAZAR	22	BATMAN
3	AYVALIK	8	GAZİANTEP	1	MUCUR	1	ARDEŞEN	22	ŞIRNAK
3	BANDIRMA	8	İSLAHİYE	1	KOCAELİ	1	SAKARYA	22	CİZRE
3	BURHANİYE	8	NİZİP	1	GEBZE	1	AKYAZI	22	BARTIN
3	EDREMIT	8	GİRESUN	1	KÖRFEZ	1	SAMSUN	22	ARDAHAN
4	ERDEK	8	BULANCAK	1	KONYA	1	BAFRA	23	IĞDIR
41	GÖNEN	88	GÜMÜŞHANE	13	AKŞEHİR	18	ÇARŞAMBA	231	YALOVA
4	SUSURLUK	8	KELKİT	1	BEYŞEHİR	1	HAVZA	23	KARABÜK
4	BİLECİK	9	HAKKARİ	1	ÇUMRA	1	TERME	23	SAFRANBOLU
44	BOZÜYÜK	91	YÜKSEKOVA	13	DOĞANHİSAR	18	VEZİRKÖPRÜ	234	KİLİS
45	BİNGÖL	92	HATAY	13	KONYA EREĞLİ	18	SİİRT	235	OSMANİYE
4	BİTLİS	9	DÖRTYOL	1	ILGIN	1	SİNOP	23	KADIRLI
47	TATVAN	94	İSKENDERUN	14	KARAPINAR	18	BOYABAT	237	DÜZCE
				1	SEYDİŞEHİR	19	SİVAS	23	AKÇAKOCA

Source: <https://www.ticaretsicil.gov.tr/view/menu/mudurlukler.php>  
(10.02.2022).



## **Chapter 9**

# **Right to Environment as an Environmental Protective Value**

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## INTRODUCTION

Environment is a phenomenon that transcends borders in terms of its sphere of influence. Natural environment in which people live has been added to the artificial one they later built. Having interacted with natural and artificial environment, pollution problems have arisen throughout the world. Although people did not worry about these problems at first, environmental degradation occurred first in the local dimension and then in the global one. Especially after industrialization, destruction of the natural environment has gradually increased. Human population growth in the 20th century places an incredible burden on the natural environment. Until recently, hazards created by countries according to their level of development have started to change. Developed countries having an established social order and a high level of prosperity in most respects fuels desires of developing countries to reach the same levels. For this reason, natural resources are seen to be intensively offered to the service of industry in these countries. In addition, while the situations of industrial cities in these countries often create great pollution on local basis, they also contribute to the problem on a global basis to a great extent. In this respect, the environment is a phenomenon that is considered as multidimensional and definitely needs global cooperation (Kaypak, 2012: 211).

As humans, our intervention to the environment has now reached a point where it can hardly be overcome. In particular, the point where the world population has reached is close to impossible to cope with for the environment. In this respect, our world has become more fragile than ever. Many problems that feed this fragility have arisen and they even threaten the future of humanity with all the living things in it. Heading problems may be listed as global warming, species on the verge of extinction, destruction of rainforests, thinning and disappearance of the ozone layer, growth of overpopulation, global warming, loss of genetic diversity, acid rain, nuclear pollution, erosion, desertification, famine, floods, withdrawal and pollution of groundwater, oil spills in the seas, excessive fishing, toxic wastes, overcrowding in cities, all of which having destructive pressures on human activities (Foster, 1999: 11-12).

The concept of right to environment has come to agenda after people have been severely affected by destruction of the environment. It has become necessary with this concept to accept the fact that the environment also has an intrinsic value, that is, not because it serves human purposes, but because the environment is also an entity. Failing to protect this intrinsic value of the environment, mankind will also threaten the sustainability of his own life.

Based on the points mentioned above, this study included emergence of right to environment, international basis for the right to environment and articles of



our constitution on the right to environment; thus attempting to concretize the concept of right to environment and to emphasize importance of existence and implementation of the right to environment.

## **EMERGENCE OF RIGHT TO ENVIRONMENT**

Right to environment is one of the third-generation rights that have developed and shaped in the very recent past in human history. If we look at the situation of our world as human beings, we can say that the legitimacy of the right to environment is no longer questionable. We see that universal rights become noticeable and legalized according to needs of time. For example, at the point where technological developments have come today, a lot of data about people is used and stored. This has led to the fact that the right to be forgotten has started to be addressed in terms of protecting people's privacy. People want not to stay on the agenda after situations such as news, interrogation, prosecution, etc. about themselves and to continue their normal lives. As much as such a right seems to us to be a new concept today, the right to environment was once perceived as an unusual concept. In addition, the right to environment is closely related to both individual and solidarity rights in terms of various dimensions of environmental problems and human factor (Kanlı & Küpeli, 2021: 424).

An insight into the development of universal rights gives us that all of them are the ones that have been obtained as a result of great troubles and efforts. There were great difficulties on the way to their development. In summary, very difficult processes have brought these rights to humanity. Although development process of the right to environment does not seem as severe as the others, it has become more palpable after increasing troubles and has consolidated its place in various international agreements in the 20th and 21st centuries. Throughout the development process of the right to environment, the developing technological facilities of humanity have also been effective since humanity can make more accurate predictions about the future. As a matter of fact, footsteps of many troubles predicted in the recent past have become more audible (Abdulahkimogullari et al., 2011: 63). While examining the environment, digitalization and environmental impact, direction and management have also moved beyond the physical environment (Yinanç, 2020: 805).

Having emerged in the last quarter of the 20th century, right to environment is a new generation right. Acceleration of developments in human rights dates back to the 17th and 18th centuries. With the influence of revolutionary movements that emerged in this period, the rights demanding the states to

remain passive and the protection of personal space were adopted. In the 19th and 20th centuries, this time with the effect of industrialization, rights such as work, union, strike, social security, which require countries to be more active and support the individual, came to the fore. In the following years, this time the rights that ensure the survival of humanity have been conceptualized and tried to be secured by international agreements. The right to environment is one of them (Dadak, 2015).

Awareness of environmental problems gained an increasing momentum in the 20th century. However, the air pollution in London in 1952 caused the death of almost four thousand people and caused the health of more than a hundred thousand people to deteriorate, and it was a heavy lesson in terms of showing what environmental problems can do to people. In the time passed over this disaster, besides the dangers that environmental problems may pose, it has also clearly been revealed by global warming that they cut across all borders. As a matter of fact, environmental rights have begun to have universal characteristics in the articles enacted in the laws of countries over time. In this regard, Article 2 of the Environment Law dated 9.8.1983 and numbered 2872, amended by Law No. 5491 defined the environment as “including living things that interact each other and maintain their connection throughout their lives, and as biological, physical, social, economic and cultural settings”. In this definition, it is seen that the environment is defined in its broadest form, including the artificial environment of human. For the sake of environmental protection, to act in line with the principles of 'sustainable environment' and 'sustainable development' corresponds to the nature of the 'environmental right' in terms of guaranteeing the rights of future generations as well as present generations (Olgun and Işık, 2017: 34). Identifying and implementing methods that reduce or prevent wastes, implementing management and systems that will combine social and economic targets with ecological requirements, using the obtained products, and putting wastes back into use are fundamental to achieve sustainable targets (Yinanç, 2017: 79).

The conditions in which we lead our lives as humans are very special conditions for us, and going out of these means that we go out of our living space. Containing these very special conditions in which we live, our planet actually has a highly fragile structure. In this respect, as humans, we seem to usurp each other's right to life with the damage done to the environment. But the problem is not limited to this. There are other living things on the planet we live on, and we have not only intervened in their habitats, but have even caused some of them to become extinct. Moreover, these creatures, in their natural lives, did not harm the world like humans, and in this respect, they are not

responsible for the violations. These creatures are currently not in a position to defend their own rights. For this reason, as humans, our responsibility towards the environment is twice as high (Bilir and Hamdemir, 2011: 143-144).

People can only live in an environment that provides them with life support. For this reason, human beings live only on Earth, among the planets in the Solar System. Pollution, unconscious consumption and destruction of air, water, soil, natural resources, flora and fauna of the world by human beings is not only an environmental problem; this also causes disappearance of life support systems offered by the Earth to human beings and initiates a dangerous process that will naturally lead to extinction of the human species. Therefore, right to environment is a right that should be emphasized because a healthy environment is the prerequisite for all human activities and rights (Bilir and Hamdemir, 2011: 143). At this point, rapid disappearance of a healthy environment has created a fundamental reason for emergence of the concept of "Right to the Environment".

## **INTERNATIONAL BASE**

The rules governing environmental issues in order to eliminate the damage to the environment and prevent it from being repeated resulted in the emergence of "environmental law". Defined simply as "the branch of law that determines the rules regarding the handling of natural resources by the society and allows the necessary sanctions to be applied to those who do not comply with these rules", environmental law serves protection, improvement and development purposes for the environment. Based on the proposition that rights can be valid in areas where there is law, "right to environment" can possibly be made use of in areas where there is environmental law. In this regard, it may be suggested that one of the most important concepts of law on environment is the right to environment (Bilgili, 2015: 564).

The 1948 Universal Declaration of Human Rights is a source for the right to environment as an international law. It proposes a standard of rights to living for everyone. According to those, every individual has the right to health and well-being for themselves and their families, which also encompass access to food, clothing, accommodation, medical care and necessary social services, as well as rights to security in any occurrence of unemployment, sickness, disability, widowhood, elderliness, or other inopportunities in terms of livelihood out of the individual's control. The Declaration published at the end of the 1972 United Nations Conference on the Environment in Stockholm also stated that "Man has the fundamental right to freedom, equality and adequate conditions of life in an environment conducive to a life of dignity and well-

being; and for present and future generations, it is the responsibility of people to protect and develop this environment” (Keleş, 2013: 30).

Taking environmental protection into a more prominent position throughout the world, United Nations Conference on the Human Environment was held in June 1972 in Stockholm. There hadn't been a more profound governmental attendance to the environment issue until its time. Attended by 113 countries, including Turkey, and contributed by many environmental organizations, the Conference is the first international one on environmental issues and is seen as a milestone in the emergence of international environmental law (Güneş, 2012).

Additionally, the United Nations Environment Conference is an international convention that can be accepted as a milestone on environmental law. In the Convention, it was emphasized that the threats posed by environmental problems are aimed at all humanity and cooperation on this issue is adopted. In addition, it is stated in the final declaration that every person has the right to live in a healthy environment and to participate in decisions aimed at protecting the environment. Again, as a result of this conference, the United Nations Environment Program (UNEP) was established (Millet, B., 1972).

The World Charter for Nature, adopted by the United Nations General Assembly in 1982, drew a clear framework for the protection of the environment, emphasizing that human beings are also a part of nature. According to the decisions taken, basic issues regarding the life of living things such as respecting the nature and not disrupting the basic functioning of nature, not making concessions on the diversity on earth, ensuring that the population levels of all wild and domestic life forms are at least sufficient for their survival, and protecting the necessary habitats for this purpose were reported. It is adopted that nature should be secured against degradation by war or other hostile activities (UN General Assembly, 1982).

The UNECE Convention on Access to Information on Environmental Issues, Public Participation in Decision-Making and Access to Justice was adopted on 25 June 1998 at the Fourth Ministerial Conference on the 'Environment for Europe' in Aarhus, Denmark. Together with the Pollutant Release and Transfer Registers Protocol, it protects the right of everyone to live in an environment that is suitable for their health and well-being. These are the only legally binding global instruments on environmental democracy that put into practice Principle 10 of the Rio Declaration on Environment and Development (<https://unece.org/environment-policy/public-participation/aarhus-convention/introduction>).

For everyone to live in a health-friendly environment to provide their well-being was aimed to be guaranteed with the UNECE Convention on Access to

Information on Environmental Issues, Public Participation in Decision-Making and Access to Justice, which was adopted June 25, 1998 at the Fourth Ministerial Conference on the 'Environment for Europe' in Aarhus, Denmark. Pollutant Release and Transfer Registers Protocol which was agreed upon during convention also provides base for an environment-friendly world.

Of the environmental acts, the Aarhus Convention is fundamental as it is a newer one handling the matters comprehensively. It links environmental and other rights and imposes responsibilities for future generations. Additionally, it sets forth responsibilities for all parts of the societies for a more sustainable development. To achieve such development, multiple participation should be achieved, and participations of administrations should also include accountability, under which environmental protection measures take place. Responsibilities of governments are seen to have been added in the convention in a way that they are subject to more transparent and accountable practices in terms of environmental issues. To support a democratic way of handling environmental matters, public participation is promoted, rights to access information and laws are guaranteed and responsibilities are imposed on both governments and public bodies with regard to these issues. Furthermore, the Aarhus Convention establishes a new process for public participation in the negotiation and implementation of international agreements (<https://unece.org/environment-policy/public-participation/aarhus-convention/introduction>).

### **RIGHT TO ENVIRONMENT IN THE 1982 CONSTITUTION**

Although it does not directly include the concept of "environmental right", the environment is integrated with the right to life in the Article 56 of our Constitution. In the title or text of Article 56 of the Constitution, the expression 'right to live in a healthy and balanced environment' is preferred. Although the subject of the right to environment is expected to be an ecologically balanced environment, a healthy and balanced environment constitutes the subject of the right to environment, which is regulated in connection with the right to life in the 1982 Constitution (Semiz, 2014: 9). The first two paragraphs of the Article 56 of the Constitution on the right to environment are: "Health services and protection of the environment" and "Everyone has the right to live in a healthy and balanced environment. It is the duty of the State and citizens to improve the environment, protect environmental health and prevent environmental pollution" (Article 56 of the 1982 Constitution). Article).

Environmental protection can be addressed within the concept of a general title, «healthy environment». From this point of view, the fact that the

environment in which human beings live, in other words, the whole of the conditions, undergoes structural interactions contrary to health is the starting point (Gemalmaz, 1986:233).

According to the relevant articles of our Constitution, living in a healthy environment is a human right and there is no direct mention of an environmental right. However, in many Constitutions, such as the Spanish Constitution (m. 45), the Constitution of Bulgaria (m. 55), the Constitution of Norway (m. 110b) and the Constitution of Russia (m. 42), it is seen that the right to environment is regulated only in a clause specific to the right to the environment (Semiz, 2014 : 9).

## **CONCLUSION**

It is seen that environmental problems have come to a dimension that affects human life and the importance of the environment has been recognized. Human beings, who understand that their own lives are in danger, have tried to find solutions to the environmental problems they have created by understanding the importance of global cooperation. In this process of finding a solution, it is seen that international agreements and conventions including regulations for many environments have been made. Again, it is also important for countries to try to implement the relevant laws by including them in their constitutions for the environment. In the constitutions of some countries, the concept of the right to environment is directly included, while in others the point of protection of the environment is included in human rights. It is also seen that the 1982 Constitution does not contain an article that includes the concept of right to environment, and that a reference is made to the state of a healthy environment.

Although it is an improvement to realize environmental problems on a global scale and to seek solutions, the dilemmas at the point of the right to environment are an indication that the intrinsic value of the environment is not understood. A fundamental point that human life needs to understand today is that the environment alone is a crucial existence. Such existence is one that is precious, not because it serves humanity, but because it has the right to live independently, and human beings have no right to destroy this existence gradually. People should act with an awareness that environment also has rights and they should not exploit it.

The concept of "right to environment" should be included in all national and international treaties and should be put into practice immediately in the relevant articles. It should not be forgotten that the most important way to cope with environmental problems is to accept that the environment has a right, and by realizing this right, human beings who live in accordance with sustainable

environmental principles will ensure their own sustainability. But for this, respect for the intrinsic value of the environment is the first rule.

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## **Chapter 10**

# **Universities as Learning Organizations after the Covid-19 Pandemic**

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## 1. INTRODUCTION

The university is a complex social organization that occupies a strategic position on the educational ladder. Modern universities face new challenges due to the rise of global competition and the knowledge economy (Bratianu & Pinzaru, 2015; Shattock, 2006). The increasing number of world universities ranking has put increasing pressure on them to deliver the best possible education. However, they also need to develop new strategies and programs to meet the new demands of society and deal with some exceptional situations like the global COVID pandemic. For instance, universities need to adapt their mission and vision to meet the needs of society (Secundo et al., 2010).

Drucker (1993) states that universities have strategic characteristics related to research, innovation, R&D activities, and therefore should be learning organizations and states that universities should serve as a force for great change by providing academic research output and the promote economic development for countries. He also believes that the information society and research are currently the main contributors. On the other hand, Zemke (1998) states that the learning organization consists of people who are dedicated to continuous learning and possess this ability. If an organization can create a learning environment that is conducive to continuous learning, then the concept of self-learning will become a vital component of employee training.

Regardless of how it is defined, learning organizations are forward-thinking, innovative, and finding more effective ways to achieve their future goals. The concept of a learning organization is about developing new strategies and methods to improve their efficiency. They are constantly looking for new approaches to improve their performance. This type of organization is also focused on analyzing the factors that influence its learning. To achieve the best possible results, learning organizations must constantly re-evaluate their purpose and develop the necessary skills to change their business structure and culture. Universities can only provide education, research, and knowledge transfer if they are able to react more quickly to changing needs. Changes and responses may vary greatly by individual and region. The modernization of society, i.e. its change and transformation, requires reforms from the universities. Competing ideas for universities make sense for successful innovations (Franke, 1999).

While a learning organization can create a safe and positive environment for its employees, it is also important to foster a culture of openness and creativity to allow its members to develop their talents. This can be done through the development of new ideas and the continuous transformation of the organization. According to Ali (2012), a learning organization is one that is

constantly developing its skills to meet the changing needs of its members. According to Nobre and Walker (2011), cognition is a core competence that organizations and individuals can use to support other complementary abilities, such as autonomy, learning, and intelligence. These skills can help them reduce environmental uncertainties and improve their competitive advantage. They noted that organizations and individuals need high levels of cognition to manage the various environmental uncertainties that can affect their competitive advantage.

With an organizational culture that has organizational process procedures and practices along with widespread core principles and values, fostering learning for all organizational members is not only valued but actively encouraged. Members of the organization can thus act autonomously and develop their creativity and teach others to “learn to learn”.

In organizations, barriers to creativity hinder business progress. Since creativity plays a decisive role in the innovation process, it is considered a formative and sustainable component of performance and change in learning organizations. You also have the ability to develop the leadership potential of others, ensuring that leadership is viewed as collective action. Leadership does not arise at a single level, for example from a single person or an elite group, but at different levels of the organization. Everyone in the organization where innovation and research is paramount, and who is aware of the purpose of learning, is aware that learning consists in advancing and achieving both the institutional and individual interests of its members by: learning individually or collectively (Reece, 2001).

Serrat (2010) emphasizes the importance of learning in an organization's effectiveness. According to Friedman (2005), the rapid emergence and evolution of new economic systems and the complexity of global organizations are forcing them to strengthen their systems. One of the most critical factors that organizations need to consider when it comes to managing their learning is the ability to effectively implement their learning programs. In 2007, Iandoli and Zollo examined the various aspects of learning in their work. They developed theories that focus on practice and experience. Their study aims to provide a comprehensive overview of the various aspects of learning in an organization. It also aims to help people understand the intergenerational learning process. In addition to being beneficial for the organization, intergenerational learning can help prevent employees from leaving the company without a sufficient knowledge base (Ropes, 2013).

The importance of higher education is acknowledged by the European Union as an integral part of the development of society. It is expected that universities

will be able to contribute to the growth of the knowledge economy by increasing their knowledge production and transfer.

Due to the rapid emergence and evolution of various economic and social conditions, universities have to adapt their programs and facilities to accommodate these changes. One of the most challenging factors that universities have to consider is the training of students for new jobs (Bharath, 2015). Through the establishment of a learning organization, universities can continuously adapt to the changing environment and improve their efficiency. It can also help them maintain their competitive advantage and increase their profits. In addition, universities are expected to uphold their social responsibilities.

The advent of the COVID-19 pandemic has highlighted a paradigm shift in how organizations and academia respond to change. Until the COVID-19 pandemic, most higher education institutions preferred a cautious and incremental approach when it comes to implementing change, even when it requires agility in their operations. Some colleges that attempt to implement new processes and models end up with drastic changes that their staff find inhumane. Despite the various technological advances that have taken place in higher education over the years, institutions' traditional beliefs about the use of new technologies have not changed (Arghode et al., 2022).

One of the biggest challenges during the COVID-19 pandemic has been the transition to online learning. To facilitate the use of new technologies, universities tried to acquire the necessary equipment and support. They also offered consistent training to their faculty members (Miller, 2021). Although the introduction of the new teaching method caused much confusion, stakeholders and faculty members quickly adapted to the new approach. Despite the various technological advances that have taken place in higher education over the years, the lack of support from faculty members has still been one of the biggest challenges they faced in the transition to online learning. To address this problem, education leaders have begun to accelerate the development of new tools and methods that enable effective and efficient teaching (Turnbull, Chugh, & Glück, 2021).

## **2. ORGANIZATIONAL LEARNING**

The concept of organizational learning refers to the ability to identify, correct, and define mistakes in order to transform the knowledge base and organizational value. This process can help create new action skills and problem-solving abilities (Vahs 2012: 460). An organizational learning process involves changing the knowledge base of an organization, improving the skills

of its members, and establishing a common frame of reference for all members of the organization (Probst & Büchel, 1998: 17).

In their book, Steinmann and Schreygg (2005: 512-524) talk about four types of learning that are commonly used in organizational learning: (1) learning from experience, (2) mediated learning, (3) learning through the incorporation of new knowledge, and (4) generation of new knowledge.

*Learning from experience:* Through the learning process, an organization can build on its previously collected experience. This process tests the effectiveness of the strategies that have been used in the past to solve a new problem. The results of the evaluation are then used to improve the knowledge base of the organization. *Mediated learning:* Through the use of mediated learning, an organization can acquire new knowledge from another. This can then be used to improve its own operations and make its products and services more effective. For instance, by exchanging knowledge at conferences or trade fairs, an organization can enhance its marketing and sales. One of the most important factors that an organization should consider when it comes to learning is the comparison with other organizations. This allows them to identify potential deficits and improve their own organization's performance. *Learning through the incorporation of new knowledge:* New knowledge can be incorporated into an organization through the hiring of an expert or acquisition of another company. *Generation of new knowledge:* According to Schreygg and Steinmann, the fourth form of learning is the generation of new knowledge, which can be used within an organizational learning process. This type of learning can help organizations gain competitive advantages by developing new knowledge that can be linked to existing ones.

To better understand the relationship between learning and change, it is important to distinguish the various learning levels. Argyris and Schön define three learning levels, namely, single-loop learning, double-loop learning, and deutero learning (Argyris & Schön, 1999: 35-36).

*Single-loop Learning.* The concept of single-loop learning refers to the first learning level in an organizational structure. It is about identifying and correcting mistakes. Although single-loop learning can solve some of the problems presented, it does not address the underlying issues of why these problems were first created. It focuses on the actions and processes that are designed to respond to the changes brought about by the environment. This process can be considered as an operational adjustment. However, it can only be successful if the culture of the organization is conducive to learning. One of the most important factors that can be considered when it comes to implementing single-loop learning is the availability of feedback. In a single-loop learning

environment, team members are able to adapt their behavior to the goals and norms of the organization. This type of learning is referred to as adaptive learning (Schreyögg & Geiger, 2016: 399).

*Double-loop Learning.* The concept of double-loop learning refers to the second level of learning. It is commonly used in combination with other forms of learning to develop a deeper understanding of the organization's values and beliefs. In dual-circle learning, the beliefs and values that have been in place for a long time are often questioned and changed. This type of learning can also be used in a conflict resolution process to resolve disagreements among the members of the organization (Vahs, 2015: 400, 433). Learning through double loop is a process that can only be done by an individual or group. It involves identifying and correcting errors that can affect an organization's norms and values. This level of learning is usually required for organizations to develop effective practices (Argyris & Schön, 1999: 36-37). All members of an organization are expected to be open and willing to make changes to the core values and actions of the organization. This can be done through the establishment of an open working environment (Vahs, 2015: 433).

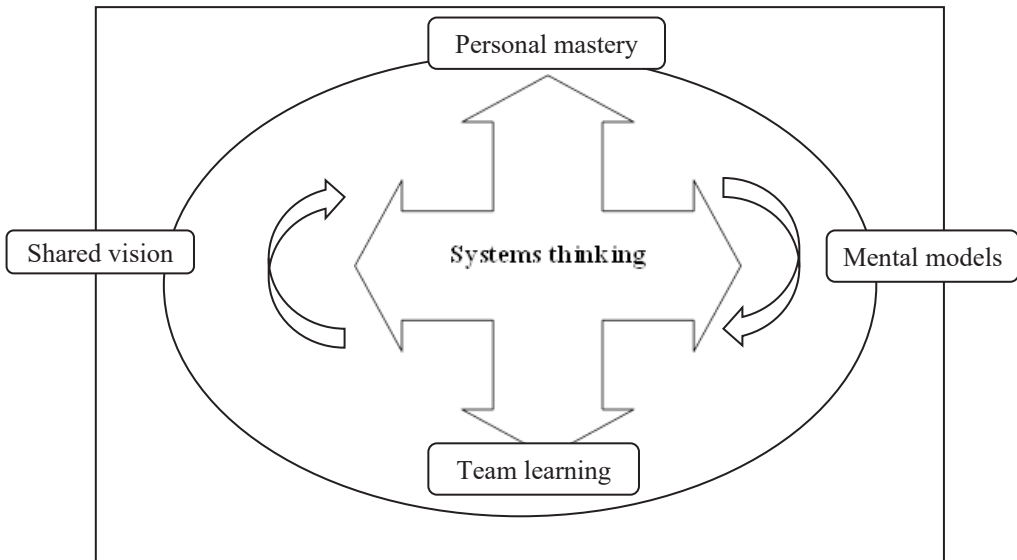
*Deutero Learning.* To effectively practice Deutero-learning, all members of the organization must have the necessary skills to master both double-loop and single-loop learning. This level is referred to as process learning or developmental learning, and it is a kind of meta-level that involves identifying and developing problem-solving skills. In Deutero learning, learning is the object of the process, and the learning context is reflected in the learning outcomes (Vahs, 2015: 434). This process aims to break down the barriers that prevent organizations from fully integrating learning into their daily lives. It also helps them become more willing to learn. The learning processes that are used on the double-loop and single-loop levels are analyzed and modified depending on the situation (Schreyögg & Geiger, 2016: 400).

### **3. LEARNING ORGANIZATIONS AND HIGHER EDUCATION INSTITUTIONS**

Peter Senge developed a new way of thinking about management that he referred to as the learning organization. His 1990 book "The Fifth Discipline" became a classic in the field of business management (Sauter, 2011). Senge identified the first four disciplines as the core elements of a learning organization. These include personal mastery, team learning, shared visioning, and mental models. The fifth discipline, systems thinking, is regarded as the central component of the learning organization (see Figure 1). It involves



bringing together various disciplines to develop a common understanding (Senge, 2011).



**Figure 1.** The five disciplines (based on Fassbender, 1997: 57).

*Personal mastery* – the discipline of self-leadership and personality development. According to Senge, this discipline is about developing a person's personality and self-leadership skills. A person with a high level of personal mastery can easily and consistently pursue their goals and vision. They can also deal with situations that can arise in life and approach it with a positive mindset.

This discipline can only be successful if the individual is open to new things and constantly learning. According to the definition of personal mastery, it involves developing a deeper understanding of yourself and improving your performance. In addition to being able to identify and develop a personal vision, the discipline also involves developing a passion for learning and being able to look at reality objectively. The concept of personal mastery refers to the continuous process of learning. (Senge, 2011: 17-18).

*Mental models.* According to Senge, people tend to carry various mental models with them, and these are ingrained assumptions and stereotypes that can have a significant impact on how they perceive the world. He said that people should become aware of their inner mental models so that they can develop new stimuli and ideas (Senge, 2011: 18-19).

*The shared vision.* Large organizations can only succeed if they have clear goals, values, and visions. Having these goals and visions can help employees

develop their individual talents and improve their performance. These goals and visions can help create a common corporate philosophy and encourage employees to work together seamlessly (Senge, 2011: 19-20).

*Team learning.* The goal of team learning is to develop a common understanding of each other and to encourage members to engage in collective thinking. This can be done through the exchange of knowledge and skills. Each member of the team has a unique set of skills that they can use to improve their performance. The members of a team can learn from one another and exceed their combined intelligence if they are able to exchange knowledge. An organization can only develop and learn if it is capable of learning. One of the most common obstacles to team learning is the lack of recognition of the structures that prevent members from learning. This is why it is important that all team members are aware of these structures. This is the only way they can improve their performance and develop a common understanding of each other (Senge, 2011: 20-21).

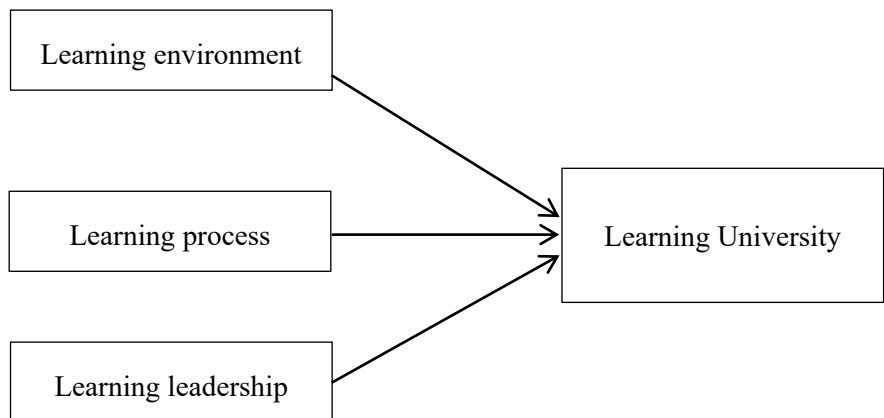
*Systems thinking.* According to Senge, systems thinking is the foundation of a learning organization. The other four disciplines are also interrelated. No individual or situation within an organization can be viewed in isolation. Instead, they must be considered together to determine the relationships among the various components of the system (Senge, 2011: 23-24). The concept of systems thinking aims to identify and understand the various patterns that can be changed to improve the efficiency of the organization (Senge, 2011: 17). Systems thinking is focused on identifying and understanding the big picture of an organization. However, this can only be achieved if the individual parts of the system are understood (Senge, 2011: 16-17).

In 2008, a team of researchers conducted a study to develop an assessment tool that helps learning organizations measure their depth of learning (Garvin et al., 2008). The three building blocks of a successful learning organization are a supportive environment, concrete learning processes and practices, and supportive leadership. A supportive learning environment encourages individuals to explore new ideas and make collective decisions. It also provides opportunities for learning practices and processes.

One of the main differences between traditional structures and learning organizations is that the latter requires certain features. These include the development of systems thinking, team learning, mental models, and shared vision. It is therefore important that the disciplines are combined to form a learning organization. From this point of view, the main differences between the traditional organization and the learning organization can be listed as follows; “a) Determining the organizational direction, b) Formulating and implementing

ideas, c) Structure of the organizational thought system, d) Conflict resolution, e) Leadership and motivation processes” (Şimşek & Çelik, 2010).

As learning organizations, universities are expected to have a variety of learning processes and procedures. However, they are not always clear about their vision of being a learning organization (Bratianu, 2009, 2014). Every university structure has different offices for different administrative departments and faculties. In these offices, people can freely and easily share their knowledge with one another. However, if the university wants to become a learning organization, it needs to develop strategies to promote and implement organizational learning. A university can be regarded as a learning organization if it has the following conditions: A supportive learning environment, a learning leadership that can transform the organization, and concrete learning processes (see Figure 2).



**Figure 2.**Necessary requirements for a university as a learning organization  
Source: Bratianu, 2009, 2014.

In order to create an environment that is more empowering and engaging for staff, students, and faculty, organizations need to adopt an organizational learning framework. This type of learning should enable them to be proactive in addressing changes and helping others adapt to them.

According to the theory of situated learning, group members can learn more effectively by experiencing new situations and navigating to a different state of being. By adopting a cooperative learning approach, leaders can play a vital role in ensuring that learning is implemented. They can assign responsibilities and roles so that members can learn together and contribute to the organization's goals and mission. This theory holds true in the wake of the COVID-19 pandemic, as schools and colleges need to be constantly alert to the threat.

## **Learning Environment**

Although Garvin et al. (2008) acknowledge the importance of the internal environment, they stated that the external environment can also affect the behavior of an organization (Bratianu et al., 2016; Christopher, 2012). For example, culture and legislation can influence an organization's managerial decisions. Due to the nature of European universities' public nature, their managements are not fully autonomous. This makes them dependent on the government's funding system, which can limit their academic management decision-making.

The goal of an organization's internal learning environment is to create a dynamic culture that promotes continuous learning and a visionary leadership. This can be achieved through the use of a motivational system that can help foster effective and challenging leadership (Alvesson & Spicer, 2016). A culture in which people learn and contribute together is shaped by the prevailing environment. "Organizational culture is both a compass that guides people and a prison that limits their freedom. Culture guides and integrates people within the organization, but it also blinds and suppresses thinking" (Alvesson & Spicer, 2016: 193). This process can be very challenging and requires both managerial and individual effort. Developing a strong motivation system and a clear goal are some of the most important factors people should consider when it comes to learning. In addition to being able to learn, it is also important that people are willing to put in the effort to improve their skills. This process can be done by establishing a set of values and a strong motivational system.

## **Learning Processes**

There are two types of learning processes in any organization: First, professional activities focus on learning how to perform well in a particular area, while the second focuses on learning how to use the collective power of the organization to improve performance. Universities focus on learning processes, while industrial organizations focus on their production. The outputs of the production process are designed to provide students with the necessary skills and thinking models to succeed in their future careers. Although the current business environment requires a focus on developing thinking skills rather than imparting knowledge (Bratianu & Vatamanescu, 2017), many students still need a mindset shift.

Learning should be a process that involves the creation and transfer of knowledge. It should also involve the retention of knowledge. The goal of information sharing and storage is to achieve a balance between the various aspects of an organization (Bratianu & Bejinaru, 2016). Intergenerational

learning can help improve the processes of learning within universities, as these are age-tier organizations (Bratianu et al., 2011).

In order to ensure that what is learned is managed effectively, knowledge production should be completed with "knowledge management", which is another prominent process in public institutions such as universities. The first step in the knowledge management process is the acquisition of knowledge. This process involves the use of various methods such as single-loop, double-loop, and deuteron learning. Organizations can then reach their employees through informal and formal methods. The next step is to analyze the information. This process will allow employees to make informed decisions and improve the efficiency of their organizations. The third step is to store the information in an organizational memory. This type of system can be used to store data for future use. The concept of transformation refers to the process of creating a learning organization. It involves three main phases: developing a learning climate, investing in corporate learning, and improving knowledge management processes. The first step in developing a learning environment is to create a conducive atmosphere for collective and individual learning (Maden, 2012).

### **Learning Leadership**

One of the most critical factors that organizations consider when it comes to developing their operational capital is leadership. This is because it can help them gain competitive advantage and transform their intellectual capital into a more effective asset (Bratianu, 2011; Donina et al., 2015).

Leaders can create a learning environment and culture for a dynamic learning organization (Garvin, 2008). In the process of ongoing learning and in these unprecedented times where rapid adaptation to face emerging challenges has become the new norm, perhaps most prominently the principles and practices of learning organizations and leadership's guidance are more important than ever. To go beyond ambitious goals and for universities to function as learning organizations will require both technological capacity and consistent leadership behaviors that ignite faculty motivation, thinking and innovation.

Employee vision is crucial in developing a learning organization. It is also crucial that the organization supports and converges to its goals. The discipline of shared vision works better in organizations with a culture of high social collectivism and future orientation (Alavi & McCormick, 2004).

One of the most successful disciplines in universities is systems thinking. This discipline is associated with various constructs, such as organizational culture and leadership. The concept of systems thinking refers to the ability to

recognize and visualize the importance of decisions made by individuals and groups. This is done through the learning of leadership abilities.

Leaders in a learning organization also need to find the right people for their teams. Leaders need to recruit the right people and support their growth for follower development and organizational success. Most leaders want to attract and retain the best talent to achieve their goals. However, there are other ways to achieve this goal and develop an effective team. According to Carol S. Dweck (2007), people are often prevented from achieving their goals because of their fixed mindset: The belief that their abilities are fixed and cannot be developed. Leaders who strive to learn from failure are more likely to succeed. They also learn from their mistakes and develop their ability to take more risks. Learning organizations help leaders create a supportive environment that encourages followers to take risks.

#### **4. UNIVERSITIES AS LEARNING ORGANIZATIONS AFTER THE COVID-19 PANDEMIC**

In today's climate of uncertainty and rapid change, agility is becoming a critical part of an organization's survival strategy. According to Anderson (2018), agility is required to respond quickly to unforeseen threats and risks that may affect an organization. Holbeche (2015) noted that agility can help an organization develop and implement flexible and agile capabilities.

In order to effectively achieve their goals and improve their operational efficiencies, higher education institutions must become agile organizations. They should also reflect highly on their failures and successes so that they can develop and implement effective agility skills. In addition, they need to continuously improve the skills of their employees to adapt to the changes brought about by the rapid emergence and development of new technologies (Anderson, 2018).

Agile organizations have characteristics such as fast and efficient operations, flexibility to adapt to change, and the ability to make quick decisions to take advantage of opportunities as they arise (Pasmore & O'Shea, 2010). According to Williams, Wolley, and Lawler (2014), colleges should focus on not chasing after every idea and choosing those that can achieve their goals.

According to Lombardo and Eichinger (2000), learning agility consists of four main components: (1) *People agility*, which refers to individuals being able to learn from their own experiences and situations, being resilient, and others to be treated with respect and dignity. (2) The concept of *results agility* refers to individuals who can overcome challenges and work at a higher level. You can inspire others to achieve their goals and perform better in difficult

circumstances. (3) *Mental agility* enables the individual to think critically and confidently. They tend to explain their thinking to others. (4) The concept of *change agility* refers to individuals who are curious about new ideas and can seize opportunities as they arise.

In order to become an agile organization, it is important that universities invest in the learning of their employees. Individuals must first engage in holistic engagement to develop effective agility skills (Meyer, 2016). Afshari and Nasab also emphasized the importance of developing and managing talent within an organization (Afshari & Nasab, 2021).

According to Anderson (2018), agile organizations learn to develop agility. They do this by employing a variety of leadership styles and processes that are not tied to traditional hierarchical structures. For example, instead of having a leader providing strategic direction and directing people, agile leaders are more involved in the development of their teams.

The concept of agile leadership has been criticized for its limitations in complex and unpredictable environments. Instead, it is considered a post-heroic leadership style. Anderson emphasizes that agile leaders should develop a vision that inspires and motivates their teams. They should also explore and learn from different perspectives so they can improve their team's collaboration and develop effective communication skills. If possible, they should also take on a supporting role (Anderson, 2018: 272).

## **5. IMPLICATIONS FOR PRACTICE**

An organizational learning strategy is an effective tool for addressing various challenges faced by higher education institutions. These include managing budgets, faculty and staff turnover, diminishing student enrollment, and student wellness. As part of the institutional reforms process, learning should be used as a catalyst for developing and implementing effective interventions that can improve the performance of organizations (Arghode et al., 2022). To effectively function in the information age, which is characterized by the rise of knowledge workers and the increasing number of data sources, higher education institutions should embrace and practice organizational learning. This type of process is considered to be an integral part of their mission.

## **6. CONCLUSION**

Despite the importance of organizational learning, the traditional response mechanism to address the challenges of competition may not be able to provide the necessary support to enable organizations to achieve their goals. This is why

it is important that organizations adopt a more agile and resilient approach. The learning process in higher education institution is often disrupted by the various factors that can affect its structure and function, such as competition, insularity, non-uniformity, and structural inertia (Shin et al., 2017). This is also exacerbated by the long-standing resistance to change that has been built into the traditions and rituals of the organization (Popova-Nowak & Cseh, 2015).

The leadership of universities is responsible for the development and implementation of strategies that will improve the quality of education and increase the productivity of their intellectual capital. Universities are organizations focused on producing knowledge and transferring it to society. Due to the rapid emergence and evolution of new technologies and increased competition for talent, universities are under pressure to provide the best possible education. For a university to be successful, it is very important to be a learning organization. It should have a supportive environment, develop effective learning processes, and have a learning leader who inspires and motivates his students.

The emergence of the COVID-19 pandemic has shown that educational institutions can only take on new challenges through learning, collaboration, creativity, resilience, ingenuity, agility and patience. In addition to reacting to the changes caused by external factors, universities should also use internal factors to improve their performance. Although the process of building a learning organization can be long and involve multiple steps, contrary to popular belief, educational institutions today are not the slowest to change. One of the most important factors that educational institutions should consider when building a learning organization is the ongoing collaboration of all their stakeholders. This differs from corporate organizations that focus on maximizing profits. The goal of education is to provide quality learning. However, it is very difficult to measure and achieve this (Arghode et al., 2022).

The complexity of this system is a major learning challenge for managers. They have to learn to deal with the changes and accept that they have to hand over power to the organization. The learning objectives and required competencies are then modified to include topics such as network knowledge, combination knowledge, and relevance knowledge (Sauter, 2011).

According to Senge (2011), a great teacher is someone who encourages and enables others to learn. To be a truly great teacher, one must first be a learner. For this reason one should usually start first with the development of learning systems tailored to the needs of teachers and trainers. This can be done through a competence development framework tailored for educational planners and



trainers. Only then can they design and implement truly effective learning spaces.

Finally, considering today's rapidly developing technological developments, it can be said that the theoretical and descriptive studies on the concept of learning organization are somewhat inadequate and old. However, it is necessary to advance the efforts in the field of education, research and practice that shape the future with more concrete studies to be done in the future. What is important here is that the structure of the learning organization should be redesigned by acting in full cooperation with public and private institutions, higher education institutions and its stakeholders.

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## **Chapter 11**

# **The Relationship of Air Transport with Foreign Trade Volume and GDP in Turkey: A Time Series Analysis**

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## **1. Introduction**

With the Air Deregulation Act enacted in 1978, the USA de facto liberalized the air cargo and passenger transportation sectors. Global air transport has also been progressively liberalized, largely because of the “Open Skies” initiative. As competition intensified with the liberalization steps in the sector, air traffic figures increased in parallel. With the increase in the demand for the air transport mode, the aviation sector has become one of the sectors that have significant effects on the economies of the countries. Global air transport is not only a large sector on its own, but also a very important sector in terms of providing input to the economy by growing with a rapid acceleration.

Air transportation, which has an important role in economic growth and development, increases the advantage of speed and adaptation to market conditions on a national, regional, and global scale. While it contributes to foreign trade with freight transportation, it also contributes economically (Tuncer, 2021: 199). Globalization has brought about an increase in the world trade volume as it allows the free movement of goods across borders. Access to raw materials and intermediate goods required to produce goods in foreign trade is achieved through transportation, and again thanks to transportation, productivity gains are ensured, and economic growth is also contributed (Saatçioğlu & Karaca, 2018: 819).

Air transport facilitates economic growth, especially in developing countries. In addition, air transport provides the fast transportation necessary for global trade and facilitates foreign trade. It enables the globalization of production by providing access to global markets and helps countries to contribute to the global economy (ATAG, 2005; ATAG, 2020; Perovic, 2013). The air transport sector has an important role in economic growth as it facilitates foreign trade, foreign direct investments, and tourism, and provides global connections. These economic benefits created by air transportation are not limited to the ones mentioned, but it is an issue that should be handled from a very broad perspective. Knowing the interactions of air transportation with the economy is important to better understand the economic effects of the industry.

With the emergence of e-commerce in parallel with technological developments and express cargo carriers such as DHL, UPS and FedEx benefiting from the rise of e-commerce, the value of air transportation in this sector was emphasized once again in 2016, when online retailer Amazon branched out and started operations. (ATAG, 2020: 22). The importance of air cargo in transportation, which is one of the most basic elements of global trade, is increasing day by day.



The main purpose of the study is to contribute to the understanding of the relationship between air transport and economic activity. In this context, it is aimed to determine whether the increase or decrease in the amount of passenger and freight transportation carried out within the framework of air transport mode in Turkey influences GDP and foreign trade. To reveal the relationship between foreign trade and GDP and air transport, a regression analysis was carried out with annual data for the period between 1988 and 2018. After the regression estimation, the results of the impulse-response analysis are also included. Before the analysis and finding's part, a brief overview of the existing studies in the literature is presented. Then, air transportation was examined in terms of foreign trade and economic growth, and the importance of the relationship between them was emphasized. In the last part, the variables used in the analysis, the results of the analysis and the findings are given.

## **2. Literature**

Njegovan (2006), in his study investigating whether shocks affecting air passenger traffic are permanent or not, concluded that shocks to air passenger traffic for the UK, Germany and Australia are largely temporary and generally do not require a revision of long-term forecasts. Chang and Chang (2009) examined the existence of a causal relationship between the expansion of air cargo movement and economic growth in Taiwan. Their findings showed bidirectional causality between these variables. This means that changes in air cargo movements affect economic growth, and changes in economic growth also affect air cargo activities. Ishutkina and Hansman (2009) used a feedback model to explain this relationship in their research examining the relationship between air transport passengers and GDP. According to the main finding of their research, it has been revealed that air transport demand is directly affected by external demand shocks, economic recessions, political and economic sanctions, and the development of other transport modes. Marazzo et al. (2010), in their research examining the relationship between air transport demand and GDP for Brazil, concluded that PAX (passenger-kilometer) and GDP are cointegrated. Chi and Baek (2013), in their study examining the dynamic relationship between economic growth and airline demand in the USA, revealed that both passenger and cargo services tend to increase with economic growth in the long run. In the short term, it has been determined that only passenger transport is sensitive to economic growth.

Frankel (1997) focuses on the export of high-tech capital goods from the United States. He argues that international air transportation can affect the success of exports. Kuledran and Wilson (2000) investigated the relationship be-

tween international travel flows and international trade using cointegration and Granger causality. As a result of their research, they concluded that this relationship exists. Brugnoli et al. (2018), according to the main finding of their study, which deals with the relationship between international trade and civil aviation, air transport has a positive effect on international trade with flexibility ranging from +0.003% to 0.13%. Cristea (2011) in her study, in which she examined the relationship between airline passenger demand and export, concluded that the increase in export volume increased the demand for business class air travel. Vijver et al. (2014), in their study examining the causality between trade and air passenger travel, examined the Asia-Pacific example for the period between 1980 and 2010. According to their basic findings, there is no significant causal relationship between the region's most advanced economies (eg Australia-New Zealand). Often there is substantial causality for relationships between developed and less developed economies (eg Australia-Thailand) from airline passenger transport links to trade. Alderighi and Gaggero (2017) empirically examined the relationship between air transport and trade with six-month data for the 1998-2010 period. Research findings: shows that air transport service has a positive effect on the exports of Italian manufacturers.

### **3. Air Transportation**

The importance of air transportation is increasing day by day in parallel with many developments such as increasing global trade volume, economic growth, technological development, and the production of wide-body aircraft. As in the rest of the world, civil aviation policies have been established in Turkey and the volume of air transport has gradually increased with liberalization. The increasing importance of the aviation sector is also due to its economic contributions. The sector, which makes extremely important contributions to the economy in terms of macro dimensions, affects many basic indicators such as economic growth, employment, foreign trade, and economic development. In the following section, the links between foreign trade and economic growth, which are examined within the scope of the analysis, are briefly explained.

#### **3.1. Air Transportation and Foreign Trade Connection**

Air transport facilitates global integration and workforce mobility as it offers access to global markets. While aviation activities provide benefits in the transportation of traded goods, they are also used as a tool to ensure labor mobility (Brugnoli, 2018: 96).

Since air transportation provides fast transportation of high value-added goods, the economic value created by air cargo is constantly increasing. The

sector, which contributes to the development of foreign trade with fast transportation, has an important role in increasing import and export volumes. According to the report published by ATAG (Air Transport Action Group) in 2020, 4.5 billion passengers and 61 million tons of cargo were transported globally in 2019. The total value of goods transported by air represents 1% of all international trade. Direct employment created by passenger and freight transport activities was 11.3 million and its contribution to the global Gross Domestic Product (GDP) was 961.3 billion dollars (1.1% of global GDP) (ATAG, 2020: 19). Air transport facilitates foreign trade and provides countries access to global markets. In this way, production is also globalizing (Perovic, 2013: 57). Thanks to the speed benefit of air transportation, it is possible for the production lines to work smoothly and efficiently. In addition, thanks to the developing technology, the e-commerce system has emerged with the spread of the internet and thus, e-commerce businesses operating in the international market have created a new demand for air cargo (Karakavuz, 2021: 124). In summary, air transport is one of the most important modes of transport for the global distribution of goods and services, and its importance is increasing day by day.

### **3.2. Air Transport and Economic Growth Connection**

Transportation has a critical importance for all sectors in the development of national economies. Trade, tourism, and development in many areas depend on the development of transportation opportunities. Used by all sectors, global air transport is generally recognized as a driver of economic growth for many countries.

The aviation industry and economic growth are in mutual interaction. As economic growth increases, air traffic figures also increase, and as air traffic increases, it contributes to economic growth. There is the possibility of feedback effects from economic growth to air cargo expansion (Chang & Chang, 2009: 264). Air transport contributes at least 2% to GDP in most developed countries (Perovic, 2013). Thanks to this interdependence of air transportation and economic activities, employment in the economy can be provided and economic activities can be realized depending on the existence of activities in the sector (Ishutkina, 2009: 3). The increase in traffic figures in the sector, thanks to air transport and the strong impact on the economy, is also increasing in GDP thanks to the rise in demand.

## **4. The Econometric Model**

Within the scope of the analysis, annual data for the period between 1988 and 2018 were used. Data on GDP, imports, exports, and the total amount of

passengers and cargo transported by air are used. The model equations used for regression analysis are given below.

*Model 1:*

$$LN\_YUK_t = \beta_0 + \beta_1LN\_GSYIH_t + \beta_2LN\_ITH_t + \beta_3LN\_IHR_t + \varepsilon_t$$

*Model 2:*

$$LN\_GSYIH_t = \beta_0 + \beta_1LN\_YOLC_t + \beta_2LN\_YUK_t + \varepsilon_t$$

Air freight transportation: Model 1 was created to reveal its effect on GDP, export and import volumes. As seen in the model equation, the amount of air cargo is considered as the dependent variable, and the amount of GDP, exports, and imports as the explanatory variable. In model 2, which was created to reveal the effects of GDP on air transport, air passenger and cargo quantities are included as explanatory variables.

**Table 1.** Variable Description and Source

Variable	Code	Source
Total amount of cargo transported by air	LN_YUK	State Airports Authority
Airline passenger volume	LN_YOLC	
Export amount	LN_IHR	Turkish Statistical Institute
Import amount	LN_ITH	
Gross domestic product	LN_GSYIH	

The data used in the research were compiled from the sources of TUIK (Turkish Statistical Institute), DHMI (State Airports Authority). Considered data were included in the analysis with their logarithmic values. The abbreviations LN\_YUK are used to express the total amount of cargo carried by air, LN\_YOLC for airline passenger amounts, LN\_IHR to indicate export amount, LN\_ITH to indicate import amount and LN\_GSYIH to express GDP logarithmic values. The table below contains descriptive statistics for the series.

**Table 2.** Descriptive Statistics of Variables

	LN_GSYIH	LN_IHR	LN_ITH	LN_YUK	LN_YOLC
Mean	26.59811	25.02425	25.15359	19.99830	13.84158
Median	26.46570	24.96256	25.01149	19.75777	13.74422
Maximum	27.58034	26.14814	26.31016	22.50652	15.16494
Minimum	25.23251	23.55340	23.49255	17.78013	12.33188
Std. Dev.	0.767656	0.893873	0.916290	1.276173	0.836396
Skewness	-0.113141	-0.220139	-0.173054	0.355998	-0.159022
Kurtosis	1.517035	1.614183	1.620877	2.225013	1.976061
Jarque-Bera	2.906754	2.731014	2.611453	1.430575	1.484903
Probability	0.233779	0.255251	0.270976	0.489051	0.475946

Sum	824.5414	775.7516	779.7612	619.9473	429.0889
Sum Sq. Dev.	17.67887	23.97029	25.18761	48.85852	20.98675
Observations	31	31	31	31	31

#### 4.1. Empirical Evidence

##### 4.1.1. Unit Root Test Results

Before starting to investigate the relationship between variables, the unit root of the array should be examined. As a result of the analysis with non-stationary series, a spurious regression problem may be encountered. Being a unit root means that “the value of the economic variable in the previous period and therefore the shock it was exposed to in that period remains in the system as it is” (Tari, 2015: 388). If the shocks are permanent, the series is not stationary. The stationarity of the series was tested with Generalized Dickey-Fuller (Augmented Dickey Fuller-ADF), Phillips & Peron (PP) unit root tests. The following table contains the test results

**Table 3.** Unit Root Test Results

		LN_GSYIH		LN_IHR		LN_ITH	
		<i>t-stat.</i>	Prob.	<i>t-stat.</i>	Prob.	<i>t-stat.</i>	Prob.
ADF	Constant	-1.5809	0.4797	-1.2487	0.6397	-1.5225	0.5087
	Constant and Trend	-1.7012	0.7257	-1.0979	0.9127	-2.0692	0.5412
PP	Constant	-1.6072	0.4666	-1.2345	0.6460	-1.5225	0.5087
	Constant and Trend	-1.8524	0.6536	-1.2380	0.8838	-2.0926	0.5289
		LN_YUK		LN_YOLC		Critical Values. % 1 -3.6701 %5 -2.9636 %10 -2.6210	
		<i>t-stat.</i>	Prob.	<i>t-stat.</i>	Prob.		
ADF	Constant	0.2286	0.9700	-0.3654	0.9003		
	Constant and Trend	-1.2340	0.8847	-6.5685	0.0001		
PP	Constant	0.2024	0.9682	-1.0488	0.7224		
	Constant and Trend	-1.3464	0.8560	-3.1324	0.1173		

According to the ADF and PP test results for the above stationarity analysis, it is concluded that all series are not stationary, that is, they contain unit roots at the 5% significance level. For this reason, the first differences of all series were taken, and their stationarity was ensured. All series are stationary in the I(1)

condition. The abbreviations DLN\_GSYIH, DLN\_IHR, DLN\_ITH, DLN\_YUK and LN\_YOLC are used for difference series.

### 4.1.2. Test Results for Deviations from Assumptions

For the regression estimation results to be valid, that is, reliable, deviations from the assumption should also be tested. Although the structure of the regression model and the coefficients are appropriate and statistically significant, they should have basic econometric assumptions (Güriş et al., 2017: 185). For this purpose, the validity of the estimation results was tested with normality test, varying variance test, multicollinearity, and autocorrelation tests. First, Jarque-Bera normality test was performed to test whether the error terms were normally distributed. Test results are given in the chart below.

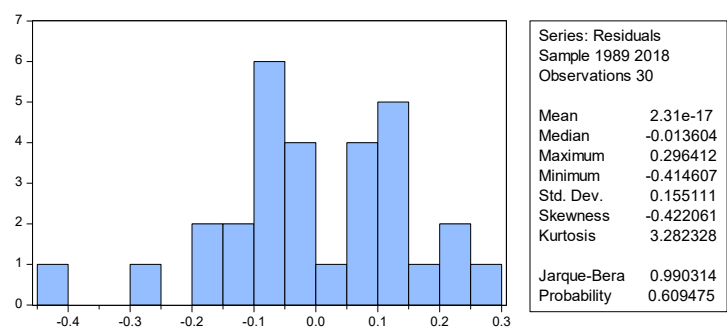


Chart 1. Normality Test Results (Model 1)

Since the probability value for the Jarque-Bera test (0.6094) is greater than 5% significance level, it is concluded that the residuals are normally distributed.

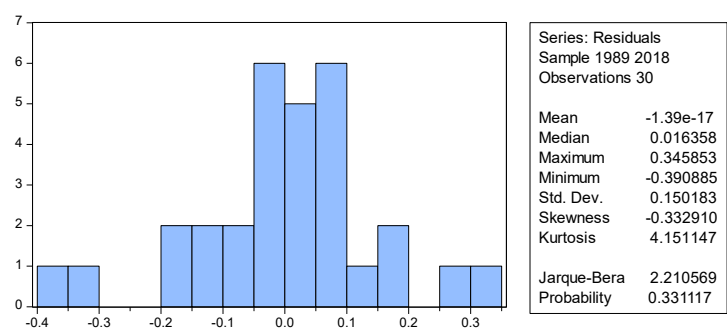


Chart 2. Normality Test Results (Model 2)

Since the probability value for the Jargue-Bera test in Model 2 is greater than 5% for (0.3311), it is concluded that the residuals are normally distributed.

Variance testing was performed with the Breusch-Pagan-Godfrey test. The following table shows the varying variance test results for both models.

**Table 4.** Heteroskedasticity Test Results

Model 1			
F-statistic	1.910199	Prob. F(3,26)	0.1527*
Obs*R-squared	5.418048	Prob. Chi-Square(3)	0.1436
Scaled explained SS	4.644032	Prob. Chi-Square(3)	0.1998
Model 2			
F-statistic	1.490333	Prob. F(3,26)	0.2433*
Obs*R-squared	2.982588	Prob. Chi-Square(3)	0.2251
Scaled explained SS	3.806422	Prob. Chi-Square(3)	0.1491

*\*Indicates that the  $H_0$  hypothesis cannot be rejected at the 5% significance level.*

The basic hypothesis ( $H_0$ ) for the Breusch-Pagan-Godfrey test is constant variance (homoskedasticity). According to the test results of both models, the main hypothesis cannot be rejected, and it is concluded that there is no changing variance problem.

The relationship between explanatory variables is defined as multicollinearity. The high correlation between the explanatory variables in the regression models makes calculations difficult in parameter estimations. Variance Inflation Factors (VIF) test was used to test whether there was a multicollinearity problem in the model. Test results are in the table.

**Table 5.** Variance Inflation Factors Test Results (model 1)

	Coefficient	Uncentered	Centered
Variable	Variance	VIF	VIF
C	0.001505	1.682994	NA
DLN_GSYIH	0.091993	3.298178	2.778489
DLN_ITH	0.080288	4.022116	3.298009
DLN_IHR	0.147633	3.074252	1.839622

A VIF value higher than 10 indicates the existence of a multicollinearity problem between the variables examined. According to the values calculated for both models, there is no multicollinearity problem in the models since the VIF values are below the standard figure.

**Table 6.** Variance Inflation Factors Test Results (model 2)

	Coefficient	Uncentered	Centered
Variable	Variance	VIF	VIF
DLN_YOLC	0.090028	2.283064	1.288826
DLN_YUK	0.035189	2.370426	1.288826
C	0.001691	2.094024	NA

The deviation from another assumption in regression analysis is the autocorrelation problem. Whether there is an autocorrelation problem in the examined models was tested with the Breusch-Godfrey Serial Correlation LM Test, which is frequently used in the literature. Test results are in the table.

**Table 7.** Breusch-Godfrey Serial Correlation LM Test Results

Model 1				Model 2		
F-statistic	0.207147	Prob. F(2,24)	0.8143*	0.064109	Prob. F(2,24)	0.9381*
Obs*R-squared	0.509080	Prob. Chi-Square(2)	0.7753	0.153076	Prob. Chi-Square(2)	0.9263

*\*Indicates that the  $H_0$  hypothesis cannot be rejected at the 5% significance level.*

According to the LM test results, the main hypothesis ( $H_0$ , no first-order autocorrelation) cannot be rejected for 5% significance levels. It is concluded that there is no autocorrelation problem in the models.

#### 4.1.3. Model 1 Prediction Results

Deviations from the assumption were tested for the model examined and no problems were found. For this reason, it was concluded that the estimation results obtained can be trusted. Before the Model 1 regression estimation, whether the 2008 global financial crisis caused a structural change in the model was tested with the Chow test. Test results are in the table.

**Table 8.** Chow Breakpoint Test

F-statistic	0.496389	Prob. F(4,22)	0.7385*
Log likelihood ratio	2.592282	Prob. Chi-Square(4)	0.6282
Wald Statistic	1.985557	Prob. Chi-Square(4)	0.7384

*\*Basic hypothesis cannot be rejected at 5% significance level.*

According to the Chow test, the main hypothesis  $H_0$  is “no break in the specified date” and according to the test result,  $H_0$  cannot be rejected because the probability value is greater than the 5% (indicated with \*) significance level, there is no structural break in the examined date.

The estimation results of the regression model, which deals with the relationship between air freight transportation and GDP, import and export volume,



obtained according to the Least Squares (Least Squares) estimation method are given in the table.

**Table 9.** Regression Analysis Results

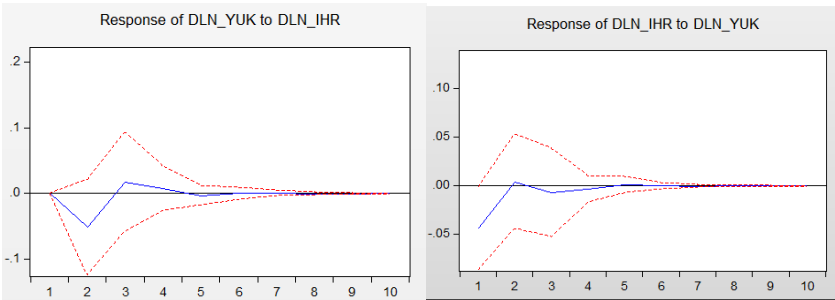
Variable	Coef.	Std. Error	t-Statistic	Prob.
DLN_GSYIH	0.317968	0.303304	1.048347	0.3041
DLN_ITH	0.451410	0.283351	1.593111	0.1232
DLN_IHR	0.860569	0.384230	2.239724	0.0339*
C	0.214036	0.038800	5.516337	0.0000*
<i>R-squared = 0.213646</i>				
<i>F-statistic= 2.354667 (0.095144)</i>				

*\*The coefficients are significant at the 5% significance level, \*\* at the 10% significance level.*

The  $R^2$  value, which is the coefficient of determination, expresses the power of explaining the effect of the variables considered in the model on the independent variable. According to the result of  $R^2$ , the explanation power of the variables considered for the change in the amount of air freight transportation is approximately 21%. According to the F statistic, it is seen that the model is significant at the 10% significance level.

When the coefficients are examined, it is concluded that the DLN\_IHR variable for model 1 is statistically significant. DLN\_IHR is statistically significant at the 5% significance level. The export elasticity of air freight transportation is 0.86. According to this figure, it can be stated that when exports increase by 1%, air freight transportation increases by approximately 0.86.

According to the model estimation result, the only variable that was found to be statistically significant was the export volume. The impact-response graph for export and air freight transportation is given below.



**Chart 3.** Impact-Response Analysis Results

According to the graphic results, air freight transport reacts to a decrease in the first two years against a standard deviation shock in exports and turns posi-

tive in the third year after the decrease. After the fourth year, the reaction ends. In the face of a standard deviation shock in air freight transportation, the export volume reacts in the direction of increase in the first two years, and then the reaction decreases and ends as of the fourth year.

#### 4.1.4. Model 2 Prediction Results

Deviations from the assumption were tested for the model 2 examined and no problems were found. For this reason, it was concluded that the estimation results obtained can be trusted. The estimation results of the regression model, which deals with the relationship between air freight and passenger transportation and GDP, obtained according to the Least Squares (Least Squares) estimation method are given in the table.

**Table 10.** Regression Analysis Results

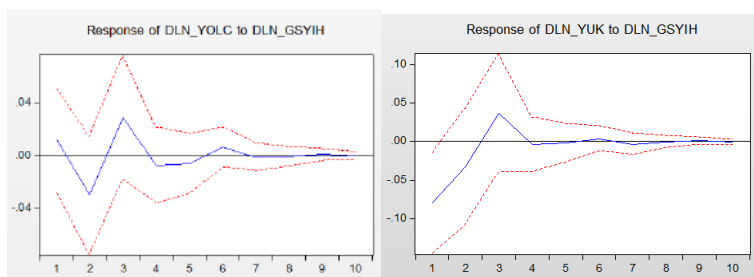
Variable	Coef.	Std. Error	t-Statistic	Prob.
DLN_YOLC	0.666391	0.300047	2.220958	0.0349*
DLN_YUK	0.401234	0.187587	2.138923	0.0416*
C	0.071369	0.041121	1.735564	0.0940**
<i>R-squared = 0.192994</i>				
<i>F-statistic= 3.228501 (0.055314)</i>				

*\*The coefficients are significant at the 5% significance level, \*\* at the 10% significance level.*

Among the model estimation results, model 2 was found to be significant (probe  $(0.0553) < 0.10$ ) at 10% significance level according to the F test. According to the R-squared value, the model explanatory power of the variables considered is approximately 20%. The coefficients of the explanatory variables are statistically significant.

According to the results of Model 2, a unit change in the number of airline passengers affects GDP positively by 0.66 units. A unit change in the amount of airline cargo affects GDP positively by 0.40 units.

According to the model estimation result, both explanatory variables were found to be statistically significant. The impact-response graph for GDP and air passenger and freight transport is given below.



**Chart 4.** Impact-Response Analysis Results

According to the impulse-response results in the chart, a deviation in GDP increases the number of shock airline passengers as of the second year. The effect disappears from about the eighth period. On the other hand, the effect of a deviation shock in GDP on the amount of airway load occurs as an increase in the first three periods and a decrease after the third period. The effects of the shocks end after about five periods.

## 5. Conclusion and Evaluation

Two models were determined for the regression analysis conducted within the scope of the research. The first of the models is on the total airline cargo amounts; GDP aims to measure the impact of import and export volumes. The second model, on the other hand, aims to determine the effect of airline passenger and freight explanatory variables on GDP.

In the analysis carried out based on the first model established, the effect of exports on air freight transportation has been proven. There is a positive relationship between export, which is one of the most important indicators in terms of economic welfare and economic growth of a country, and air freight transportation. This situation shows that air transportation has an important place in the logistics process required for the goods produced in a country to be sent abroad. Various capacities offered by aircraft, being the fastest mode of transportation, safety, and security applications, etc. Due to the advantages in the processes, air freight transportation is increasing day by day. In our country, the demand for air freight transportation has increased in recent years. With this analysis, it can be said that the number of exports is effective in the demand for air freight transportation.

In the analysis carried out based on the first model established, it has been proven that air passenger and freight transportation create a positive increase in GDP. GDP, which is one of the most important macroeconomic indicators, gives an idea about economic growth. Thus, it can be said that air passenger and freight transportation have an impact on economic growth. All sectors, especial-

ly tourism and industry, need logistics processes. Although transportation modes are preferred according to necessity in logistics processes, the need for air transportation is increasing day by day with the effect of developing technology and globalization. The effect of this increasing demand on GDP contributes to the economic growth of the country. Any investment and support that will enable the development of air passenger and cargo transportation and the increase in demand will have an impact on economic growth. For this reason, this situation should be considered in future air transport policies.

In summary, the connection of exports with air freight transportation and air passenger and freight transportation with GDP has been revealed, and an important output for aviation economy has been obtained. Based on these results, the policies, and processes to be followed for the development of air transport in Turkey will also contribute to economic growth. The method used in the study, the compilation of data sets of different countries and country groups can be applied again. Thus, the situation can be evaluated in terms of countries.

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## Chapter 12

# Identity Change and Identity Verification of Characters in *Maurice* by E. M. Forster

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### Through the Looking Glass and What Forster Found There

In September 1913, when E. M. Forster began writing *Maurice*, homosexuality was largely regarded as a punishable crime that carried not only individual humiliation but also public disgrace. Thus, suicide was frequently the only option. However, 'in contrast to the English tradition of intolerance, suppression and punishment, Forster and his hero maintain a belief in a sexual Arcadia' (Nadel, 1982, p. 178). Because the 'unspeakable aspects of the self' have become one of the main manifestations in *Maurice*. As the theme of homosexuality is evident in the text due to the purposefully inserted statements, it is debatable that whether Forster uses a kind of discourse which shows both the "sayable and the unsayable" (Kate, 2014, p. 128) in his work. Max Saunders contends in this regard that "it may have been precisely this repression of his own sexuality that made him most creative" and that Forster's novel might be 'a transformation of what could not be expressed more directly' (2007, p. 14). However, the homosexual references are not hidden or put ambiguously in the text, thus only a thorough critical reading will help decode the text's main concerns. Kate claims that in *Maurice*, Forster employs 'a conventional dualistic model to speak of the unspeakable, to articulate and overcome the impossibility of homosexuality' particularly, in the context of Edwardian society (2014, p. 19). In addition, it would not be incorrect to argue that had Forster published *Maurice*, which openly portrayed homosexual yearning, and had he been detected engaging in sexual encounters with individuals of the same sex, he would have almost probably met the same fate as Oscar Wilde in 1895.

In the years 1927, the life of a homosexual living in England was a life lived primarily in the closet. The cost of the closet is thinking, specifically thinking about every single issue from various perspectives such as dialectics, aesthetics, sexuality, and English laws. For Forster, writing fiction becomes a kind of resistance against the subversion of his closet life, specifically in order to reveal his homosexual preferences. According to Eve Kosofsky Sedgwick, Forster's 'closetedness' means that it is 'a performance initiated as such by the speech act of a silence - not a particular silence, but a silence that accrues particularity by fits and starts, in relation to the discourse that surrounds and differentially constitutes it' (1990, p. 3). Forster tries to leave his 'closetedness' behind by urging readers and authors to shift their habitual reaction to literary works sensibly. For instance, in his *Aspects of the Novel* (1927), Forster unambiguously advises readers to set aside 'demon of chronology' and authors to feel free from declaring 'the limitations of date and place'. Furthermore, he encourages authors and readers to be free of other constraints such as gender, age, and class. Undenially, he is more willing to give the authors freedom to express their thoughts

while creating their arts. Thus, to him, “[The authors] come from different ages and ranks, they have different temperaments and aims, but they all hold pens in their hands, and are in the process of creation” (1927, p. 13). In other words, Forster offers all of these innovative strategies on purpose to encourage readers and writers to think more freely. Almost certainly, he feels that the more emancipated people grow, the less judgemental they will be, particularly when it comes to homosexuality.

In the novel, Maurice declares that he is an ‘unspeakable of the Oscar Wilde sort’ (M, p. 136). Such a statement clearly illustrates the silence of the silenced because, it is not easy to talk about his own homosexuality in the early twentieth century, even for a fictitious character like *Maurice*. As a result, Forster purposefully has his homosexual characters utter their thoughts ambiguously. What is so interesting is that, even in 1984, when homosexuality was not a crime in most of the world, ‘sexual speech is forced into reticence, euphemism, and indirection’ (Rubin, 1975, p.209) in England. However, it’s important to point out that silence doesn’t mean that something doesn’t exist. Silence can also be a sign of tacit disobedience. In his work, *The History of Sexuality*, Foucault, by stating that ‘[t]here is not one but many silences’ emphasizes the fact that ‘[t]here is no binary division to be made between what one says and what one does not say’ (1990, p. 27). During those years, homosexuals were suppressed and silenced in society; nonetheless, their silence does not imply that they do not exist.

After the emergence of firstly, the Cambridge Apostles and then, the Bloomsbury group, whose members including Forster himself recruited from the former The Apostles, The Cambridge Conversazione Society, an intellectual society at Cambridge University was founded by George Tomlinson, a Cambridge university student, in 1821. The Cambridge Apostles, as an exclusively secret society, have been noted for their openness or positive attitudes towards homosexuality and opposition to Victorian values. They are also influenced by modernism’s initiative ideas, as stated in the following paragraph:

In terms of sexuality and the family, modernism introduced a new openness with candid descriptions often sympathetic to feminism, homosexuality, androgyny and bi-sexuality beside a questioning of the constraints of the nuclear family which seemed to hamper the individual’s search for personal values (Childs, 2017, p. 20).

As a prophetic author, Forster prefers to compose his work using literary allusions in order to evade persecution as a result of *Maurice*. He knows that if

*Maurice* had a bad ending, it might have been published. Even if he knows 'happy ending was imperative' in the novel, he relinquishes his opinion in order not to 'have bothered [others or in some sense authorities] to write otherwise' (M, p. 218). In his *Terminal Notes*, he strongly adds that "I was determined that in fiction anyway two men should fall in love and remain in it for the ever and ever that fiction allows, and in this sense Maurice and Alex still roam the greenwood" (M, p. 218). Even if such a love affair is in fiction, he wants it to last long in the greenwoods.

When *Maurice* was first released in 1971, it served only to remind many readers that it was a homosexualized version of D. H. Lawrence's *Lady Chatterley's Lover* (1928). In his essay titled "D. H. Lawrence and Homosexuality", Jeffrey Meyers points out that Lawrence wrote frequently and very openly about 'manly love' (1973, p. 68). As a result, there has always been a discussion regarding whether or not these two authors affected one another. Their friendship begins in 1915, at a meeting. Despite their mutual affection, they argue vehemently over the necessity of revolution, as described by Furbank. For him, Forster believes that Lawrence is 'too un-self-aware or perhaps deliberately self-blinding' and that he ignores his 'own sexual side' (1981, II, p. 12). However, both of them are greatly influenced by Edward Carpenter (1844-1929), a homosexual fellow and the author of several publications about homosexuality.

As implied, critics contended in the 1970's and 1980's that Forster's fictions indirectly question the homosexual closet rather than presenting gay desire, sex, and relationships explicitly. Additionally, the critics state that Forster frequently depicts heterosexual romance, which concludes in genres such as the Bildungsroman with marriage. Furthermore, Forster's decision to publish *Maurice* posthumously, along with his homosexual-themed short tales under the title *The Life to Come*, caused critics contemplate what it might be like to be 'a hesitant writer'. For example, Julian Mitchell reviews *Maurice* in *The Guardian* in 1971, and she explicitly argues that Forster underestimates his gay readers by refusing to publish the book while alive: "He was [...] wrong, I think, not to have published *Maurice* in however doubtful a foreign edition during his lifetime. It could conceivably have helped to get the law changed sooner" (cited in Gardner, 1973, p. 439). Other critics, such as Andrew Hodges and David Hutter, underline Forster's hesitancy and even go so far as to label him a hypocrite and a traitor, as stated, '... when public opinion was waiting to be led, he [Forster] remained silent, preferring to watch the drama dispassionately from the stalls rather than take his proper place on the stage' (1977, p. 22). On the other side, one can wonder if Forster would have faced the same fate as Wilde in 1895 (when Forster was sixteen) if he had published the work that openly supported homosexu-

al desire? Jeffrey Weeks (1990) concedes that the Wilde trials produced a frightening anxiety among homosexual British subjects. As a result of the 'severe prosecution homosexuals, particularly stigmatized after the Oscar Wilde's trials' (Kelbelová, 2006, pp. 1-2), the public is unaware of Forster's sexual orientation, that is, his homosexuality, until 1970, after his death. At that time, many people blamed Forster 'for not using his authority to speak out in favour of gay rights and law reform' (Kelbelová, 2006, p. 2). Besides, he is criticized for being invisible and unspeakable during his lifetime, and interestingly enough, after his death.

In a similar vein, Forster's concealment from the public eye has to do with his treatment to a taboo matter in the society through the means of his personal experience. Whereas Stevenson (2007) claims that Forster struggles to leave behind his homosexuality, Matz states that "Forster does in fact want to erase the *scene* of masculine love, in many senses of that term: he does not want to make a scene, or represent homosexuality scenically; rather, he wants to derealize sexual identity" (2000, p. 206). Forster himself reaches an ending point in his preface to *Two Cheers for Democracy*: "We cannot expect to love one another," but he insistently emphasizes that "we must learn to put up with one another. Otherwise we shall all of us perish" (1951, p. XI). When Forster died in the year 1970, his sexual orientation has become publicly known and all his novels are (re)visited through a new perspective, namely through the lenses of homosexuality. As a closeted homosexual, he struggles against familial and societal constraints. In his personal letters, he frequently expresses 'his desire to live his romantic life out in the open and find the same love, comfort, and stability with a man that he saw in heterosexual relationships' (Borchardt, 2013, p. 52). It is known that throughout his life, '[a]side from one incident of blackmail at the hands of a lover's wife, very few people, including his mother, knew of his homosexuality' (Borchardt, 2013, p. 53). All these accounts associated with Forster's homosexual orientation and the emergence of *Maurice* are highlighted briefly to give some insights about the identity verification process of the author himself.

### **Identity Criticism: Person Identity and Social Identity**

In this part, *Maurice* is examined in relation to its implications on homosexuality through 'person identity' and 'social identity' with regard to identity criticism. Whereas person identity is 'the set of meanings that define the person as a unique individual rather than as a role-holder or group member' (Burke & Stets, 2009, p. 124), social identity is commonly based on the identification of a person with a social group (Abrams & Hogg, 1988), whose members are socially

compared and passed through a categorization process. Additionally, with regard to social identity, the social groups share the view that they are the members of the same social category. Apart from Burke and Stets, Sheldon Stryker, who is one of the other earliest initiators of contemporary studies in identity criticism, is much more concerned than any other scholars such as George Simmel and Ralph Linton about how the self is affected by any social structures. Stryker is less concerned with how identities negotiate in interaction. Rather, he focuses on the effects of society on identity. In line with the definitions above, an analysis is to be made in *Maurice* about person identity and social identity. The homosexual characters in the novel such as Maurice, Clive, Risley, and Alec all identify themselves as homosexuals within the group, most often non-verbally. In other words, even if they know that each of them is homosexual, they pretend to be unaware of their unique circumstances, remarkably when they are among the heterosexual groupings.

Burke and Stets' elucidations on the concepts of person and social identity provide more insights into the key contrasts between them. To them, while person identity meanings are commonly based on 'culturally recognized characteristics that individuals internalize as their own and that serve to define and characterize them as unique individuals' (2009, p. 124), having a particular social identity means usually 'being like others in the group and seeing things from the group's perspective' (2009, p. 118). Furthermore, it is widely assumed that individuals in groups think and act similarly, implying that there has always been some degree of homogeneity in their thoughts and activities. According to these views, Maurice, the novel's protagonist, is considered to have validated a variety of role identities, each of which contains a diverse set of meanings.

At the start of the narrative, Maurice is depicted as a boy in his adolescent who has a student identity at a public school; in his youth, he is presented as a Cambridge university student; and finally, he becomes a stockbroker. As a result, Maurice adopts a variety of role identities when the situation changes. Stryker (1980) claims that the self indisputably mirrors society. As a result, the self includes several role identities. According to McCall and Simmons, many role identities that are arranged in a hierarchy of importance serve to mirror a person's ideal self. (1978). They state that the prominence of an identity depends upon three basic aspects such as firstly, 'the degree of one gets support from others for an identity'; secondly, 'the degree of one is committed to the identity' and lastly, 'the degree of one receives extrinsic and intrinsic rewards from the role identity' (1978, p. 74). In the novel, one incident clearly reveals how both Maurice's and Clive's ideal selves validate their own identities. At a time when Maurice misses four lectures during his Cambridge years, including the dean's

translation classes, and cuts chapels because he oversleeps due to his relationship with Clive, the dean only punishes Maurice not Clive. Because Clive is selected as 'the best classical scholar' of the year (M, p.75). So, the dean only sends Maurice down whereas Clive is spared punishment. According to the dean, the role meanings of being a student is not fulfilled by Maurice so, he says, "Until you write me a letter of apology, I shall not recommend your admission to the college in October" (M, p. 75). As implied, Maurice and the dean must reach an agreement on the role identity meaning claimed by the dean and the behaviours that correspond to that student identity. Indeed, a student's role identity generally entails being academically responsible. However, Maurice fails to do the requirements aforementioned. According to the explanations of McCall and Simmons (1978), it can be inferred that as a student, Maurice is unable to get support from the dean for the student identity he claims. Moreover, he knows that the degree he has committed to student identity is not satisfactorily enough. Furthermore, Maurice receives neither extrinsic nor intrinsic rewards from his role identity as a student. Or, to put it another way, Maurice doesn't get the student identity he claims to be verified. As a result, he is dissatisfied with his student role identity. Clive, on the other hand, misses the same classes as Maurice but receives no punishment because he is widely regarded as a genius. Because the dean ponders not to send down Clive for the simple reason that he finds the degree Clive is committed to student identity as adequate.

Apart from his student role identity, Maurice has a homosexual identity, which is a social identity shared by a small group of Cambridge University homosexuals. This social group thinks and acts alike particularly in some certain issues such as going to the concert of Tchaikovsky, visiting each other's houses, refraining from homophobic settings, arranging special days of meeting and celebrating joyous occasions. For instance, Maurice is portrayed as a man whose homosexual intercourse has become a habitual action among the many things he has scheduled on a daily basis:

Maurice's habits became regular. He ate a large breakfast and caught the 8.36 to town. In the train he read the *Daily Telegraph*. He worked till 1.0, lunched lightly, and worked again through the afternoon. Returning home, he had some exercise and a large dinner, and in the evening [sic.] he read the evening paper, or laid down the law, or played billiards or bridge. But every Wednesday he slept at Clive's little flat in town. Weekends were also inviolable. They said at home, 'You must never interfere with Maurice's Wednesdays or with his weekends. He would be most annoyed' (M, p. 93).

As the quotation above suggests, Forster presents Maurice as an ordinary person who is busy with his own schedule. However, Maurice behaves in conformity with his homosexual orientations, he accepts no interference on Wednesdays or at weekends as he stays at Clive's flat in town. It is overtly stated that any interference makes him exasperated. Consequently, he retains his social identity. Maurice is also presented with his person identity:

No one worried Maurice. He had established his power at home, and his mother began to speak of him in the tones she had reserved for her husband. He was not only the son of the house, but more of a personage than had been expected. He kept the servants in order, understood the car, subscribed to this and not to that, tabooed certain of the girls' acquaintances. By twenty-three he was a promising suburban tyrant, whose rule was the stronger because it was fairly just and mild (M, p. 93).

As shown above, Maurice is good at maintaining his person identity at home. As he is getting older, he is endowed with a father-like figure in the house, who arranges many things at home. Besides, he acts as a man who has a supreme authority. In other words, he demonstrates his masculinity in social settings where heterosexual relationships are prevalent. Furthermore, he makes everyone in the house understand that it is a taboo to make him acquaint with the girls. On the other hand, he is presented as a moral and pleasant man who rules fairly. Maurice is briefly presented with his distinguishing characteristics, which reveal both his personal and social identity.

Clive, Maurice's most beloved partner, can be said to have a person identity based on culturally recognized characteristics that he internalizes as his own. For instance, while Mrs. Durham, Clive's mother, is looking for wives for him, she tries to decide which of the girls, namely Ada or Kitty, will best suit him. Interestingly enough, both of the girls are Maurice's sisters. Consecutively, she invites her favourable one, that is, Ada to Penge house. Weirdly enough, Clive knows what her mother's real intention is. But he does nothing to prevent her mother. Moreover, he seems as if it were quite normal to invite a girl before proceeding to the marriage, as narrated in the novel:

Only Pippa [Clive's sister], into whose mind a breath of modernity had blown, began to think her brother's coldness odd. 'Clive, are you going to marry?' she asked suddenly. But his reply, 'No, do tell mother,' dispelled her suspicions: it is the sort of reply a man who is going to marry would make (M, p. 91).



As the quotation uncovers, even if Clive confirms that he does not intend to marry, Pippa only thinks that it is the commonest thing a young man does when he is confronted with such a question. Without a doubt, Clive appears to be opposed to marriage at first sight due to his homosexual orientation with Maurice. Apart from his person identity, he also retains a homosexual identity, which he seems to be pleased with. But the other side of the coin is that his mother hopefully wants him to get married soon. Furthermore, in the course of the novel, Clive transforms from homosexuality to heterosexuality, which means that his identity meanings change gradually. Even though he initially appears to be opposed to marrying anyone, including Ada, he recognizes his own transformation and renovation and marries Lady Ann at the end. The change in his identity can be explained by Burke and Stets with these words: "Identities are defined by the meanings held in the identity standard. Identity change, therefore, implies that the meanings held in the standard are changing" (2009, p. 175). This means that the meanings held in the standard of Clive changes in the course of time, which eventually indicates his journey from homosexuality to heterosexuality. The change in the identity meanings of Clive is quite discernible. As a member of a family of lawyers and landowners, Clive prefers normality in his life to gain respect of the society. In other words, he prefers living his life in conformity with the standards of the Edwardian social codes and cultural norms rather than his own person identity. His preference also indicates that his social identity, which is commonly associated with his family, outweighs his person identity, which is related to his homosexual life.

With regard to identity theory, it can be claimed that identity change involves changes in the identity standard, which is the output of a higher-level control system. Nevertheless, it never gives any explanation under which conditions the identities change (Stets & Burke, 2009, p. 180). Yet Peter Burke outlines mainly three conditions under which identities change by giving examples of the spousal identity in his work in general sense. These conditions can be mostly classified under three headings: Firstly, 'the changes in the situation'; secondly, 'the conflict between at least two identities held by an individual'; and finally, 'the conflict between identity standard and behaviour' (2006, pp. 81-96). Accordingly, in the following part, the identity change of Clive from homosexuality to heterosexuality is to be analysed in relation to the conditions of change, asserted by Burke.

As for Clive's situation, it is perceptible that the first source of identity change mainly stems from the change in a situation that disrupts meanings controlled by him. For instance, when Clive becomes ill and the doctor offers him to send a nurse, Maurice resists the idea of having been sent a nurse, as he

thinks he is the one who is eligible for taking care of him better than any other people. Yet, Clive neither accepts Maurice's offer nor respects his decision. And he prefers the nurse to take care of him rather than Maurice himself. Nonetheless, in the later parts of the novel, it is realized that the nurse becomes a problem in their relationship, as Maurice thinks that "Nurses are not nice. No nice girl would be a nurse" (M, p. 98). In its deeper meaning, he seems as if he were jealous of the nurse. Moreover, he also believes that it is the nurse who made Clive's sexual orientation change by her sexual allure. The following quotation illustrates the situation from the perspectives of both partners:

'Look here, Clive, would you rather have a trained nurse or me? One's coming tonight, but I left word she was to be sent away again, because I'd rather chuck the office and look after you myself, and thought you'd rather.'

Clive was silent so long that Maurice thought him asleep. At last he sighed, 'I suppose I'd better have the nurse.'

'Right: she will make you more comfortable than I can. Perhaps you're right' (M, p. 97).

As indicated, when the situation changes, Clive's attributes also change. These words are the best way to describe his situation. Situational changes have a big impact on the characters. Namely, when the individuals are confronted with a newly encountered situation, their behaviour patterns also change. In this example, as a homosexual man since his adolescence period, it is the first time Clive has ever experienced a rather close proximity with a woman, namely the nurse. Thus, the change in situations brings about the changes in Clive's identity standard.

As for the second condition under which identities are changed, the role conflicts and status inconsistencies are considered as the examples of identity conflicts. More elaborately, Peter Burke makes an explanatory statement on the second source that leads to identity change. To him, "... when people have multiple identities that are related to each other in the sense that they share meanings and are activated at the same time" (2006, p. 183). Accordingly, throughout the story, Clive has a gender identification that classifies him as masculine in his typical surroundings. But he also has a role identity as a lawyer in the higher court as he gets through 'his bar exams successfully' (M, p. 94). That is to say, he practiced law as a barrister, a respected occupation at the time. On the other hand, as he has always had a tendency to sodomy, which is an unlawful act, he has always been at odds with the identity standards. In the event that these two identities are activated at the same time and he 'cannot act on the basis of one of

these identities without creating a discrepancy with respect to the other, then these identities are in conflict' (Burke & Stets, 2006, p. 183). Thus, what he tries to do is to control his perceptions as a homosexual, namely a kind of commitment takes place while he is trying to make a concession between his identities. Because the extent to which each of the identity standards changes is mainly associated with the other factors such as the 'degree of commitment' to each of the identities, as proposed by Burke and Reitzes (1991). Surprisingly, he makes an emotional commitment by marrying a woman. This commitment means that Clive's identity in the society is more salient than his homosexual identity in his homosexual settings. In other words, he prioritizes his social identity as a lawyer over his personal identity as a homosexual man. Furthermore, it becomes much more difficult to change his identity standard because of the fact that his person identity is tied to his social identity within the hierarchy. Thus, while one identity is on the verge of change, the other usually disturbs it as well. Then, he prefers being normal by confessing Maurice that, "I have become normal" (M, p. 112). Conversely, Maurice is traumatized, and he thinks of intensely "Who made you change?" (M, p. 113). Whereas to Clive "No one [has made him change]. It was a change in me merely physical" (M, p. 113), to Maurice it was "[e]vidently the nurse" (M, p. 113). All these accounts indicate that Clive's identity change is activated when he is confronted with multiple identities which have a special place in the hierarchy. Precisely, when he was a student at the university, he felt that he could enjoy the life he wanted, but, when he is confronted with the reality of the society, which coincides with his adulthood, he decides which of the identity should be placed at the highest level. When all of his identities are activated concurrently, he chooses heterosexuality.

As far as the third source of identity change is concerned, it is denoted that the last condition under which identities are changed is through 'a conflict between the meanings of one's behaviour and the meanings in the identity standard', as noted by Burke and Stets (2006, p. 184). In the novel, while Clive overtly states that "But I've changed, I've changed" (M, p. 113), Maurice reacts, "You only think you've changed" (M, p. 113). The reply of Clive makes Maurice irritated: "I know my own mind" (M, p. 113). In this scene, Clive normally employs behaviours whose meanings are in harmony with his identity or whose meanings repair situational meanings in accordance with his own identity. Indeed, Clive's transition from homosexuality to heterosexuality means that he re-establishes situational meanings by adjusting them to his own identity.

### **Identity Verification Processes of the Characters**

After giving a brief account on the identity change of the characters in *Maurice*, the identity verification processes of the aforementioned characters in relation to identity criticism are to be analysed in the remainder of this work. As previously stated, Burke and Stets define identity as consisting of four basic components: an input, an identity standard, a comparator, and an output by emphasizing the fact that '[e]ach of these components is a process dealing with meanings within the environment and within the self' (2009, p. 62). Accordingly, each identity has a set of meanings that define its various aspects.

With respect to gender identity, some people are known to have been characterized as more masculine or more feminine. Even though femininity and masculinity vary according to society, there are some certain aspects about their manifestations with regard to gender identity within the same culture and/or society. Thus, the meaning of 'finding the location of an individual's gender identity' is commonly connected with the discovery of 'what it means to that individual to be male or female in his or her own culture' (Burke & Stets, 2009, p. 63). Thus, this set of meaning is called 'identity standard'. In Turkish culture, for example, if a male does not arrange his proximity to another male while seated next to him or speaking with him, his attitude is often viewed as improper, as it is in British culture. People might think that he is either a disturbing person or homosexual. In the novel, Maurice discovers what it means to be a male in his own society. But he is in conflict with the identity standard and his actual identity. According to Schwarz, "Maurice alternates between, on the one hand, guilt and disgust (when he accepts and internalizes society's image of the homosexual) and, on the other, the acknowledging of the legitimacy of his own needs" (1983, p. 635). Furthermore, to Nelson, Maurice sporadically feels a conflict between the 'traditional, accepted, moral story and his own intuitions and emotions, his own specific individuality [...]' (1992, p. 316). Maurice faces a dilemma whether to accept or not his homosexual orientation among his multiple identities.

As for the basic components of identity, firstly, the inputs that are related to perceptions can be said to be important in terms of identity verification process. Because the perceptions of individuals are main sources of information. Through the use of perceptions, the individuals are able to control their settings by usually interacting with the others. Specifically, one can get at and comprehend the meaning of anything through perceptions. In order to demonstrate the extent to which the perceptions of the persons as inputs contribute to a successful relationship, the following quote, which demonstrates Maurice's affection for Clive, can serve as an illustration:

Once certain that Hall [Maurice] loved him, he [Clive] unloosed his own love. Hitherto it had been dalliance, a passing pleasure for body and mind. How he despised that now. Love was harmonious, immense. He poured into it the dignity as well as the richness of his being, and indeed in that well-tempered soul the two were one. There was nothing humble about Clive (M, pp. 69-70).

The quotation from the very beginning of the novel clearly indicates that the inputs are indicative of characters' mutual love. In other words, through their perceptions, both Maurice and Clive become certain that their love is real. They also believe that it has been more than flirtation. Their love, they believe, improves their perceptions because of its richness and harmony. As the two become one, their love turns out to be a kind of mutually shared perception. Apart from the above narration, there are numerous interpretations that could be interpreted as homosexuality inputs in the novel. For instance, Clive's giving a cigarette to Maurice's mouth by saying that "Give me a cigarette. Put it in my mouth" (M, p. 44); Clive's stretching up to Maurice and striking his hair (M, p. 55); Clive's sitting at the feet of Maurice and leaning against him while Maurice is sitting on a chair (M, p. 46); Clive's typically moving about getting the coffee ready for Maurice (M, 47); Clive's whisper about his love to Maurice when people are all around (M, p. 58) along with many other incidents exemplify the inputs, particularly about how Clive verifies his own identity as a homosexual in the novel.

Secondly, each identity involves in itself a set of meanings, namely an identity standard. Whereas people are commonly characterized as masculine or feminine as far as gender identity is concerned, their representative qualities as being more masculine and being more feminine are commonly segregated from each other with respect to their culture and society, as indicated before. When the identity standard is taken into account in *Maurice*, it becomes rather apparent that understanding an individual's gender identity is to do with his/her own culture and society, as the identity standards are unique in a given culture and society. Thus, exploring what it means to that individual to be a male or a female in his or her own culture becomes a major factor in decoding one's identity in general sense. In the scene where Maurice and Clive together skip the lessons at Cambridge University and enjoy their time in landscape with 'willow trees' (M, p. 73) by bicycle, Mr. Cornwallis, the dean, recognizes their inappropriate relationship according to the accepted gender identity in the Edwardian period, as indicated in the following:

Mr. Cornwallis always suspected such friendships. It was not natural that men of different characters and tastes should be intimate, and although undergraduates, unlike schoolboys, are officially normal, the dons [ teachers at a university, especially Cambridge and Oxford] exercised a certain amount of watchfulness, and felt it right to spoil a love affair when they could (M, p. 75).

As narrated in the excerpt above, Mr. Cornwallis as a clever man, whose perceptions and intuitions are deeply affected by the established norms of Edwardian England, is cognizant of the importance of spoiling their love affair. As a dean, he is conversant with both masculine and homosexual features; therefore, he and other university colleagues seek to prevent Maurice and Clive's homosexual orientation. However, he only suspends Maurice not Clive from school. Because he suspects that Maurice is the one who digresses most from 'normality' to 'abnormality'. Clive, on the other hand, escapes punishment since, as previously stated, he is the top classical scholar of the year. When this incident is analysed in terms of identity standard, it is noticeable that the dean as the representative of the common British culture actually attempts to prevent them from being engaged in a homosexual intercourse, which deserves legal punishment. On the other hand, he believes that it is more appropriate to discipline Maurice for skipping courses than for engaging him in homosexual behavior.

According to Burke and Stets, 'with respect to the college student identity, four different meanings have been found to be important: academic ability, intellectualism, sociability, and assertiveness' (2009, p. 64). The reason why Maurice is punished but for Clive is that Maurice lacks some of the meanings such as sociability and assertiveness. As a proof for his unsociability and unassertiveness, his unwillingness and refusal to go to the chapels can be given. Moreover, he also lacks academic ability which Clive has. According to Burke and Cast (1997), each individual is characterized by a rather stable, or even unchanging set of meanings which clearly shows who they are. In line with this explanation, it can be inferred that both Maurice and Clive, whose identity standards are not in accordance with the socio-cultural structure of the Edwardian period, present direct inputs about who they are, that is, they present neither feminine nor masculine, but homosexual attributes, all of which attract the attention of the dons of Cambridge. Remarkably, it is also important to state that both of them follow the strict principles of the Edwardian society. For instance, even if "He [Clive] had blamed circumstances rather than himself" (M, p. 70) for his homosexual engagements, he never resists to the established rules of the society in the Edwardian period. However, such a notion suggests that these meanings define identity standard, which are reachable for the comparator.

As for the comparator, it only compares the input perceptions of meanings pertinent to the identity with the memory meanings of the identity standard. The output of the comparator is a determinative factor that produces ‘error signal’, namely the difference between the input and the standard. For example, considering Maurice's gender identity, it is clear that since his adolescence, Maurice has had a preference for men over women. In the earlier parts of the novel, while having a conversation with Mr. Ducie, Maurice confesses that “I think I shall not marry” (M, p. 19). Because he realizes the non-normativity about himself, or more explicitly, he recognizes his homosexual orientations. On the contrary, Mr. Ducie suggests him, “To love a noble woman, to protect and serve her” (M, p. 19). With these remarks, Mr. Ducie apparently acts in line with the identity standard of the society. In other words, his thoughts are completely in harmony with those of the society. A man's duty in a masculinist society is to love, protect, and serve a noble woman. This perception can be ordinarily considered as the identity standard for a masculinist society in the Edwardian period. Agreeably, when Maurice resists the idea of marriage, it means that he does not act in accordance with the identity standard of the society as well. In other words, the identity standard acts as a ruler for measuring Maurice's input perceptions, telling him that he is not acting in a masculinist way as far as the identity standard of the society for males are concerned. The error signal, which indicates his insights are not in conformity with the standard in the society as a male, ‘ultimately affects the patterns and sequences of his verbal and nonverbal behavior’ (Burke & Stets, 2009, p. 66), as is the case in the above extraction.

Besides, the outputs are regarded as the behaviour in a particular situation in the identity verification process. The behaviour is usually related to the error signal from the comparator. Just as input comes from the environment, output is also produced in the environment. However, the effect of the output behaviour is to change the environment from what it was (Burke & Stets, 2009). Thus, the meanings are changed. Returning to the example of Maurice's gender identity, if Maurice notices himself to be exhibiting more feminine or more masculine acts than the gender identity standard as a male, the output tells him to lower the degree of his femininity or masculinity in the meanings of his verbal and non-verbal actions. If Maurice takes this action, it results in his altering the situation. In other words, if Maurice changes his behavior to match the gender identity standard, his identity standard will match that of the society. As a result, the error will be zero, and he will no longer adjust his behavior. On the contrary, when Maurice's behaviour is examined in terms of error signal from the comparator, it is obvious that his actions do not match the gender identity standard in regard to masculinity. In other words, from the beginning to the end of the



novel, Maurice does not change his attributes in relation to the identity standards of the society which are encoded in Edwardian England. Thus, his actions result in error signal because he does not employ masculine attributes. Nonetheless, it is clear that society's error signals are constantly warning him to change his behavior to conform to identity standards. But he prefers not to change the level of his homosexual behaviour. In the case of Clive, however, it is critical to note that Clive does not resist the error signals from the comparator. Just as is the case with Maurice, Clive is also continually warned by his mother about marriage, that is a heterosexual attribute. However, unlike Maurice, Clive changes his homosexual attributes and in the later parts of the novel, begins acting in conformity with the identity standards of the masculinist society.

In identity criticism, parts of the identity process are enumerated as firstly 'continuous loop'; secondly, 'signals' and thirdly, 'control system' (Burke & Stets, 2009, p. 67). The continuous loop means that 'perceptions of meaning are constantly coming into the comparator while meaning behaviours are constantly output to the environment' (Burke & Stets, 2009, p. 68). Action and perception mutually act. In other words, 'action does not stop while perception occurs, and perception does not stop while action occurs' (Burke & Stets, 2009, p. 68). For instance, as a man who has a male outward appearance in the society, Maurice continuously observes his environment and perceives indications about the level of his masculinity being manifested in a number of different situations. These manifestations can be seen not only in his own behavior, but also in that of others. To put it another way, these manifestations occur in a continuous loop systematically, which means that Maurice's behaviour has a meaning for him and for others in different situations. As indicated previously, 'identities generally deal with meanings', that are 'being input to the identity system' and 'being controlled' (Burke & Stets, 2009, p. 68). In explaining Maurice's homosexuality through the units of Burke and Stets, it is important to define the signs of his homosexuality and how the identity process works. For instance, so to speak, if Maurice perceives eight units of masculinity about himself in a given social context, he will act accordingly for the sake of increasing that amount if the standard is set at ten units in his own society, but he will decrease that amount if the standard is set at six units. Similarly, if his standard is set at six units of masculinity, he will endeavour to increase the level of masculinity he exhibits if he perceives four units. Burke and Stets explain the relationship between the level of masculinity perceived and the level of masculinity existed in terms of identity standards in the following part:



Thus, neither the level of masculinity perceived about himself in the situation nor the level of masculinity that exists in his gender identity standard predicts his behaviour. Only the relationship between the inputs (perceptions) and the standard as determined by the comparator predicts the behaviour, and that is because the behaviour (output) is a direct function of the error or differences as detected by the comparator (2009, p. 68).

To put it another way, every behaviour is controlled through the control system. Thus, the relationship between Maurice and Clive indicates that they mutually develop homosexual orientations to each other. For instance, Clive's behaviour is predicted neither by the level of masculinity he perceives about himself nor by the level of masculinity he displays. From the very beginning of the novel, Clive is presented as a boy, "Deeply religious, with a living desire to reach God and to please Him, he found himself crossed at an early age by this other desire, obviously from Sodom" (M, p. 67). More explicably, the fact that he has found himself in sodomy acts since his early ages paves the way for a change in his life. As a result, the behavior is predicted by the relationship between the inputs and the standard. Because the output, which is detected by the comparator, is a direct indicator of the error signal.

In identity-verification, Swann reveals that 'developing an opportunity structure' (1983, p. 36) is of the utmost importance as people create their own opportunity structures through three distinctive ways. First one is 'displaying signs and symbols' through the means of not only language communication but also a number of other issues such as clothing, cosmetics, hair style; possessions such as the car one's own, the place of the house and the pets one adopts as well as one's own innate appearance or the change of body structure through diet, exercise and plastic surgery and Botox. As Swann himself advocates, a person's appearance provides many data about his/her identity, values, moods, attitudes s/he adapts. For instance, a business suit and a pair of jeans do not have the same effect on the recipients. Apart from his discourse, Maurice has a number of characteristics such as 'bourgeois [and] unfinished' (M. p. 69), which has a clear impact on his identity. In the following quotation, his facial expression and physical appearance as well as his own style are described:

Now Maurice, though he did not know it, had become an attractive young man. Much exercise had tamed his clumsiness. He was heavy but alert, and his face seemed following the example of his body. Mrs Hall put it down to his moustache - 'Maurice's moustache will be the making of him' - a remark more profound than she realized. Certainly the little black line of it did pull his face to-

gether, and show up his teeth when he smiled, and his clothes suited him also: by Durham's advice he kept to flannel trousers, even on Sunday (M, p. 52).

In the novel, it is also revealed that Maurice has owned a motorcycle, which was given to him as a birthday present from his grandfather. As a result, the implications for his own identity show how prosperous he is in Edwardian society.

Second one is 'selective affiliation', that is, choosing the right person and the right situation to interact. Selective affiliation is important in selecting the right person because it makes it easier for the person to understand who he or she is. Because the right person will treat in a manner which is consistent with her/his own identities. In considering Maurice's preferences while choosing the right person and the right situation to interact, it is conceded that Maurice prefers only the homosexuals such as Clive, Dickie, Dr. Barry's young nephew, and last of all Scudder. He prefers choosing the ones who naturally fancy himself as a homosexual or whose manners are consistent with those of him. More explicitly, Maurice neither has a girlfriend nor a fiancée at Cambridge. Most of the time, he spends his time with the boys, which he enjoys most. Furthermore, his hatred for women, particularly his sisters, is narrated throughout the novel. Thus, the selective affiliation for Maurice becomes the ones who mostly have the same sexual background. Likewise, the selective affiliation for Clive is Maurice, as indicated in the following extraction: "During the next two years Maurice and Clive had as much happiness as men under that star can expect. They were affectionate and consistent by nature, and, thanks to Clive, extremely sensible" (M, p. 91).

The third is 'interpersonal prompts', which refers to the use of appropriate interaction strategies. It entails having others treat you in a way that is consistent with your own identity. In the novel after Clive marries a girl, Maurice meets a boy named Scudder from the working class. Then, Maurice appreciates his homosexual orientation with Scudder. Yet, when Scudder attempts to go abroad to work, Maurice prevents him from going abroad and he persuades him not to leave him. Thus, he uses appropriate interaction strategies, as indicated in the following part:

Maurice said, 'This is just what I want to talk about. Why don't we arrange so as we do meet again?'

'How do you mean?'

'Why don't you stay on in England?' (M, p. 202).

In the following quote, another strategy employed by Maurice is presented:

‘Did you ever dream you’d a friend, Alec [Scudder]? Nothing else but just ‘my friend’, he trying to help you and you him. A friend,’ he repeated, sentimental suddenly. ‘Someone to last your whole life and you his. I suppose such a thing can’t really happen outside sleep’ (M, p. 172).

As can be seen, both of the quotations above clearly reveal Maurice’s attempts to make eternal companionship vows. Maurice makes each of these statements with caution in order to serve his own purpose. As far as interpersonal prompts are concerned, it is rather distinguishable that what Maurice attempts to do is to make Scudder believe in their homosexual orientations, which he most presumably thinks that their relations will last forever. Thus, he uses appropriate interaction strategies not to make Scudder go abroad.

However, identities, as control systems, can be interrupted in a number of ways according to Burke (1991; 1996). The first interruption is the ‘broken loop’, which is explained below:

When activated, an identity is a highly organized, continuously operating feedback loop of adjusting outputs to maintain congruence between inputs and the identity standard; breaking this continuous loop would constitute an interruption of a highly organized process and would be a major source of distress...(Burke & Stets, 2009, p. 77).

The broken loop occurs, particularly but necessarily when a loved one dies, say, one’s wife dies, his identity with respect to that person is interrupted (Burke & Stets, 2009). The broken loop may happen in many instances including losing the loved ones or being promoted or being laid off etc. In *Maurice*, the broken loop occurs when Maurice is confronted with a reality, namely the marriage of Clive with a girl, a reality which makes him question all his life along with his own identity profoundly. Because with the marriage of Clive, the identity of Maurice is interrupted, and ultimately, the broken loop occurs. When he understands that Clive is decisive on his prospective marriage, he feels as if he were the one who lost his beloved one. As proof, he has waited for Clive for at least three years, expecting him to return, which has caused Maurice to suffer for at least three years. More explicitly, the broken loop experienced by Maurice himself becomes a major source of distress in his life, as proposed by Burke and Stets (2009). On the contrary, for Clive, Anne has been at the very centre of his life but for Maurice, as narrated in the following part:

The centre of his life was Anne. Would Anne get on with his mother? Would Anne like Penge, she who had been brought up in Sussex, near the sea? Would she regret the lack of religious opportunities there? And the presence of politics? Besotted with love, he gave her his body and soul [...] (M, p. 143).

As can be seen from the quotation above, whereas Maurice's identity is disrupted by the broken loop, Clive's identity appears to be unaffected.

The second interruption is the 'interference from other identities' (Burke & Stets, 2009, p. 78), which becomes comprehensible when people have more than one role identity. Interestingly enough, when one role identity is activated, the other role identity can also be activated instantaneously. This situation leads to role-conflict. Maurice, Clive, and Scudder all have homosexual identities throughout the novel, which they keep hidden from society. For instance, Maurice has more than one role identity, first, he is a college student and second, a son of a widowed mother with two daughters. Thus, Maurice is expected to graduate from school and take the position of his dead father. He is, however, torn between his responsibilities as a family member and his homosexual identity. As inferred, such a dilemma causes role-conflict situation in Maurice himself. For instance, Maurice, after Clive's marriage, struggles in his life to be normal by visiting some doctors and by accepting hypnotises. However, Maurice has always verified his homosexual identity and has never put his family member identity in jeopardy.

As for Clive, he unambiguously 'represents the parasitic British aristocracy in decline' with his 'exclusive, timid, and self-conscious' aspects (King, 1982, p. 76). On the other hand, he has a homosexual identity as he has always indulged in homosexual conducts since his childhood. Yet, his mother strongly urges him to marry, the result of which leads Clive to experience a role-conflict. In order to solve his role-conflict, he goes to Greece to appreciate his inner self. When he comes back, he becomes like a new-born baby intellectually and he contemplates that it is high time to quit his homosexual contacts. As for Scudder, he is only a member of a lower-class society and works under the supervision of Clive's family. However, he is also in a homosexual affair with Maurice. Furthermore, he gives up going abroad for the sake of leading his life with Maurice. As indicated, the identity processes of all these three characters are interrupted by interference from other identities. Yet, according to Stape, "[...] Maurice does learn to conceal his own sexuality, even at the cost of approaching the brink of moral and mental breakdown" (1990, p. 144). Through the revelations of Mr. Ducie, it can be inferred that Maurice, at the initial stage of

his identity formation, constructs a 'false social self', which is rejected instinctively by his later experiences and emotions. Nonetheless, each of the characters has multiple role identities, some of which are at odds with one another. Except Maurice and Scudder, Clive seems to have succeeded in solving his role-conflict by marrying, which appears not a real marriage at all. This marriage, however, does not fulfil its obligations in the form of a sexual relationship or emotional closeness.

As for the third interruption of the identity process, it is 'over-controlled identity', which is heavily dealt with the first two, but with a dissimilarity in its essence. In regard to over-controlled identity, Burke and Stets indicate that 'each identity is a control system that is driven by the size of the error signal or discrepancy between the inputs and the identity standard' (2009, p. 78). To them, whereas in a loosely controlled system, 'a larger degree of discrepancy or error is tolerated before control mechanisms work very hard to reduce that error', in a tightly controlled system, 'more sensitivity to error' and 'more attention and resources to monitor potential discrepancy' (2009, p. 78). are required.

With regard to over-controlled identity, it is rather obvious that Maurice is trapped by the discrepancy between the inputs and identity standard. In other words, the inputs, which are related to perceptions of Maurice, are controlled by his interaction with the environment and actually, are not in compliance with identity standard. The expectations of the society do not confirm his actual identity. However, he disguises his identity in order not to be visible as a homosexual in the society. In other words, he employs a tightly controlled system as he must be very sensitive to error signals. Even after Maurice experiences a failure in his relationship with Clive, he still controls his life and presents an over-controlled identity. In his work, Bailey summarizes how Maurice has been successful in over-controlling his identity.

Having lost his first true love and unable to see any chance for finding another in his homophobic society, Maurice turns to work, not only the work of the commercial and financial world but also the all-encompassing, disciplined effort to engage continuously in useful activities (2002, p. 337).

Just like Maurice, Clive also spends both his time and energy to make sure that everything is in comply with the standards of the society. The relationship between Maurice and Clive shows the social structure of the society: "Clive belongs to the country aristocracy and is the social superior of his lover – Maurice [...]. Clive and Maurice are close enough socially so that their outward association invites no comment" (King, 1982, p. 76).

Yet, Clive is presented as a man who displays no tolerance and no margin of error in his life. Most probably, he may have visited Greece for this reason, namely, to think deeply about his own identity. His taking strict decisions in his life particularly leaving his homosexual affair with Maurice can be considered as an urge on controlling his own identity in relation to the standards of the society. All in all, it can be asserted that Clive employs more tightly control system than does Maurice as he pays more attention to the error signal as a homosexual, that is, an unacceptable act by the cultural codes and societal norms of the Edwardian period.

The last interruption of the identity process is ‘episodic identities’, suggested by Burke (1991). In the episodic identities, ‘people have multiple identities, not all of which are activated at the same time’ (Burke & Stets, 2009, p. 78). Alternatively put, episodic identities, as its name suggests, are interrupted in nature. The continuousness of the process is interrupted habitually and unsurprisingly. In Maurice, Clive’s family, namely the Durhams, whose ‘great-great-uncle had been Lord Chief Justice in the reign of George IV’ live in ‘a remote part of England on the Wilts and Somerset border’ (M, p. 81) called Penge, which is immense. When Maurice arrives at Penge, there have been many people around such as the Durhams namely, a mother with two daughters; Maurice’s sisters, Ada and Kitty; and several servants such as Pippa, Scudder, and others. When two young men meet in Maurice’s room, which has been prepared for him to stay, Clive rushes in and says “I shall kiss you” (M, p. 82). Furthermore, they sit closer to each other. But they are very alert whether anyone can knock the door and enter the room instantly as they have to shift their identity for the sake of concealing their homosexuality. As a result, whenever they are interrupted by other situations, they have had to change their identities. In this sense, both Maurice and Clive’s identities are episodic in nature and they are not activated at the same time. The continuity of their intimacy in a room with no one but themselves may be routinely and predictably broken as the other residents are also accommodating at the same time and in the same place. For the fear of being seen by the others while kissing each other, they embody episodic identities. It is important to note that they both experience a certain amount of distress. In general, the interruptions by the others at Penge, particularly in the room scene, pave the way for heightened distress for both Maurice and Clive, which results in episodic identities.

## **Conclusion**

In conclusion, E. M. Forster’s orientation toward homosexuality in his own life has had a significant impact on the creation of such a novel on homosexu-

ality. As the act of sodomy was considered illegal at that time, Forster remains as a hesitant author and accordingly, also remains as a person who never uses his own position to speak up for the benefits of homosexual rights. As an author who prefers being invisible and unspeakable during his lifetime, Forster is blamed by many people. The examination of *Maurice* through the lenses of identity criticism with a focus on identity change and identity verification of the characters concludes that Forster creates his characters by endowing them with four basic components of identity such as input, identity standard, comparator, and output. In accordance with identity criticism, it is significant to note that the life-like characters employ many strategies in order to change and/or verify their identities. For instance, as a homosexual, Maurice does not change his homosexual identity even if he encounters with the error signals from the environment, as a note, the dean's reaction can be given as an example for the error signals along with the accepted societal norms and cultural codes of the Edwardian period. On the other hand, Clive changes his homosexual identity when he is confronted with the error signal from the comparator. His transition from homosexuality to heterosexuality could be due to his mother's insistence on marriage or the accepted societal norms and cultural codes in the Edwardian Period. Accordingly, it is concluded that the characters' degree of commitment to either person identity or/and social identity determines who they are individually and what their sexual orientations are. In the novel, when Clive encounters with counter-identities like his mother and his ancestral past, he prefers to marry a girl and pretends to be seen as a heterosexual man in the public eye. Yet, the other characters such as Maurice, Risley and Alec prefer to lead a homosexual life in the novel. When the identities of homosexual characters in *Maurice* are excavated through identity criticism, it is discovered that homosexual characters verify their own identities particularly, in homosexual contexts where they feel safe. Additionally, it is also discovered that a homosexual character such as Clive has to change his social identity as heterosexual even if his personal identity remains homosexual not only due to fact that following the pre-determined gender roles in the Edwardian society is a must but also that being homosexual is regarded as both a sinful and unlawful act. In conclusion, the degree of devotion to person identity and/or social identity causes characters to become either homosexual or heterosexual.

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**Chapter 13**

**Innovation Strategies**

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There is a lot of overtime to make innovation monitoring distinctive and systematized (Ettlie et al., 1984).

There is a large amount of alternative monitoring that businesses can follow based on their origin and purpose (Trott, 2005).

There are different groupings based on innovation monitoring in the sources.

### **1. Freeman and Soete's Classification**

Freeman and Soete (1997) described six alternative innovation pursuits. This follow-up grouping covers the original technology start-up time and speed of the enterprise (Hadjmanolis and Dickson, 2000).

#### **1.1. Offensive Innovation Strategy**

This pursuit of innovation means seizing the technology and market leadership by getting ahead of the competitors in creating original products. Therefore, the Research & Development unit of the enterprise has a key role in this follow-up. A firm that follows an aggressive pursuit will normally conduct a lot of inspection and indirectly show a great deal of passion for Research and Development within the enterprise (Freeman and Soete, 1997).

A successful follow-up of aggressive innovation requires creating objective value for buyers, rehabilitating company processes and leading the results that produce original occasions, as well as making it necessary to start the implementation and commercialize a variety of ideas, from a very insignificant rehabilitation attitude to an original invention that will shake the environment (İraz, 2010). ).

#### **1.2. Defensive Innovation Strategy**

The important issue in this follow-up is to fully benefit from this situation by rehabilitating an existing crop or process that exists outside of the original crop or processes purpose (İraz, 2010).

Firms that follow the defensive detailed plan do not wish to participate in the market in the first place, but they do not want to be behind the technical variation swing movements (Freeman and Soete, 2004).

#### **1.3. Imitative and Dependent Innovation Strategy**

Companies that save on imitative innovation follow-up are not in the forefront of the market, stay away from risk, and have less spending, equipment and employees (Trott, 2002). The states that have developed in the globalization process aim to gain market advantage by adopting this follow-up in the market of the non-aligned movement. It makes a lot of use of this monitoring for the

purpose of new entrants to the market with low expenditure and imitation of crops. An example of this situation is electronic and sportswear businesses (Zetter, 2018).

Firms that practice dependent monitoring prefer to be loyal to firms that are of great importance in terms of innovation and technology (Sarıhan, 1998). Non-autonomy businesses do not attempt to create method differences in their crops, except for specific requests from businesses or buyers to which they remain loyal (Freeman and Soete, 2004).

#### **1.4. Traditional and Opportunistic Innovation Strategy**

Mostly, with the traditional follow-up expression, the mentality consists of not giving importance to Research and Development processes and realizing design differences, which can be described as innovation that does not last long, with the intention of being in a state that gives beauty or the need for difference, rather than creating original products (Sarıhan, 1998).

The business that adopts the opportunistic monitoring, looks at the demands and needs of a rather inadequate segment of buyers that others do not think of, and follows the grouped markets as a monitor, generally benefiting from these markets (Ettlie, 1984). An effective communication network is required in order to be able to follow this monitoring successfully. With the realization of this, suitable situations in the market and strong ideas that are possible to develop will be found before all people and suitable situations in big markets that are not taken into account by the companies with which we compete strongly will be evaluated (Iraz, 2010).

### **2.Miles and Snow's Classification**

The segmentation of Miles and Snow (1978), which conveys the general monitoring attitudes of enterprises, can be claimed as innovation monitoring (Hadjmanolis and Dickson, 2000).

Miles and Snow described four innovation monitoring. These follow-ups; Defender, researcher, analyst and reactor monitoring.

#### **2.1. Defensive Strategy**

In general, it is the follow-ups consisting of overtimes that do not want the risk of appearing as a leader in the market and are willing to take advantage of the opportunities found by the companies that have just entered the market (Güleş and Bülbül, 2004).

Firms of this type also have transactions like firms that follow aggressive monitoring. However, R&D activities are efforts that follow the lead and are based on practice and troubleshooting. These Research and Development activities, in which the products of the new companies entering the market are examined and the deficiencies are completed or replaced with the original shifts, and the applications of the crop shifts are carried out, have less expense and risk compared to the existing ones (Ülgen and Mirza, 2004).

## **2.2. Leading Strategy**

It has been understood that this follow-up, which follows the principle that constitutes innovation in the first place, is applied perfectly in an environment with many parameters. Moreover, it has been determined that businesses that produce more original products than they are, however, produce occasions for process innovation (Ettlie, 1984). In research firms, elasticity is more important than profitability, and staff engagement is important in the application of this monitoring (Richard et al., 2003). These follow-ups, which are not clearly understood that the things that are expected to happen, can happen, also assume a serious risk due to their nationality. However, the effective gain that can be realized by being at the forefront or one of the front in the market is the price of this risk (Ülgen and Mirza, 2004).

## **2.3. Analyst Strategy**

They divide the attributes of advocacy and investigative businesses, maintaining a credible position in the main market while trying to find their original market position by advancing the crop (Morgan and Strong, 1998). The problem with this strategy is how to take advantage of the original crops and market occasions that are created while retaining the crops and buyers that underpin something static. The analyst is an implicitly enthusiastic follower who, immediately after the researcher, transfers the version of the crop created by the researcher to the market (Miles and Snow, 1978).

## **2.4. Reactive Strategy**

Top managers often understand the uncertain situations and differences that occur in their environmental environments, but cannot respond dynamically to this situation (Miles and Snow). There is never a rational thought for contention in an industry and has not been able to create a process or system to adapt it to the market (Morgan and Strong, 1998).

### **3. Trott's Classification**

Trott (2005) stated that there are four different innovation pursuits. These follow-ups; offensive/leading innovation monitoring, defensive/follower innovation monitoring, cost minimization/imitative innovation monitoring, and market segmentation/conventional innovation monitoring.

#### **3.1. Offensive/Leader Innovation Strategy**

The basis of this monitoring is the superiority of establishing a monopoly, and the aim of the enterprises that implement the monitoring is to transfer the crop to the market before contention occurs. It is important that the company that will implement this monitoring attaches importance to the Research and Development processes (Trott, 2005).

The fact that the companies that follow this follow-up have a very strong information repertoire, the possibility of their personnel and senior managers to face innovation and risk, have an appropriate communication system and a variable, knowledge and learning, constantly renewing organization structure (Iraz, 2010).

#### **3.2. Defensive/Follower Innovation Strategy**

This follow-up necessitates that the business be quick in production, design, progress and marketing, respond quickly to the business that starts in the market, and have a strong technical science (Trott, 2005).

In general, it can be found appropriate in the form of a follow-up evaluation of companies aiming at applications in the form of differentiation, such as advancing the new crop, creating it with much less expense, creating different designs and including original features(Acaray, 2007).

#### **3.3. Cost Minimization/Imitative Innovation Strategy**

The specified follow-up is on generating production with a small expense, and its success is based on realizing cost reduction while production increases. It requires the expertise, capacity and dexterity to become a business crop and process engineer. This follow-up is reminiscent of the overt defense follow-up, but differs in that there is no need for an infrastructure that includes all of the powerful techniques(Trott, 2005).

Other follow-up has been very effectively evaluated in rapidly advancing Asian countries. In the mentioned countries, businesses have discovered the opportunity to imitate existing products with small personnel costs and have had the opportunity to be included in the market and to be accepted (Trott, 2005).

### **3.4. Market Segmentation/Traditional Innovation Strategy**

This follow-up is aimed at fully satisfying the needs of the classified market due to the demands and needs of a certain market segment or a very limited segment of buyers. In general, macro-scale production is not necessary and production is not necessary with small crop changes, and production is distinguished by small product changes. For example, Apple is one of the important companies by successfully applying this follow-up (Trott, 2005). The strategy of the market with limited buyers is periodically restored by major crop innovations (Miller and Friesen, 1978).

### **4. Classification of Tid et al.**

Innovation is the main source of differences and uncertainty in the environment, but also the main source of contention in a business (Tidd et al., 2005). Tidd et al. (2005) examined innovation in the context of applied science and found it appropriate that innovation tracking is based on business conflict tracking. Moreover, they stated that innovation monitoring related to the institution has three main contents (Tidd et al., 2005):

- Status of the business; the competitive and national situation of the enterprise in its trying to outdo each other,
- Procedures/matrix related to all techniques; the follow-up options that the business is likely to acquire,
- The managerial and organizational processes of the enterprise; methods of creating work in the business environment or the capabilities of the business

Tidd et al. (2005) divided innovation monitoring into rational and utilitarian monitoring by examining it as applications integrated with conflict monitoring in the business environment.

#### **4.1. Rationalist Strategy**

This follow-up consists of successive stages; (1) To describe, comprehend and analyze the environment, (2) To determine the course of action at the beginning of the analysis, (3) To reveal the purpose of action taken. That is to say, it includes the analysis of the advantages and disadvantages of the institution in the wake of the appropriate external situation and intimidation. Support for businesses in handling this issue (Tidd, 2005):

- Being aware of the trends in the contentious environment,
- Being ready due to differentiating horse,
- Ensuring adequate attention to the one focused in the maxi-period,
- To ensure that actions and goals are tightly interconnected,



However, the external environment is in a rapidly differentiating structure that includes sophistication that includes receivers, competitors, organizers and so many other elements, as well as technological, economic, social and political changes. For this reason, it is difficult to grasp the present adequately, similar to predicting the past. On the other hand, especially in important businesses, managers may not be realistic about the effective and ineffective sides of the business, since they do not have real documents that meet the needs of the business (Tidd et al., 2005). Rational follow-up will be unsuccessful due to structural inconsistency, especially in the original growing industries (Tidd et al., 2005).

#### **4.2. Utilitarian Strategy**

Judging by the utilitarian monitoring, the enterprise has only a certain document about its environment, its effective and ineffective parties, and the future change and ratio of change. For this reason, the company's follow-up is subject to falsification in terms of original communication and concept. For this reason, it has to constantly create audits (Tidd et al., 2005).

In conditions of complex and continuous change, utilitarian monitoring is more logic than rational monitoring (Tidd et al., 2005).

### **5. Gilbert's Classification**

According to Gilbert, quite a lot of businesses position their innovation pursuit in the middle of the absolute initiative and the absolute non-initiative. The job of choosing an innovation track is influenced by many factors, such as the industry in which the business is in operation, the past and current track of the business, origins, individuals and equipment, and current processes of the business (Gilbert, 1994).

#### **5.1. Proactive Innovation Strategy**

The enterprise that takes the initiative and implements the innovation monitoring is generally the first to innovate and is motivated by the market and all techniques, and it effectively invests in innovation inputs in a non-absolute manner (Hadjmanolis and Dickson, 2000). The success of innovative pursuit of initiative depends, at least to some extent, on the quality of creative acumen. Individuals with this qualification are not suitable for large bureaucratic organizations about important public administration-related organizations. Some businesses discover and catch such individuals as a result of a bit of coincidence. Familiar companies such as 3M, Motorola, and Hewlett Packard, known for their initiative-taking innovation pursuits, are striving to establish

creative structures and reward methods that drive creative acumen to test. Firms that take an effective initiative and follow innovation reward the effort as well as the outputs. Innovations that take initiative have to be tolerant of failure, while focusing on the main innovation that will differentiate the contention situation of the industry. It is not possible for a firm that takes initiative and implements innovation monitoring to be happy with all outputs (Gilbert, 1994). Innovative innovators overestimate different communication origins (Hadjmanolis & Dickson, 2000).

## **5.2. Reactive Innovation Strategy**

The business that accepts this follow-up introduces innovation when a significant difference is created through the adversary and with possible actual and relatively low risk (Hadjmanolis and Dickson, 2000).

With this follow-up of innovation, businesses aim for success, which is always encountered. This innovation follow-up is smaller than the initiative-taking follow-up, but its cumulative effect is likely to be more effective. This innovation monitoring makes it necessary to place more emphasis on process innovation than product. Because such innovations are effortless compared to the existing ones. The reward method must consider the results, and the results must be examined by the business success. This after-action innovativeness creative acumen tends to be rather under-motivated and somewhat too amenable to step-by-step development. In this follow-up of innovation, it is necessary to give the opponents a very long time and pay attention (Gilbert, 1994). This innovation includes imitating the origin (ability), creating an equivalent origin or supplying a superior (qualified) origin over the existing one. This innovation process can encourage fundamental innovations (Hunt, 2000). Businesses that accept this view do not take action to create original products or generate ideas, except to react to a crisis or a sudden situation. In the hectic environment of aggressive innovators, those who take action after the job is done and those who successfully act reactively in their world cannot compete successfully with their adversaries (Saleh and Wang, 1993).

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## **Chapter 14**

# **Fragmented Families in Djibouti: A Study on Single Parenting**

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## **Introduction**

The family structure in Africa and in Djibouti in particular has changed radically with industrialization and globalization. With all these rapid changes, it is observed that old traditions and practices have started to be abandoned in Djibouti in recent years. For Djibouti, traditional values and beliefs have gradually begun to be replaced by modern cultural values. What was never acceptable in the recent past is now becoming acceptable, especially for the younger generations. Djibouti, which was a French colony for many years, gained its independence in 1977. Being a very young and inexperienced country, Djibouti has difficulties in coping with the social problems it faces. Like most African countries, Djibouti has a deep-rooted culture and strong traditions. In the traditional Djiboutian structure, it is never acceptable for a woman to have children before marriage. The adoption of Islam, which is one of the religions that does not approve of sexual life outside of marriage and sees it as a sin, by a large part of the population prevents single mothers from being accepted by the society. The family structure in sub-Saharan countries is basically patriarchal.

Despite the transformations in Djibouti's social and family structure, Djiboutian society still does not allow women to have children without marriage and to be single mothers. However, with the increase in divorces, the phenomenon of single parenting has begun to emerge. In this study, 17 cases of single parenting in fragmented families were examined.

There are two types of single parenting in fragmented families, depending on whether the mother or father assumes parental responsibilities: paternal single parenting and maternal single parenting. In cases where the woman can take care of the child/children, generally maternal single parenting is observed. However, if the woman does not have health, economic power and opportunities to take care of the child or children, the duty of parenting in broken families can be fulfilled by the father.

Although the divorce rate in Djibouti is lower than in other neighboring or regional countries, divorce rates have increased in recent years. Single parenting has recently become more common in Djiboutian culture. Djibouti also has a polygamous culture, which, like most African countries, allows one man to marry more than one woman (polygyny). There are also cases in Djibouti where women are not allowed to take care of their children alone after divorce.

The concept of "single-parent family" is a concept coined to refer families without a father, consisting of an unmarried mother and a child. It refers to fatherless families that arise when young women who become pregnant without knowing the consequences of sexuality have to raise their children alone, especially in cultures that allow premarital sexual experiences and in societies where



sexuality is experienced at a very young age. In the concept of "single-parent family", the term "single" means not only single but also unmarried. Today, the concept of single parent family is misused for single parenting in fragmented families. In addition, this distinction is important in terms of Djibouti family structure. Because in Djibouti, it is almost impossible for a woman to have children without getting married. Traditional, religious and moral values do not allow extramarital affairs or single motherhood.

However, in fragmented families, there can be two types of single parenthood: paternal single parenthood and maternal single parenthood. In a "single parent family", the father has never been part of the family. On the other hand, in a fragmented maternal single-parent family, the father still exists but the mother takes on the parental responsibilities. In fragmented paternal single-parent families, there is already a father and the mother does not disappear; only the parental tasks are assumed by the father. For these reasons, it is necessary to separate the concepts of single parenting and single parent (/unmarried) family from each other. In this chapter, we have tried not to use the concept of single parent family to refer to single parenting in fragmented families broken up by divorce.

A couple's separation or divorce is one of the stressful events in a person's life. Separation causes significant changes and can lead to certain psychological or emotional disorders or problems. Single parenthood is a common phenomenon and is as old as humanity. According to Dowd, single parenthood means that the parent who does not live with a spouse or partner takes the responsibility of raising their child/children alone (Dowd, 2000:1).

The socialization of children is crucial for the continuity of any culture. The family is considered the most important socializing agent, especially for children. In most societies, children are raised in a highly structured and disciplined way as parents try to instill strong moral, spiritual, social, physical, and cognitive principles in their children. The traditional two-parent family, in which the biological parents maintain marital union and joint custody, at least until the child reaches adulthood, is becoming increasingly rare in modern Western societies. Divorce rates have risen sharply around the world in recent years, and many children suffer from parental separation, family breakup, and not having a stable family.

Broken families brought into question the traditional family model, which was the most acceptable and common until the end of the 1960s. Broken families have characteristics that put family members, and especially children, at greater risk of poverty and insecurity. Throughout this work, we will try to answer and clarify the following questions. What are the characteristics of the

broken family? With whom does the child live after separation, divorce, or the disappearance of one of the spouses? What is the situation in these families in terms of poverty, employment, housing and childcare?

### **Conceptual framework**

The notion of single parenting occurs when a family consists of one parent and a child or several dependent children. In the past, the death of a parent was more likely to upset families than divorce or separation. Nowadays, single parenting usually emerges after the divorce of the parents (Dumont, 2016:2). Thus, for some writers, including Camara, the concept of single parenting is quite new and represents the transformation of the family concept since the late 20th century. The number of single-parents that raise their child without a spouse, especially the number of families consisting of mother and child, is increasing (Camara, 2019:3).

From a demographic perspective, single parenting is defined on the basis of the absence of a spouse. In terms of family sociology, a distinction must be made between single-parent families, consisting of unmarried women and children, without a father or husband, and single-parenting in fragmented families in which one parent leaves the home. (Olivier David, 2004). Therefore, a single parent takes on the long-term and parenting role for the children. From an economic point of view, it is also decisive who is the main provider of the family's resources. Subjectively, though fragmented families are separated and divided, the separated fragments are highly dependent on social, cultural and economic contexts. Broken families are the object of special interest in political, economic and social aspects (Suif-Lingpong, 2001:4).

While the family was once considered one of the most durable and robust institutions, today the family is a delicate structure based on the close relationship between two adults. If the relationship doesn't work out, the family will likely break up. North American feminist movements have been very influential in this regard. However, the appearances and representations of broken families in discussions have also changed: attitudes towards broken families have evolved from exclusion to rejection, from ignorance to trivialisation. As the meaning of marriage has changed over time, the link between sex and marriage has been broken. The family shrank in time, losing its functional and unitary volume. It changed from large extended families to the smaller nuclear family consisting of only parents and children, and finally to even smaller single-parent families and fragmented families with one parent, excluding other parent. In the African example, the increase in the proportion of female heads of households associat-

ed with broken families is paralleled by poverty and low statistical visibility. (Tichit, 2005:2).

### **Methodology**

Data collection and analysis was carried out for the purposes of this study. We also used a questionnaire that included closed-ended questions as well as open-ended questions as a tool to collect field data. The answers to the closed-ended questions were subjected to statistical analysis using SPSS software. The answers to open-ended questions were subjected to textual analysis. The field-work was carried out on 17 people, (15 women and 2 men), living in Djibouti.

### **Presentation and analysis of data**

K2 (a 23 years old woman) says the following about being a single parent: *"If a woman is a single parent, no one in the society accepts it, it is almost impossible for a Djiboutian woman to have a child without being married and without her husband"*.

According to E1 (a 23 years old man), most tribal men are used to babysitting, but after the divorce, the opinions of those around are very harsh and men cannot overcome the difficulties of the common beliefs on single parenting in Djibouti.

The composition of all households differs significantly accross the countries. In the case of Djibouti, the most important recent change is the increase in the proportion of fragmented families. Considering the increase in the number of single-parent households, single parenthood can be seen as a social phenomenon that needs to be examined. Single parenting, a neglected phenomenon, increasingly, has begun to occupy more space in the demographic structure than in the past.

K1 (a 19 years old woman) describes her post-divorce experiences as follows: *"After my divorce from my first husband, I was rejected not only by my family but also by society. I was blind, yet I continued to seek my rights and was a single mother for a long time, but eventually I had to find a husband to regain a normal status."*

E2 (a 30 years old man) told about his experiences as a single father: *"I am a single man who looks after my child because I divorced my ex-wife. However, my wife and I did not officially divorce because I did not want custody to be given to my wife and I gave money to my ex-wife to let the child stay with me."*

After becoming a single parent, individuals have difficulty in adapting to life emotionally, socially and economically. Mothers are economically disadvantaged and more likely to encounter negative attitudes and behaviors from the

environment; Economic difficulties cause educational, psychological and socio-logical problems, prevent the family from functioning as an institution and all those effect and endanger the whole society.

K4 (a 20 years old woman) shared her experiences with her family breaking up due to cultural difference as follows: *"Because my husband is from a different tribe, I had to divorce because it was very difficult to deal with cultural differences. But in the end, society forced us to stay together. As separated parents, we are seen together in the eyes of society, even though we are not married."*

One of the participants, K1, also pointed out cultural differences: *"Cultural differences in the north and the injustice of the state affairs make us suffer a lot. My tribe does not understand this. Because the state does not recommend that the child stay with the mother, but I do. I am both their mother and father.. I can look after them even if i have nothing financially"*

**Table 1: Age of the participants**

Age				
N	Minimum	Maximum	Medium	Std. Deviation
17	16,00	30,00	23,1765	4,11150

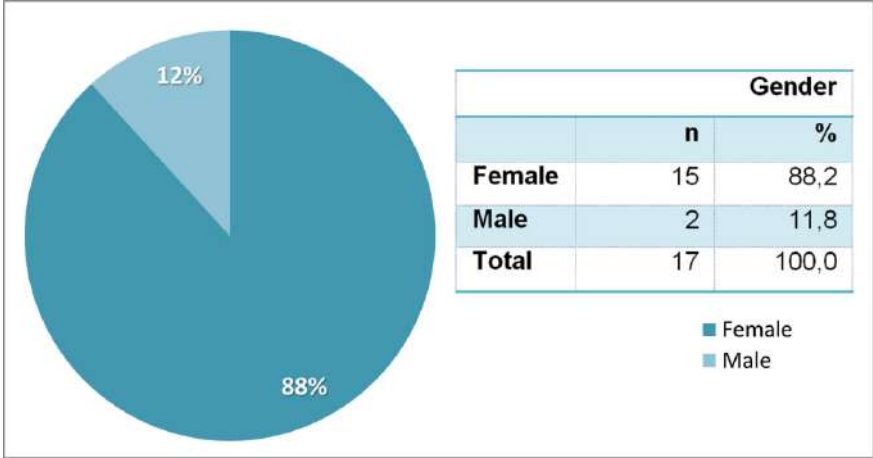
The marriage age of women in Djibouti can be quite low. The minimum age of the participants in this study was 16 and the maximum age was 30. The average age of single parents participating in our research is 23.18.

**Table 2: Number of children of participants**

Number of children				
N	Minimum	Maximum	Medium	Std. Deviation
17	1,00	6,00	2,5294	1,28051

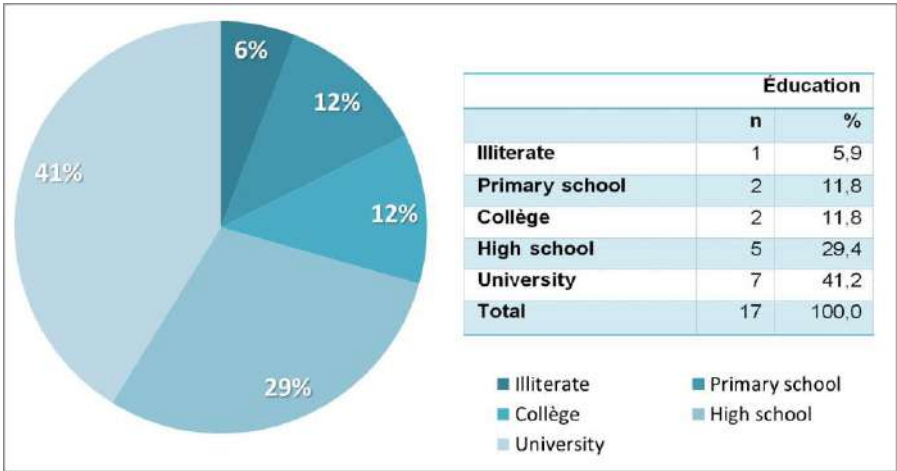
The minimum number of children is 1 and the maximum number of children is 6. These figures are a reflection of the diversity in Djibouti in terms of family size and number of children. the average number of children of the participants is 2.53.

**Figure 1: Distribution of respondents by gender**



The sample of our study consists of 17 participants. In parallel with the thesis of some authors on the feminization of single parenthood in Africa, 88.2% of the interviewees were female and only 11.8% were male. The results of Tichit's 1994 study also showed that 70 to 90% of single-parent households in Africa are headed by women (Tichit, 1994). On the other hand, as seen in our study, the existence of paternal single-parent fragmented families is remarkable. The existence of families consisting of father and children may indicate a societal change in marriage and parenting norms. (Delaunay, Adjamagbo, Ouédraogo, Attané and Ouédraogo, 2018).

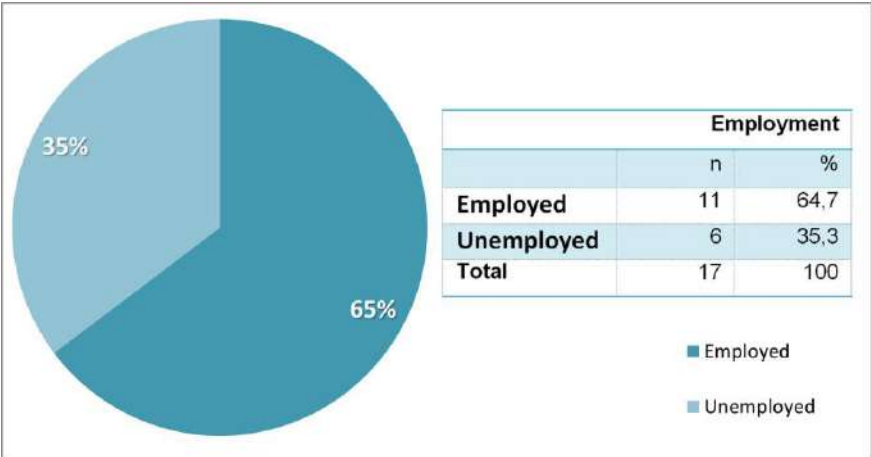
**Figure 2: Distribution of respondents by level of education**



Only 1 of our participants did not receive any education. Participants who are graduated from primary and secondary school are represented by 11.8% for each level. 29% of the participants are high school graduates. 41.2% of our participants are university graduates.

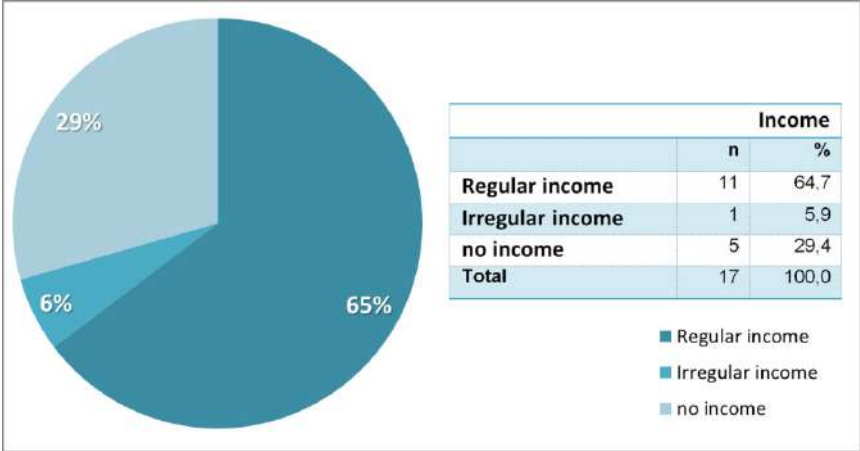
Because of the relationship between divorce and education, the lower the education level, the less likely individuals are to be a single parent. Since divorce rates are higher in those with higher education levels, broken families are more common in those with higher education levels. Due to social restrictions, it is difficult for individuals with a low level of education to decide on divorce. This is comparatively less among high educational level individuals who generally adopt Western lifestyle.

*Figure 3: Distribution of participants by employment*



Employment is very important in terms of providing a certain economic independence to the individual. Generally in Africa, the economic dependence of a spouse is one of the reasons why it is difficult to decide on a divorce. It is noteworthy that more than a third of the respondents are unemployed. This does not mean that those who are employed do not actually experience economic problems. Economic problems are also related to whether their income is regular or not. This illustrates the difficulties faced by these single parents who have to raise children alone.

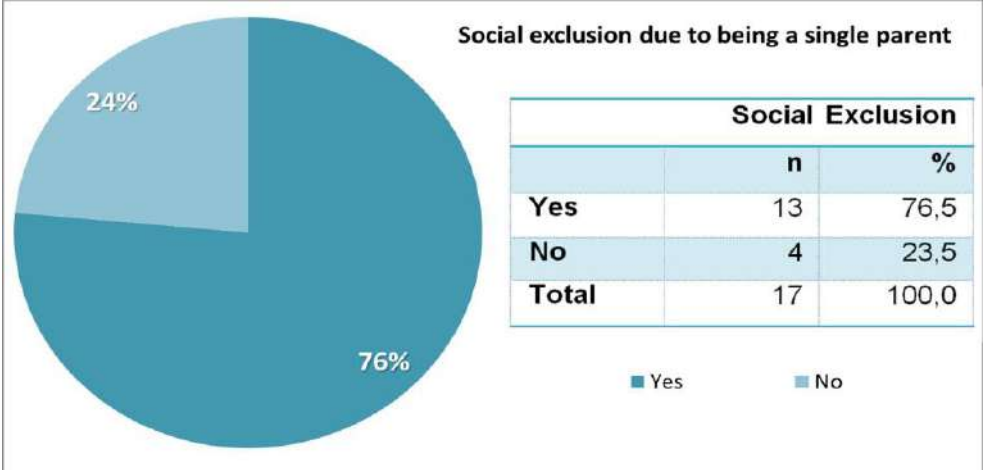
**Figure 4: Participants' income**



Having a regular income provides certain autonomy. Beyond the emotional pain caused by divorce, single parents have to face many more problems. To work in a regular income job, you need someone to take care of the children during working hours. If the lone parent has no relatives to take care of the children, this time they must hire a babysitter and spend a significant portion of their earnings on childcare.

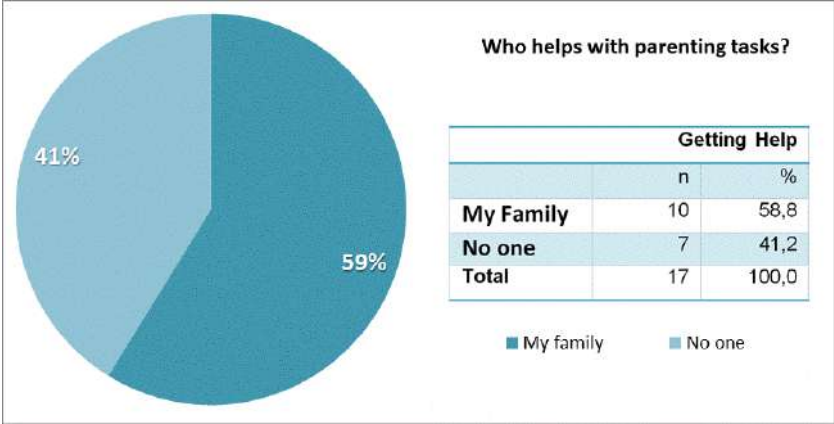
Olivier et al. rightly point out that broken families do indeed face a number of additional barriers: lack of time, difficulties in accessing property, increased discrimination and isolation (Olivier, Eydoux, Ouallet, & Séchet, 2003). Based on all these, it is seen that the economic situation is a determining factor in single parenthood. Although most of the participants have a regular income, 29.4% have no income and 5.9% have an irregular income.

**Figure 5: Social exclusion due to being a single parent**



As mentioned above, Djibouti is a country with a strong presence of traditions and beliefs. Thus, divorce is viewed badly and when the divorce occurs, the woman is automatically stigmatized. The separation of a couple is perceived as the failure of the woman's parents. 76.5% of the participants said that they feel socially excluded because they were single parents. Half of 23.5% who do not feel excluded are men, the other half are women who are university graduates and have a regular income.

**Figure 6: Get help with parenting tasks**



Single parenthood contains the challenges of raising children alone. Therefore, single parents need support from their relatives. It is seen that 58.8% of the participants receive help from their family members while fulfilling their parenting duties. However, 41.2% stated that they did not receive any support from anyone.

**Conclusion**

Although the changes in family structure seem to have reduced the stigma on single mothers, single parents have to cope with many problems in societies where traditions are still strongly preserved and maintained. With the increase in single parenthood, studies on developing social policies to overcome the difficulties and problems encountered and/or reduce their effects have also begun to occupy an important place in the literature.

The remarkable increase in divorces, fragmented families due to divorces, and thus single parenthood resulting from broken families in sub-Saharan Africa and Djibouti family structure, which is the subject of this study, points to the importance of single parenting and related problems.



This study shows that being a single parent due to divorce has important effects in terms of social pressure or support received by single parents. When one of the parents dies, the social environment gives much more support to the lone parent, while the divorced single parents are not supported and even they are socially excluded.

Single parents of fragmented families have much more challenges compared to two-parent families and need more support to cope with problems due to single parenting and divorce. It should not be forgotten that as divorce rates increase, the number of single parents will increase due to divorce, which means that not only single parents who undertake the duty of parenthood, but also their children will be more affected. For all these reasons, we can say that there is an increasing need for more comprehensive researches on this subject, especially in terms of overcoming the economic and social difficulties of single parents in Africa....

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## Chapter 15

# Turkish Foreign Policy and Indigenous Defense Industry Efforts<sup>1</sup>

Halide Nur CAFOĞLU YAŞAR<sup>2</sup>

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<sup>1</sup> This research is extracted from writer's Ph.D. Dissertation titled as "Comparative Analysis Of Post-9/11 Indigenous Defense Industry Policies, Transformation And Cooperation: Israel, India And Turkey" handed out to the Ankara Yıldırım Beyazıt University, Institute of Social Sciences in 2020.

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## **1. Turkish Foreign Policy and Turkish Defense Industry**

Turkey has been long in the defense export market; however, it has been under the spots recently due to becoming one of the most dedicated defense producer and exporter of the very future. Moreover, Turkey has been performing a stable and good economic growth so that has been taking attention of investors from different sectors all around the world. According to United Nations World Investment Report 2018 (UNCTAD, United Nations Conference on Trade and Development Country Fact Sheet Turkey, 2019), Foreign Direct Investment stock values inward to Turkey in 2017 has reached up to almost 200 billion dollars which is equal for 23 percent of the gross domestic product compared to 9.6 percent of the GDP in 2000 and 13.3 percent of the GDP in 2003. (UNCTAD, 2006)

AK Party and its leader, current President, Recep Tayyip Erdoğan has been actively in control of Turkish politics since 2002. Turkey has experienced considerable economic increase and foreign investment during the first term of the AK Party governance. However, post 9/11 global developments and renewed policies, have put Turkey through several crisis situations and the ruling party have been at the target of critics on several aspects.

### **1.1. Post 9/11 Global Incidents and Turkish Foreign Policy**

9/11 terrorist attack was followed by the US retaliation with the invasion of Iraq. Later on there was an Arab Spring uprising among several Arab states. As a consequence of those incidents there have been a formation of ISIS (Islamic State of Iraq and Syria), aggregation of separatist and terrorist Kurdish groupings just across the Turkish border. This has led to a flow of migrants from conflicting and civil war areas towards Turkey. Turkey either has been a final destination or a transit state for refugees. Almost 4 million refugees have settled into Turkey while millions of others tried to reach through European continent.

Great numbers of migrants fleeing from civil war into Turkey have all created domestic insecurities of Turkey. There were suicide bombings in several cities of Turkey including capital Ankara in which more than hundred people lost their lives. Turkey has become a transit state for refugees wanted to cross into European border. Several refugees had been victims of illegal human traffickers while trying to cross into European borders. While they have all contributed to the chaotic insecure environment in domestic politics, they have also affected Turkish-West relations from a security angle.

Beside those immediate threats, Turkey's geography and history composes conflict of interests and high level of risks in some respects. Most of the

ongoing problems are survivals of the Ottoman Empire. And in the near future, this geographical and historical legacy of the Ottoman Empire seems to continue.

Since the beginning of the new Turkish Republic, Turkey wanted to stay away from armed conflicts around its neighbor most of the time. In fact, Turkey remained neutral during the Second World War. It peacefully dealt with risks and threats emerging from its geography. Turkey is surrounded with Black Sea region, Aegean Sea, Mediterranean Sea and Middle East on the East. What happens around those border lines and in neighbors have directly affected Turkey and its security. Those aforementioned regions, by nature, have been hosting great amount of hydrocarbon energy reserves, petroleum. Turkey has been acting as a bridge for transportation of those resources to the world markets. Although this has increased the importance of Turkey's location, it has also increased the risk and importance of security policies related with that.

Concept of security and domestic policies enacted for national security can not be separated from regional and global security. Recent threats and risks for a single state will quickly turn out to be a security issue for the rest of the world. Borders have been less visible when it comes to security because national security is not as national as before.

As mentioned before, 9/11 attacks have changed the threat and security perception of "West". Global war against terror had declared and it was announced that radical Islam as a top threat. Although the attack was located within US borders, US and allied states went after a retaliation thousand kilometers away from the incident. Moreover marginalizing Islam, the Muslim population all around the world have been subject to national and global securitization policies. Islamophobia have been on rise as a result of religious discrimination<sup>1</sup>. Many radical Islamic terrorist groups, like Taliban in Afghanistan, have benefited from victimization as they had identified themselves as voices of their regions. Unfortunately, they have tried to strengthen their area of impact under different formations since then. They have been using and benefiting from every single opportunity and security weakness. We have seen them on the ground, in Syria, Iraq, Yemen, under different names such as ISIS.

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<sup>1</sup> "The first known printed usage of the Word Islamophobia appears to be in February, 1991, when it was published in a periodical in the United States. It has been included in the Oxford English Dictionary since 1997. This Word is functionally similar to xenophobia and offers a useful shorthand way of referring to a dread or hatred of Islam and therefore a fear or dislike of Muslims. Following the events of September 11 th, 2001, it has been speculated that Islamophobia and discrimination against Muslims have increased." Read for more: Sheridan, L.P., "Islamophobia pre- and Post-September 11th, 2001", *Journal of Interpersonal Violence*, Vol:21, Number:3, March 2006. Pp. 317-336

Disorder within the Islamic world have both been the reason and the result of some occasions during the post 9/11 era. Ongoing Arab-Israeli conflict, regional sectarian polarization and the Arab uprisings have both served for the new recruits for the radical Islamic movements and terrorist organizations and they have also contributed to the turmoil within the Islamic world as well. Ones, very few countries, who haven't experienced any kind of uprising and relatively stable, have been implementing rather well processing welfare state and social policies in general.

After presenting an overall frame of the Turkey's neighboring regions and states after 9/11, we will briefly mention about one-by-one relations with some countries to Turkey in a chronological order, if possible.

As sharing the same border, Iraq and Turkey has never seriously confronted with each other. Two countries have had long lasting economic and political relations. Although Iraq couldn't pose any military threat for Turkey, Kurdish problem Turkey has been dealing with more than 30 years is directly related with the stability and security of Iraq. After the US invasion of Iraq, the country lost its integrity and stability. Similar to the Syria, Iraq has experienced humanitarian problems due to an instable environment after the US invasion. Dissolution of integrity within the country has not only led to a security problems or economic problems such as control of the energy supplies but also has been affecting regional dynamics. Power gap in Iraq whittled other actors' appetite. Iran has expanded its control over some parts of Iraq while other parts were controlled by confronting parties. The division within the country have led a fertile ground for radical groups. This sectarian division has not only posed risk for bordering states but turning the region into a more fragile structure.

Radical Islamists and jihadist groups have turned their route towards Iraq right after Afghanistan. ISIS, a violent terror organization and contains both Iraqi and Syrian territorial aspirations within the abbreviation, has expanded its territorial gaining within the Iraqi borders gradually. Again, as a neighbor, this didn't pose a threat solely for Turkey but turned out to be one of the greatest security challenges for contemporary global system.

On the other side of the border there is Syria and due to the civil war since 2011, there have been humanitarian crisis. The Assad regime has been trying to remain in power at any cost. However, the scope of power and control of the regime is still very limited. Due to security and power gap, Syrian territory have become fertile for any kind of terrorist activities. There were so many jihadists and ethnically motivated armed groups on the ground to take the control over from the regime. Civilians have been victims of that brutal conflicting interests. There have been both refugee flow and terrorist leakage towards Turkish



border. As part of its Open Border Policy Turkey have accepted and been hosting almost 4 million refugees within and outside the camps all around Turkey. To prevent civilian losses and more future flow from Syria, Turkey having cross border operations. However, Turkey by itself not the only state to interrupt into Syrian conflict. There have been United States, Russia and Iran on the ground, with their conflicting interests as well. While US has been operating with the Free Syrian Army, Syrian Kurds and terrorist YPG militant on the ground, Russia and Iran have been behind the regime power. Turkey, as the neighboring country, have been trying to keep balance within this complicated Syrian equation and been acting responsibly for the sake of civilians.

Iran and Turkey mostly experienced a stable relationship throughout the time. Although they don't share similar point of view on global and regional scale and Iran never poses a direct threat to Turkey, Iran's sectarian policies, nuclear program and revolutionary regime's relations with world powers have been affecting Turkey as well. Iran has been exploiting the Shia-Sunni divide in the region. Civil Wars in Iraq, Syria and Yemen have shown that Iran's direct interference into incidents around triggers more instability in the region. Both great powers and regional powers have been trying to prevent and balance the Iranian influence on the region especially on conflicting areas. In fact, United States imposed serious economic sanctions on Iran and led great number of states to follow after her. Sanctions are aimed to contain Iranian affect within the region and its nuclear program. However, Iran have still been continuing to develop long range missile systems and nuclear weapons which poses a great threat not only for the region but for the rest of the world.

Israel is on the other side is another nuclear power within the region. There has been no intention recently for Israel to give up its nuclear aspirations. Having shared the same region with Iran and Israel, nuclear uncertainty has become one of the security doubts of Turkey. Until now, Turkey didn't have any better option than staying under NATO's umbrella for deterrence. Beside nuclear issue, Israel and Turkey have been subject to many political and diplomatic disputes. Mavi Marmara incident was the only moment of escalating tension between two states that might ended up with a war. However, two states preferred to engage in dialogue and resolved their issues. Arab-Israeli conflict is one of the most longstanding active wars going on in the region. Turkish Government have been harshly criticizing Israeli policies over Palestinian soils. Turkey stands against Israel for using disproportionate force over Palestinians and having accusing Israel for its years long human rights abuses. Lately, United States made a move and expressed its recognition of Jerusalem as the

capital of Israel and moved its embassy there. This move was with intention of provoking the Muslim world.

On the north, there is the Russian Federation. Lately Turkey and Russia have been remaining good relations. Turkey is one of the great recipients of Russian Gas. Increasing trade volume and human exchange brought two countries closer. Shot down of the Russian fighter jet by Turkey and other conflicting interest on Middle East policies didn't escalate enough to cut ties with Russia. In fact, relations deepened, and Turkey bought Russian S-400 missile defense systems and agreed to construct and operate a nuclear power plant with the Russian expertise in defiance of United States. However, there still have unsolved historical disputes between the two. As Turkey sharing an ethnic and historic bond with Azerbaijan, the dispute over Nagorno-Karabakh might bring Russia and Turkey into a confronting position. Armenia's unlawful occupation of Nagorno-Karabakh have led to an ongoing war between Armenia and Azerbaijan over the status of the Nagorno-Karabakh.

Moreover, Turkey and Russia both share maritime to Black Sea. So that, Russia's domination within the Eurasian hinterland and its relations with other Black Sea countries such as Moldova, Ukraine and Georgia would affect stability and security environment within the region. Although Russia's control over Ukraine and annexation of the Crimea undermined the stability within the inland sea, Turkey has helped to establish initiatives such as Blackseafort and Blacksea Harmony to stabilize shaky ground.

As mentioned before, Turkey had stayed away from actual conflicts and hot zones since the formation of the new Turkish Republic with one exception: 1974 Cyprus Peace Operation. It was escalated with the Cyprus Problem in the 1960s. Since after the Peace operation many issues left unsolved and have become chronic problems. The most important of them are representation of Cypriots in the island and issues of continental shelf. Despite objections, EU approved membership application of Greek Cypriot Administration. However, according to 1959-1960 Treaties on Cyprus, it was the violation of international law that the "Treaties prohibits Cyprus from joining any international organization of which both Turkey and Greece are not members" (Republic of Turkey Ministry of Foreign Affairs, 2014). Following UN initiated series of negotiations and invited both parties to be part of the solution. After years long efforts, a draft plan for the solution of the disputes on both sides was put on referenda. While Turkish Cypriots shown that they were eager to establish peaceful settlement within the Island by approving the plan with clear majority, Greek Cypriots rejected it with an overwhelming majority more than 75 per cent. While this issue remained unsolved, nowadays there have been other

important source of tension around the region. There has been escalation in the tension because of the undersea energy riches, developing more natural gas discoveries within the Eastern Mediterranean Sea. Turkey argues, referring to the United Nations Convention on the Law of the Sea, that, “islands like Cyprus can not claim exclusive economic rights off their coasts. Instead, ownership of offshore waters should be determined by the continental shelf, meaning that those waters, and any hydrocarbons that might be discovered there, are mostly Turkish”.(Johnson, 2019) Contrary to the premise, there have been multinational plans undergone in the shores of eastern part of the Mediterranean Sea, with the cooperation between United States, France, Italy and Greece. The drilling activities have still been carried out despite all the reservations made by the Turkish state. As if that were not enough, two EU member friends and historic relatives, Greek Cypriots and the Greeks brought their unpleasant situation in front of the EU. And that resulted with an official warning and economic sanctions imposed to Turkey. “Long story short, energy search on the Eastern Mediterranean is not economic but a continuation of longstanding political dispute from the 1960s. Turkey has been and will stand there for the sake of Turkish Cypriots at any cost.”(Cafoglu Yaşar, 2020, s. 102)

## **1.2. A Brief History of the Turkish Defense Industry**

As mentioned above, added to immediate threats, Deterrence and good defense require attention when the geostrategic location and long historical position are considered. Turkey and the region have always been at the center of interest conflicts and high levels of risks. First attempts by the Turkish to ensure deterrence and strengthen defense capabilities, can be traced back to the Ottoman Empire. Until 17th century, the Empire had relative and absolute strength and power within the region and among its competitors. However, being unable to follow and adopt the innovations of the Industrial Revolution of the 18th century, the Empire, eventually, lost its supremacy and effectiveness with the beginning of the First World War.

Right after the First World War, with the dissolution of the Empire, the first decade was occupied with the establishment of the New Turkish Republic and the War of Independence. Nevertheless, there were some defense industry initiatives and production efforts, especially during the War of Independence, as part of the overall industrialization policy of the Turkish Republic. According to the Presidency of Defense Industries, there had been “some important ventures in ammunition, weaponry and aircraft production”(Presidency of Defense Industries, 2018) during this period. At first, as leftovers from the First World War, some machinery and production staff were brought from İstanbul to

critical venues of the War of Independence such as Ankara and Erzurum. These efforts not only helped to win the war, but also can be counted as the first attempts towards the local defense industrialization initiative for the Turkish Republic.

Defense production institutionalization process of the Republic initiated and organized under the rule of General Directorate of Military Facilities in 1921. Further efforts for weaponry and ammunition projection and calculation were argued in 1923 İzmir Congress of Economics. Some of these projects of the Congress were realized, in and around the capital Ankara, as the construction of facilities and manufacturing processes as a public initiative. Besides, part of individual enterprises, a private factory was in charge of “producing pistols, 81mm mortar and its ammunition, explosives and pyrotechnics, provided support to the Turkish Armed Forces during World War Two. (*Ibid*, 2018)

Aviation industry were first started facilitating under Tayyare ve Motor Türk AŞ (TamTAŞ) in 1928. It was established in Kayseri and produced nonstop until completion of maintenance of Turkish Airforce Command inventory aircrafts in 1939. Within almost ten years, TamTAŞ has produces “a total of 112 aircraft –15 German Junkers A-20s, 15 US Hawk fighters, 10 US Fledging trainers, 15 German Gotha liaison aircraft”(2018). Collapse of the TamTAŞ had led to one of the major steps for the Turkish aviation industry; an aircraft facility by Turkish Avition Association was established in 1941. It did produce several trainer, ambulance and transport aircrafts. Moreover, aircraft engine production has started in 1945 and some other production facilities were established at around 1942 and 1943 in order to repair and maintain aircrafts during the Second World War.

Drastic changes in power projection on the global scale led a great shift on the regional dynamics right after the World War Two. Immediate Cold War period following the global war witnessed both military and political militarization, due to its nature. In order to guarantee military and foreign aid, Turkey went after the Western block and aligned with the NATO. “Positioning itself under NATO umbrella was meant to adjust and even limit domestic defense industry developments in line with NATO requirements. Turkish defense industry had been progressing with baby steps. With the NATO membership, Turkish domestic defense industry development was slowed down. The quantity of the orders by the Turkish Armed Forces from national suppliers sharply decreased. As a result of this reduction in the defense production facilities, all production efforts were gathered under one single roof as Machinery and Chemical Industry Corporation established in 1950. Of course, this didn’t mean Turkey completely handed out its defense policies to

NATO. Ministry of National Defense had been working on the agenda for planning development and production of weaponry and military equipment so that they established Research and Development Department in 1954.”(Cafoglu Yaşar, 2020, s. 116-117)

What brought the idea of development and establishment of a proper defense industry in serious terms was the arms embargo upon Turkey due to Cyprus Crisis and the Peace Operation in which Turkey took an active part on the side of Turkish Cypriots as the guarantor state. “Cyprus problem was political and evolved with the incidents in 1963 and 1967. At the end, Turkey launched an operation, Cyprus Peace Operation, in 1974 and as a result faced with a serious arms embargo. The embargo revealed, once more, a well-known necessity for Turkey; development of a national defense industry and becoming self-sufficient. In order not to depend completely on a foreign supplier, Turkey looked after ways to activate its local defense industry once more. A concrete example for taking action during that period was the production of G-3 and MG-3 rifles under German licenses. Another concrete example for domestic initiatives was the establishment of Turkish Armed Forces Foundation. Although it was a small step, the Foundation launched enterprises such as Aselsan, Havelsan and Aspilsan which Aselsan has been on the SIPRI Top 100 defense producers’ list for some time.”(Cafoglu Yaşar, 2020, s. 117)(See Figure 1)

In 1980s, Turkey has undertaken a modernization initiative of the Turkish Armed Forces. Primary aim was to develop domestic defense industry to achieve up to date technology. As a result of some achievements and shortcomings, Undersecretariat for Defense Industries (Savunma Sanayi Müsteşarlığı-SSM) was established in 1985. The primary motivation behind advancement of the defense industry was the lessons made after embargo and meeting the needs of Turkish Armed Forces in general. Because self-sufficiency was the priority behind domestic initiative, there was no intention of offering Turkish products to the foreign market or use them as a foreign policy tool, a bargaining power at that time. However, 2001 economic crisis spurred the idea of making money from defense exports. Decreasing demand from the domestic market led the idea to release excess production to the foreign market. However, state and public support was behind the expectations at that time since 2006.

Starting from 2006, state and private sector has started to work hand in hand in order to support defense industry export. Local private firms have been licensed and utilized as main contractors in defense procurements. This has helped to ease bureaucratic process. To monitor and plan the production and

performance, feasibility studies implied. This prevented “the squandering of time and resources while averted the risks that may occur due to incompetencies in meeting needs of end users and also made it possible to prepare more accurate budget plans”(Presidency of Defence Industries, 2018).

Covering the years for 2007 and 2013, the 9<sup>th</sup> development plan released in 2006 has put many aspects for developing Turkish defense industry. It states that production should be competitive, self-sufficient, flexible and integrated with the country’s economy. Turkey and its defense production should actively participate in international cooperation opportunities for joint production, design and R&D. In order to meet the expectations of the domestic priorities, required infrastructure, technological and organizational know-how should be the main objective. Moreover, within the 2007-2011 strategic plan of the SSM, focused on meeting the defense requirements of Turkey and Turkish Armed Forces by providing indigenous domestic solutions. It is mentioned in the plan that Turkey should not only obtain its self-sufficiency but also become one of a kind competitive defense industry.

During the 2010s, indigenous design programs have been emphasized under the responsibility of the domestic main contractors in order to ensure that critical technologies and design capabilities are met domestically to the maximum extent. SSM's vision for the 2012-2016 Strategic Plan is to put Turkey ahead in defence and security technologies and to undertake the mission of managing the industrialization, technology and procurement programs that will continuously improve the defence and security capabilities of the country. In this respect, Turkey's overseas dependence has been significantly reduced through the provision of these programs, which will prepare the TSK for the combative environment of the future, gain competence in defence and security technologies and develop platforms and systems that will gain technological superiority domestically. With primarily the Milgem Ship, the Altay Tank, the ATAK Helicopter, the ANKA and Bayraktar Unmanned Aerial Vehicles, the Hürküş Training Aircraft, the Göktürk 1 Surveillance Satellite, the New Type Patrol Boats, Rapid Intervention Boats, National Infantry Rifle, Mine Protected Vehicles and Air and Missile Defence Systems, many systems, subsystems and weapon systems are the outcomes of projects that reduce dependency of the defence industry.

Within this framework, significant headway has been attained in the defence sector in the post-2006 period. The defence and aerospace sector worth \$1.3 billion in 2002 reached \$6 billion, defence and aerospace exports reached \$2 billion from \$247 million and R&D expenditures went from \$49 million to

\$1,25 billion. In addition, three Turkish companies are among the top 100 defence industry companies in the area of global defence and security.

The 10th Development Plan (2014-2018) calls for a competitive structure of the defence industry, defence system and logistics needs to be met in an integrated and sustainable way by the country's industry based on indigenous design, civilian use of appropriate technologies, increase in the domestic ratio and the share allocated for R&D as well as supporting networks and clustering structures in specific areas of the defence industry. In keeping with the Development Plan, the 2017-2021 Strategic Plan has identified the aim and targets of the SSM to, "manage by providing an integral approach to ensure the sustainability of the defence industry by developing the capabilities of our country to increase its power in defence and security areas through programs that will enable the sustainability of the defence industry" in order to make "Turkey a global player in the defence and security field with indigenous design and advanced technology capabilities."

With a historic referendum on a package of constitutional amendments, in 2017, there have been several and serious changes on the parliamentary and presidential system of Turkey(BBC News, 2017). As part of this transition, President Recep Tayyip Erdoğan made some organizational changes, included the one on SSM. Before that SSM was responsible to Ministry of National Defense. With a decree-law introduced by the President Erdoğan in July 2018, SSM has been made responsible directly to the President himself. Since then, it is restructured and organized as "Presidency of the Republic of Turkey Presidency of Defense Industries.

There have been two Turkish companies among SIPRI's list of top 100 defense firms. They are Turkish Aerospace Industries and ASELSAN.(Fleurant, Kuimova, Tian, Wezeman, & Wezeman , 2018) (See Figure 1) Although Turkey is still not a major player within the global defense industry, with planning and active domestic policies shows that it is dedicated to becoming one. Moreover, Turkish President Recep Tayyip Erdoğan has been very outspoken about Turkish defense industry aspirations and actions. His goal is to completely rid Turkish defense industry of foreign dependency by 2023 (see Figure 2 for arms exports to Turkey). He wants Turkey to achieve at least 25 billion dollars in arms exports by that time. Considering total arms exports of Turkey between 2011-2015 as 856 million dollars, this objective might sound a bit ambitious. To compare and understand, within that time period, there were only two states exceed that limit and they were United States and Russia. Erdoğan once stated that Turkish defense industry is becoming stronger "In addition to state organizations, there are many private sector companies that



work day and night, so they can compete with the world leaders. Our engineers are achieving new successes every day. Many projects that until yesterday were thought to be unachievable have either been completed or are nearing completion."(Daily Sabah, 2018) He often states the fact that Turkey shouldn't import any ready made defense products, software or systems if it can produce it by itself. Turkey still needs time to achieve self sufficiency in defense industry. No matter what will be the cost for Turkey, Erdoğan said Turkey will spend more time and money, but will definitely develop its own products. Cooperation with international firms is an option as well. Licensing and domestic production opportunities for foreign products is on the agenda. There are number of successful private companies operating in Turkey. Erdoğan said "In addition to state organizations, there are many private sector companies that work day and night so they can compete with the world leaders. Our engineers are achieving new successes every day. Many projects that until yesterday were thought to be unachievable have either been completed or are nearing completion."(2018)

Previous Defense Minister Ismet Yilmaz mentioned about new opportunities and destinations (see Figure 3 and Figure 4) for Turkish defense industry as some markets in South America and Africa can't afford armaments that are produced by global powers so Turkish products can be a great export opportunity. A little over half of the country's military equipment is currently made domestically. "Turkey raised concerns amongst its NATO allies in 2013 when it chose China Precision Machinery Import and Export Corporation, a company sanctioned by the United States for selling missile technology to Iran and Pakistan, as the preferred bidder for a \$4 billion long-range missile system"(2018). Turkish Government expressed its eagerness and explained its reasons as China being more willing to share latest technology than United States and European Defense Companies do. From 2011-15, U.S. companies supplied 63 percent of Turkey's armaments imports. Muharrem Dortkasli, chief executive of Turkish Aerospace Industries, argues that "We are talking about a country that will have its own national tank, national ship, national helicopter, satellite, and war plane. We are aiming to have everything the five permanent members of the UN Security Council have"(Guay, 2017).

### **1.3. NATO – Russian S400 Systems – Milestones in the Development of Modern Armaments**

After an overview of the defense sector development in Turkey, it is important to mention about Turkey's membership to NATO (North Atlantic



Treaty Organization). Turkey's NATO membership constitutes a great milestone for Turkish defense development.

Turkey's role in the Alliance has been important since the beginning. Despite contributing with the second largest army to the Alliance, Turkey's proximity and historical closeness to Middle East nations is an advantage for NATO. Turkey as an ally has highly contributed to the NATO missions in Iraq and Syria as well. Most of the air operation against ISIS (Islamic State of Iraq and Syria) was coordinated and controlled from the 39. Air Base Wing at İncirlik Air base near Adana (Garamone, 2014). With its strategic geopolitical positioning, Turkey has hosted X-Band missile radar systems. During the Iraqi Freedom operation undertaken by NATO, Turkey demanded an ally protection so that Patriot batteries and AWACS have deployed on Turkey (Kasapoğlu, 2014).

Turkey has been into new defense development and production processes. In 2 years' time period Turkey has tested the Bora, first indigenously produced ballistic missile which can carry almost 450 kg and has a range of 280 kilometers (Gürçan, 2017). Following, Turkey has announced the production of upgraded version of the Bora, the Bora-2, which has said to have a longer range. However, being a party to the Missile Technology Control Regime (MTCR), the Bora-2 development announcement would result in concerns because the Regime limits range of surface-to-surface missiles with range of 300 kilometers (Bekdil, 2018).

Beside those concerns, there have been some other factors that complicated Turkey's stand among NATO member states and in general. Turkey has been through a bloody coup attempt and a constitutional referendum afterwards. Moreover, the war in Syria and aftereffects of it such as ISIS and other terrorist organizations around the region have triggered the distrust towards the Europe and the West. This resulted with the pursuit of diversification of defense sources and taking steps towards Turkey to become a self-sufficient defence producing country by itself.

Not a coincidence, Turkey have been in search for new foreign platforms other than "NATO friendly" options. The most important impetus behind diversifying defense sources is Turkey's and President Erdoğan's policy of attaining a self-sufficiency in defense production at most. That would be fair to say Turkish demand was derived from its domestic security needs. Chinese, U.S. and Russian platform systems were at the table at first. They all have their pros and cons. However, Turkey, recently, has ended up with the Russian S-400 systems. In international relations, one should not forget that it is more important who you buy your defense products from than what kind of

armaments you are acquiring. So, the decision was said to be political than commercial due to reasons mentioned before.

Another importance of the S-400 systems sale to Turkey is that Russia sees Turkey as a gate towards Middle East. Russia wants to increase its visibility in the region via its defense products. Just like the US, they are aware of the fact that in order to have a good control over the region, military components are best. From the side of Middle Eastern states, they are either into Russian military products to show they are no longer fully dependent to the US or they use Russian products as a bargaining chip to receive more affordable offer from the US.

Although US still holds the technological supremacy in terms of defense production, since there have been not many hot wars around, most of the states watch for their strategic security interests over technology. Luzin confirms this fact is valid for Russian side as well. He states “S-400 have become a tool for Russia’s foreign policy”(Suchkov, 2019). He also mentioned that all those calculations would depend on US reaction towards Turkey. If the pressure US makes will be too much, potential S-400 importers will hesitate to purchase.

Besides its deterrence and strategic supremacy, providing Turkey with S-400 systems spurs some doubts. According to some, Turkey might use the systems against Russia and/or Russian interest in case of any conflict between two states. Others assume that Turkey, with a secret deal, might provide US the details of S-400 so that United States can effectively appeal against Russia in case of a crisis scenario. However, according to Russian experts(2019), these assumptions couldn’t go beyond from a word of mouth. First reason is Russia have not provided Turkey with the same S-400 systems they are using and keeping for themselves. It is the export version Turkey has been received. Secondly, since S-400 is a great but also an old system, Russia has already been working on a new generation advanced version of it. At the end of the day, as rational actor, Moscow should have calculated pros and cons of the system export to a NATO member state.

“In addition to NATO-operated systems, Turkey has developed domestic missiles and entered negotiations to buy foreign platforms. Turkey’s will to acquire new and upgraded missile systems likely stems from domestic security interests. There may be geopolitical undertones, especially guiding the decision to buy a system from Russia, but the foundational interest for the government is still national stability. The missile developments and international deals suggest Turkey is more aggressively pursuing a domestically sufficient defense industrial base. In early 2018, President Erdoğan indicated that he is interested

in producing almost all defense products domestically except for in emergency situations.”(Boyce, 2018)

On the other hand, while Europe has had domination in the armament production capability after the second world war, a great number of ballistic armaments fought with each other in the eastern half of the World and caused enormous amount of bloodshed and losses. Even after a generation later, European defense systems and armaments were at the hands of proxy states. Three incidents(Friedman & Friedman, 2015, s. 114, 115) and use of those older systems proved that those armaments were out fashioned, and primitive compared to the new ones; intelligent and guided missiles.

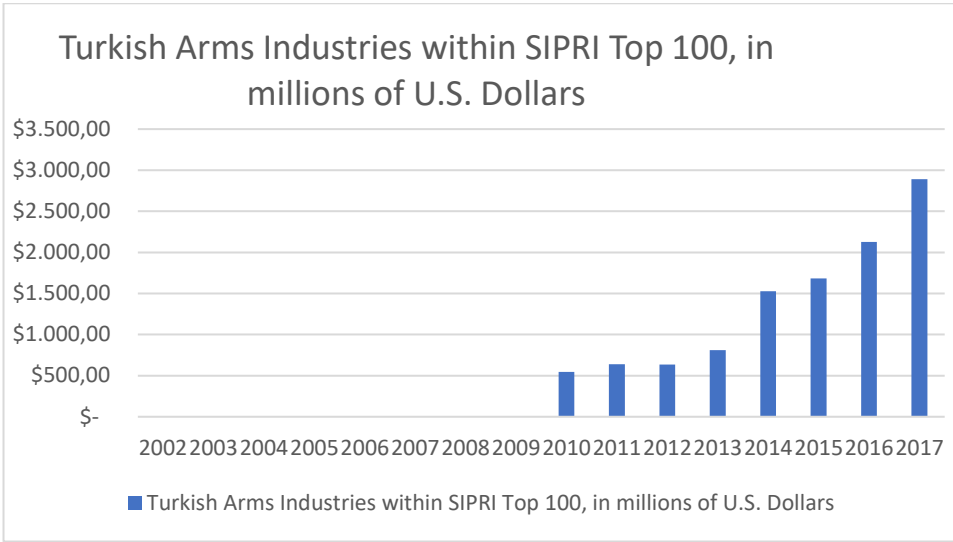
First incident was in 1967 at Port Said. Soviet made Komar patrol boat of the Egyptian Navy targeted an Israeli destroyer Eilat at offshore of the Port Said. Missiles activated and targeted the Israeli destroyer from 7 miles away and shot it. It was the first time in the history that a battleship is destroyed by a surface to surface missile system. Second incident happened during the Vietnamese War in 1972. At a day, twelve F-4 Phantom fighter aircraft took off with a command to destroy a strategic bridge, Thanh Hoa, that connects North and South Vietnamese ports and railways. Since 1967, more than hundreds of fighter aircrafts had attacked to the bridge but it was still there. At that day, 8 of the twelve aircrafts were carrying thousand kilos of bombs, however, as different from the previous attacks, those were intelligent bombs that can re-arrange their targets with an integrated laser and electro-optic guided systems accordingly after they are launched. The rest, 4 aircrafts, were carrying Chaff system that misguides enemies radar systems and acts like a jammer. As a result, the bridge was destroyed by only twelve aircraft. Third and last incident was within Sinai Peninsula in 1973. The Egyptian army had already crossed the Suez Canal and occupied almost all of the Israeli Bar-Levi line of the battle. The Egyptian attack was successful indeed, however, public opinion worldwide had an impression biased towards Israel. However, strategic and tactical maneuvers and use of armaments brought victory to Egypt. Hundreds of Egyptian infantryman attacked to the Israeli tank troops from a short range with their anti-tank weapons. After first attack twelve Israeli tanks were destroyed. With a second attack, another troop of Israeli army were blocked. After under heavy anti-tank weapon fire Israeli Army retreated with only four tanks left behind.

These three incidents are important to understand the impact of evolution of weapons systems over strategic power capability of a state. European global hegemony which was depended upon ballistic weaponry systems collapsed after a series of failed incidents. Since then, it is obvious that in order to maintain or

gain supremacy as a state, one should keep up with new technology, update and modify its systems and be able to produce its own defense requirements.

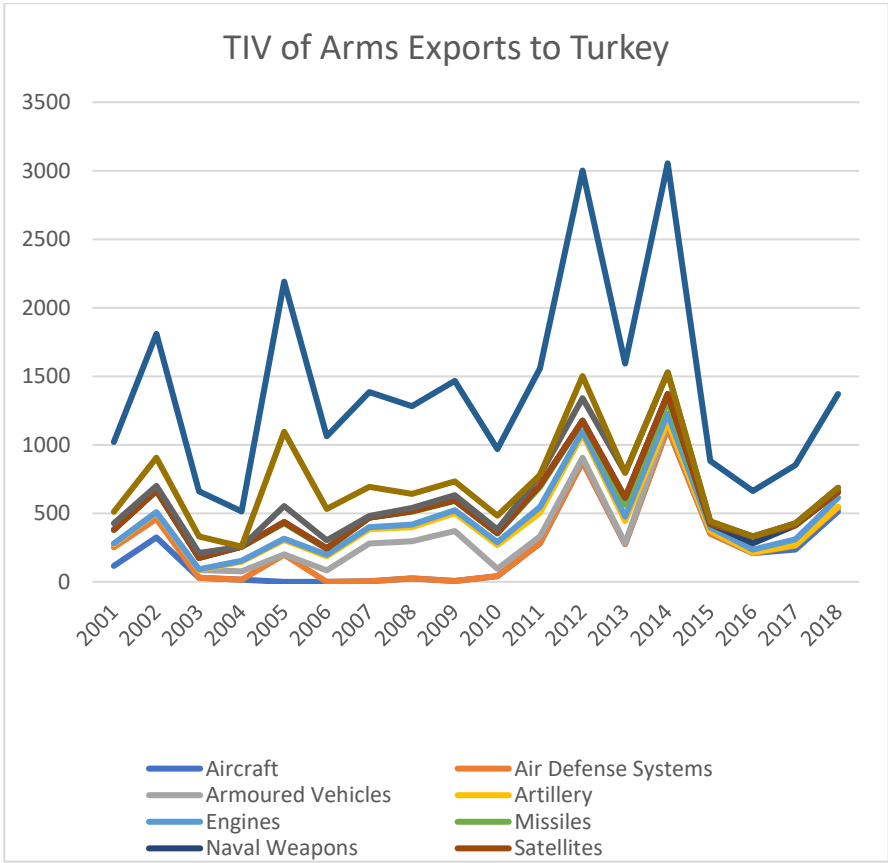
Modern war defense equipment can not to be produced without having any national minerals, and human power. As a result, it becomes a complicated civilian industry. Dual-operating economies are doing better, and they are more advantageous than single purpose military operating industries(2015, s. 49-50). For instance, General Motors both produces military tanks and an automobiles and Litton Industries produces submarines and microwave ovens.

Human power and size of an army is important during the arm production and deployment processes. Moreover, military strategy of the US to solve this problem was to find allies who were eager to comply with US in turn for a long-term US political and economic aid. It worked well during the last century, however, in a long run it is proved to be not useful as it was thought. Technical solution for that was to develop and produce kind of weapons that might compensate the situation. US experts not only developed and perfected their weapon and engine technologies at the beginning of 1950s, but they also perfected traditional weaponry platforms such as aircraft carriers, submarines, war tanks and military bomber aircrafts(2015, s. 53). Moreover, new developments, inventions and productions within the weapons industry is meant to change the meaning of geopolitical and geo-military power in traditional terms.



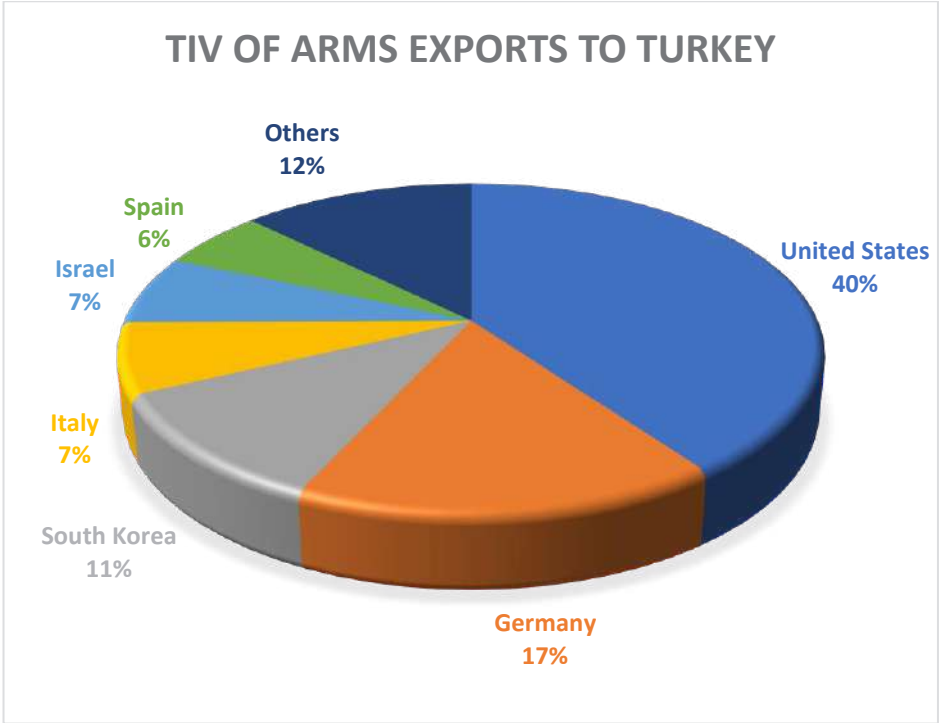
**Figure 1:** Turkish arms industries within SIPRI Top 100, in millions of U.S. dollars

**Source:** Cahoğlu Yaşar, H. N. (2020). Comparative Analysis of Post-9/11 Indigenous Defense Industry Policies, Transformation and Cooperation: Israel, India and Turkey (Doctoral dissertation, Ankara Yıldırım Beyazıt University) Ankara



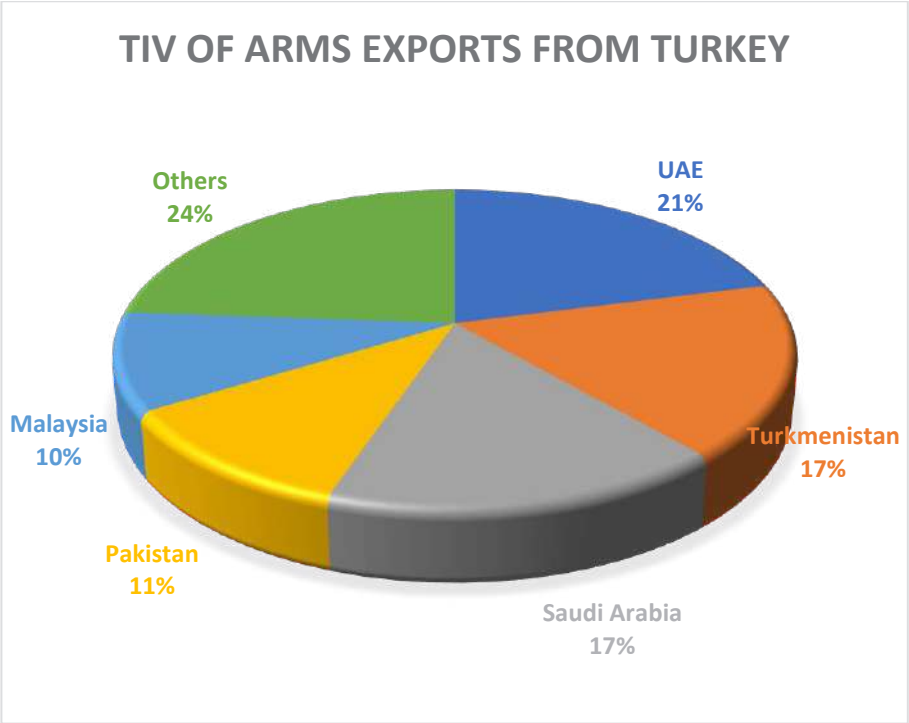
**Figure 2:** Trend Indicator Value of arms exports to Turkey

**Source:** Cafağlu Yaşar, H. N. (2020). Comparative Analysis of Post-9/11 Indigenous Defense Industry Policies, Transformation and Cooperation: Israel, India and Turkey (Doctoral dissertation, Ankara Yıldırım Beyazıt University) Ankara



**Figure 3:** Trend Indicator Value of arms exports to Turkey

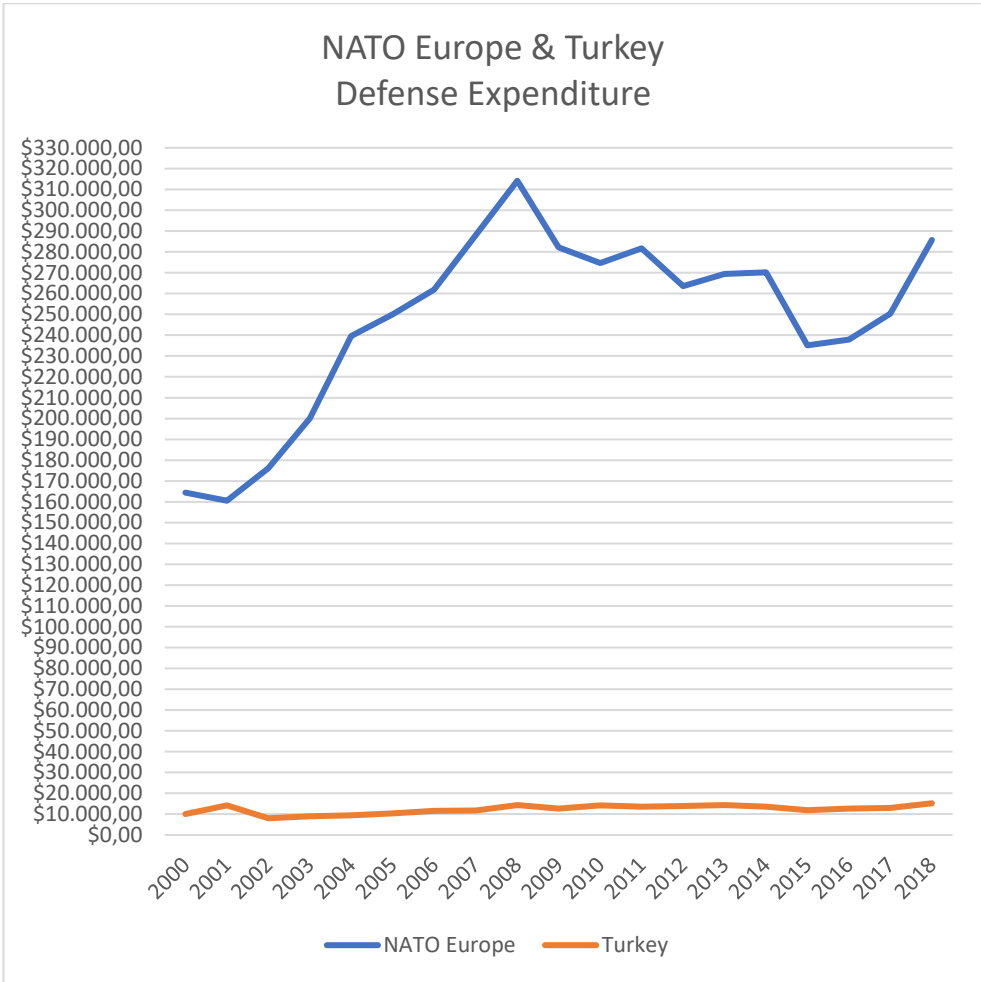
**Source:** Cafoğlu Yaşar, H. N. (2020). Comparative Analysis of Post-9/11 Indigenous Defense Industry Policies, Transformation and Cooperation: Israel, India and Turkey (Doctoral dissertation, Ankara Yıldırım Beyazıt University) Ankara



**Figure 4:** Trend Indicator Value of arms exports from Turkey

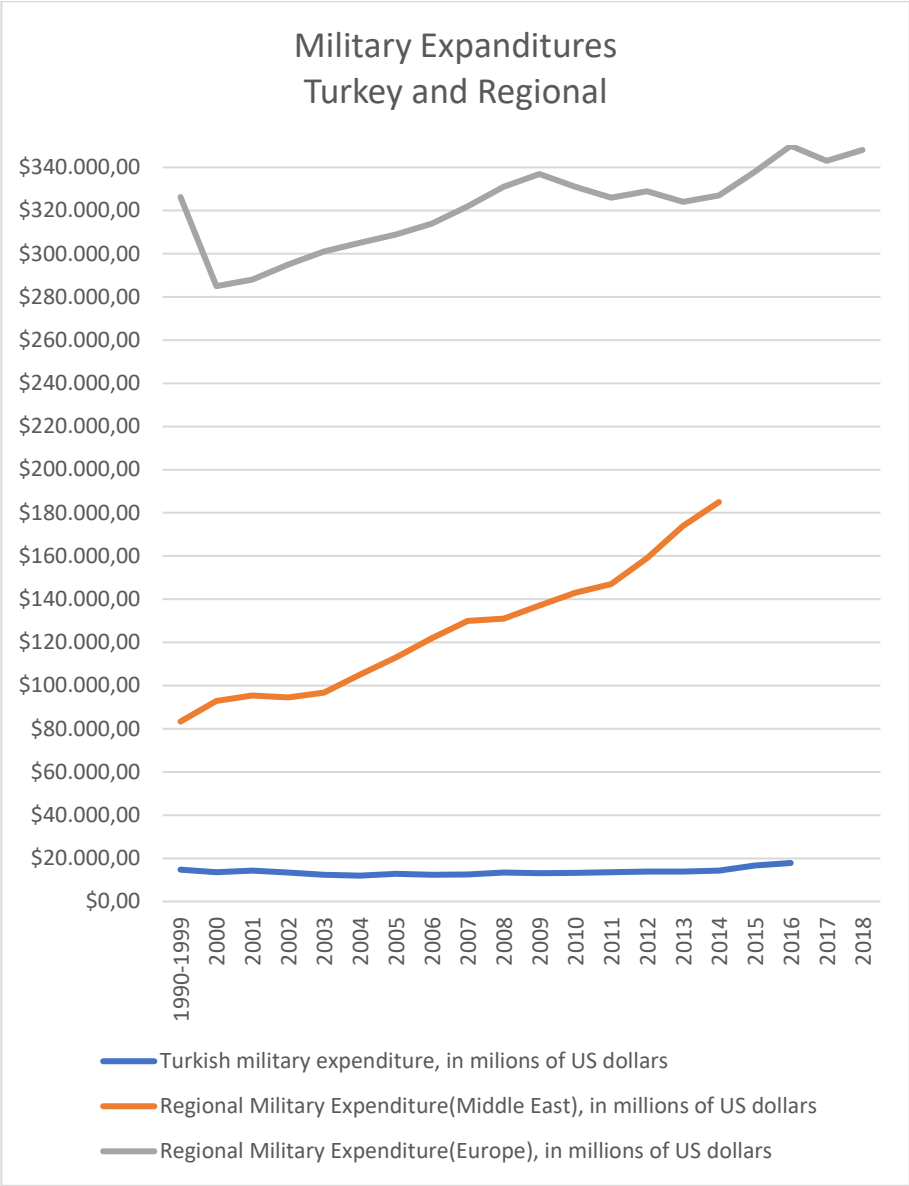
**Source:** Cafoğlu Yaşar, H. N. (2020). Comparative Analysis of Post-9/11 Indigenous Defense Industry Policies, Transformation and Cooperation: Israel, India and Turkey (Doctoral dissertation, Ankara Yıldırım Beyazıt University) Ankara





**Figure 5:** Defense Expenditures of NATO Europe and Turkey

**Source:** Cafoğlu Yaşar, H. N. (2020). Comparative Analysis of Post-9/11 Indigenous Defense Industry Policies, Transformation and Cooperation: Israel, India and Turkey (Doctoral dissertation, Ankara Yıldırım Beyazıt University) Ankara



**Figure 6:** Turkey and The Regional Military Defense Expenditure

**Source:** Cafoğlu Yaşar, H. N. (2020). Comparative Analysis of Post-9/11 Indigenous Defense Industry Policies, Transformation and Cooperation: Israel, India and Turkey (Doctoral dissertation, Ankara Yıldırım Beyazıt University) Ankara

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## Chapter 16

# Integration of Artificial Intelligence Systems into Real and Virtual Marketplaces

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## 1. INTRODUCTION

Globalization, digitization, and innovations have all altered the environment in a number of different industries, which has led to an increase in the number of new needs. The beginning of the 21st century may already be considered the beginning of the digitization and technical developments of the century. The process of digitalization is an excellent illustration of technological advancement; it is also closely connected to innovations, the success of which is dependent on the sharing of information and technology. Transfers of knowledge, technology, and innovations all contribute to the growth of artificial intelligence and together form a massive digital chain. The possibilities offered by artificial intelligence are expanding all the time, and their scope is virtually unbounded. This new technological development calls for humans to possess a distinct set of abilities. Despite the fact that technology has a number of benefits, there are some people who believe that artificial intelligence poses a danger to civilization and has the potential to one day replace humans. People from a variety of professional backgrounds may hold divergent and even opposing viewpoints (Tchelidze, 2019).

It is conceivable to define digital marketing as the practice of utilizing digital technology to create channels for potential receivers, with the ultimate goal of attaining corporate objectives through the more efficient fulfillment of consumer requirements. The term "digital marketing," which is gaining popularity, is commonly used in place of "internet marketing" and "e-marketing," which are also common concepts. This is not the appropriate way to go about doing it. When it comes to communicating with a consumer, the Internet is only one of the many various channels that may be utilized. In addition to that, there is home audio and video equipment, in addition to a variety of home appliances (Sawicki, 2016).

The use of artificial intelligence (AI) in marketing is becoming increasingly significant as a result of several factors, including the availability of large data sets, the growth of computer power, the decline in the cost of computing, and the development of machine learning algorithms and models (Huang & Rust, 2021).

AI technology operates in the realm of automation and continuous learning, serving as the intellect that enables data-focused analytics and decision-making. AI automates many of the tasks associated with the gathering, storage, management, and retrieval of information that can assist in the production and administration of corporate services. These tasks include: Deep learning, genetic algorithms, and natural language processing are just a few of the AI technologies that may be used to teach computers to spot patterns in enormous volumes



of data. Artificial intelligence (AI) can also teach robots to understand natural language (Kumar et al., 2019).

## **2. EFFECTIVE MARKETING**

The rapid development of technology over the past several years has pushed a number of different sectors into motion. The development of marketing has progressed to the point where it is essential for marketers to adjust their strategies to the latest digital trends. In spite of the fact that it may appear to be a priority for marketers, the reality is that the proliferation of automated applications and systems that are supported by artificial intelligence does nothing more than reduce the level of complexity inherent in traditional targeting and customization procedures. In many instances, internet marketing platforms feature algorithms for determining which combinations provide the greatest results. In other cases, businesses go through the trouble of developing and deploying customized solutions in-house (Dumitriu & Popescu, 2020).

In order to build effective marketing strategies that are appropriate for the conditions of a digital economy, it is essential to define the scientific underpinnings for the most recent technological advancements that are associated with digital marketing. These recent technological advancements are connected to the practice of digital marketing. Alterations in people's motivation, mentality, way of life, and quality of life, as well as the emergence of opinion leaders in the space of the Internet, the rise of communities in social networks, the development of the market for specialized applications, and the improvement of systems that manage relationships with consumers, are all necessary preconditions for carrying out such a study. The rapid pace of technological progress in this particular instance predetermines the wide range of viewpoints that may be taken with regard to the generalization of the theoretical notions that underpin advancements in digital marketing (Oklander et al., 2018).

## **3. THE ADVANTAGES AND DISADVANTAGES OF DIGITAL MARKETING**

The use of digital marketing gives marketers the ability to view precise outcomes in real-time. If an advertisement is published in a newspaper, it is difficult to determine how many readers actually turned to the appropriate page and gave the ad their full attention. There is no foolproof way to determine whether or not any sales were generated as a direct result of that advertisement. On the other hand, digital marketing may assist you in determining the scope of your product or service's reach, engaging with potential clients, reaching customers on a worldwide scale, and promoting in a more individualized fashion. Howev-

er, there are a few drawbacks associated with digital marketing. Internet connectivity is essential to the success of digital marketing. Because some users may not have access to the internet or may have a subpar connection, certain places may not have internet access. It contains a lot of clutter, so it is difficult for marketers to make their commercials stand out, and it is difficult to attract customers to initiate dialogues about the brand image or goods of an organization. However, the fact that many other products and services on the market are competing with yours and employing the same digital marketing tactics might be a drawback. Because of the large quantity of advertising that occurs on websites and social media platforms that may be deemed fraudulent, some customers may have a poor impression of some businesses. This is because some customers do not trust businesses that conduct business online. Even one person or a very small number of people may do significant damage to the reputation of a well-known business. The only thing that digital marketing does is spread information to potential customers, the vast majority of whom lack the purchasing authority or capacity to make a purchase. As a result, the ability of digital marketing to translate into actual sales volume is questionable (Desai, 2019).

#### **4. ARTIFICIAL INTELLIGENCE IN DIGITAL MARKETING**

The significant role that artificial intelligence (AI) plays in the strategic decisions of customers and the nature of competition in today's world is a direct result of the quick transformation that AI has wrought in the dynamics of the new digital world. In addition, AI has helped many firms forecast large amounts of consumer data, which enables them to meet the expectations of their customers and deliver tailored goods and services. The use of AI in operational marketing has risen, particularly in areas such as the design and selection of advertisements, consumer targeting, and customer analysis. Despite this, the effectiveness of the position in strategic decision-making may be improved by using machine learning techniques, knowledge representation, and computational intelligence. AI, or artificial intelligence, is emerging as a new technology that can provide business solutions for a better understanding of consumer behaviors. AI also helps to target a specific audience by employing better digital marketing techniques, so it can provide a superior understanding of consumer behaviors. Additionally, it helps in building a positive connection with a customer, which ultimately results in the development of strategic partnerships with customers. This demonstrates without a doubt that the application of AI in digital marketing results in extremely successful campaigns. However, in order to reap the full benefits of AI, one must first ensure that they have the necessary infra-

structure, organizational culture, appropriate set of skills and knowledge, and necessary technology (Zaman, 2022).

It is anticipated that adding AI to the process of making strategic marketing decisions would result in the following benefits (Stone et al., 2020):

- Increased speed of decision-making, particularly in response to new data being available or emerging competitive threats, which allows companies to capture the benefits of stronger market positions earlier;
- Identifying missing data;
- Increased rationality, particularly via the removal or reduction of cognitive bias by decision-makers;
- The establishment of a common decision-making basis;
- The incorporation of learning from experience; and
- Improved marketing project management quality.

## **5. ARTIFICIAL INTELLIGENCE INTEGRATION FOR DIGITAL MARKETING**

The use of digital marketing that is enabled by artificial intelligence (AI) is revolutionizing the way in which businesses create content for campaigns, generate leads, reduce the costs associated with customer acquisition, manage customer experiences, market themselves to prospective employees, and convert their reachable consumer base through social media. There are a great number of companies out there in the real world that are now utilizing AI in their digital marketing strategies. Importantly, the use of artificial intelligence in marketing creates not only practical challenges but also ethical questions, as is the case with the vast majority of technologies that have great potential. This is the case with the majority of technologies because of the way that they work (van Esch & Stewart Black, 2021).

The use of artificial intelligence (AI) in marketing is done so as to continually follow and forecast the future purchase choices of the target customers, as well as to improve the "journey" of the target consumers. The strength of artificial intelligence may be seen in its fundamental components, which include large amounts of data, automated learning, and effective solutions. The term "big data" refers to the capacity of marketers to compile and organize massive volumes of data with only a small amount of effort that is performed manually. By making use of this data, they will be able to ensure that the appropriate message is communicated to the appropriate individuals at the appropriate time via the channel of their choice. Machine learning, also known as "deep learning," gives marketers the ability to comprehend enormous data collections and derive

logical conclusions from them. They have the ability to forecast consumption trends, follow and evaluate consumer purchases, and anticipate the future behavior of consumers. Because we are living in an era in which powerful solutions are being developed, we are at a time when robots actually perceive the world in the same manner that people do. Machines are able to quickly recognize concepts and themes across a wide variety of data, understand human emotions and human speech, and provide appropriate replies to customers' inquiries. They are able to forecast the actions and choices of customers with ease and utilize this information to find solutions to problems in the future. Through the continued integration of technology into the tangible aspects of the actual world, new, more efficient, and immediate ways of interacting with customers are being developed. Expectations of a high level of service from customers will continue to rise. Companies and marketers will face a new difficulty as a result of this, as well as a new opportunity. Marketers may better achieve full personalization and relevance with the assistance of artificial intelligence. With platforms like Google, Facebook, and YouTube reaching billions of people every day, as well as digital ad platforms, massive communication will finally be possible. Because of this size, in addition to the level of customization that can be achieved via the use of artificial intelligence, businesses will soon be able to design individualized advertising in real-time. The implementation of artificial intelligence is where the world of the future will be found (Dimitrieska et al., 2018).

## **6. ARTIFICIAL INTELLIGENCE APPLICATIONS FOR DIGITAL MARKETING**

This section takes a look at how artificial intelligence may be applied to many aspects of digital marketing. The usage of social media plays a significant role in the collection of more personal information about a possible consumer, which subsequently makes it simpler for marketers to create a targeted campaign. Chatbots are computer programs that are powered by artificial intelligence and that communicate with users in a setting that uses natural language. Because an ever-increasing proportion of activity on social media now takes place on private messaging services like WhatsApp and Facebook Messenger, these programs are swiftly becoming one of the most important focuses of attention for marketers. Image recognition is quickly becoming one of the most intriguing and perhaps most significant advances in the field of artificial intelligence. If someone wants machines to be able to "think" like us and mimic our ability to respond to our surroundings, such as in the case of self-driving cars, then it is of the utmost importance that they are also able to "see" like us. This is

because self-driving cars rely heavily on their ability to respond to the environment around them. Computers can find and identify even the most simple things and situations these days. Email marketing has become even more effective because of the application of artificial intelligence, which benefits both the marketer and the client. The aim of any marketer is to achieve personalization at scale, and artificial intelligence makes this possibility a reality. Augmented reality is another part of artificial intelligence that can improve the level of customer satisfaction (Murgai, 2018).

## 7. IMPLICATIONS OF AI ON MARKETING MANAGEMENT

AI has a big effect on how marketing is managed today, and it's clear that marketing teams will have to change the way they do their jobs. The implications of AI on marketing management are given below (Jarek&Mazurek, 2019):

- **The removal of tasks that are strenuous and require a lot of time:** AI is capable of automating jobs that are mundane and repetitive in nature, such as data collection and analysis, picture search and processing, and the adaptation of images.

- **An increase in the weight that is placed on creative and strategic endeavors:** The precise analyses that are done by AI highlight the importance that actions that are creative and strategic play in the process of building a competitive advantage.

- **New approaches to the design of products:** AI will change how value is given to customers and will boost the role that creating innovative solutions via design plays in the process.

- **Improving the marketing team's existing skills and teaching them new ones:** In order to use AI, the marketing team needs to know about the new technological possibilities and have data scientist skills.

- **An innovative environment for the marketing industry:** Because of the complexities of AI, the role of firms that produce AI solutions has become increasingly important. Artificial intelligence is getting better all the time, so we need to build a new way to interact with AI entities that offer tools for data engineering or machine learning.

## 8. COMPARISON OF CONVENTIONAL MARKETING TO DIGITAL MARKETING

When traditional marketing practices are compared to the methods of digital marketing, it can be seen that there are many places and possibilities where online marketing is competent, has its advantages, and is always preferred over it. This is because digital marketing has become increasingly popular in recent

years. The following items present a comparison of traditional marketing and digital marketing (Bala & Verma, 2018):

- Digital marketing takes place in real-time, in contrast to traditional marketing, which requires us to wait for a certain amount of time before seeing how clients have responded to our efforts. Because we are able to monitor the responses of our customers in real time, it is much simpler to determine whether or not a specific marketing campaign is successful for the product. Furthermore, the marketer is in a position to make the necessary adjustments to the promotional campaign based on the information provided by the customers; however, this level of adaptability is not possible with traditional marketing.
- In traditional marketing, it is difficult for small retailers to compete with the big competitors in the market due to the costs involved and the expertise required in strategy-making. On the other hand, in the case of online marketing, through a crisp website, you can reach your target audience with a wider reach and better service assurance. The involvement of cost is another factor that creates a significant amount of difference between traditional marketing techniques and online marketing; a business house can create its respective digital marketing strategy with very little cost and replace conventional, costly advertising methods such as print media, radio coverage, television, and magazines.
- Once a marketer has optimized the keyword search criteria content on their website, it is a great return on investment with a very low cost to maintain the positioning. Online marketing allows any business promotional idea to have a far greater reach and coverage because it can be seen in any part of the world via one marketing campaign.
- Customers are able to express their opinions regarding the product, their choice of purchasing the product, and corresponding feedback, all of which are visible on the website. So, using electronic marketing gives marketers a good chance to connect with their target audience. This lets the marketer create options to get their target audience to take the right actions, like visiting their website and learning about their products, their features, and the different services they offer. A well-designed website that provides quality information can target the requirements of the customers and add significant value to their expectations through the creation of greater opportunities. Digital marketing is a more effective method for developing a brand than more traditional modes of marketing. Digital marketing is superior to traditional marketing

methods because it can generate a ripple and viral effect in the promotion. For example, using social networking sites, email, and other forms of social media makes it possible for the message's content to spread very quickly.

## **9. CONCLUSION**

The use of artificial intelligence by a number of businesses has directly contributed to the expansion of their respective market shares, which has led to the success of those businesses. It is anticipated that the level of competition between various businesses will increase as the number of people who use intelligent products in their day-to-day activities continues to rise. This is due to the fact that intelligent goods made possible by AI make the lives of consumers significantly simpler and more convenient all around. It is possible that the growth in the amount of competition brought on by the digital era would be damaging to marketers, particularly if technology like artificial intelligence and robotics are used. A large number of individuals will be fired from their employment as a direct consequence of the climate of digital warfare that will be produced. In today's increasingly digital world, there has been a constant rise in the application of robotic technology and artificial intelligence in the management of goods and brands. This development has been accompanied by an increase in the usage of both of these technologies.

Marketers need to keep their digital marketing abilities current in order to keep up with the constantly shifting expectations of clients in today's environment. Only then will they be able to fulfill the requirements set out by those customers. Building up one's marketing abilities is essential in order to make the necessary preparations, which include targeting digital markets in a way that is distinctive, creative, and forward-thinking in terms of one's efforts.

Companies that have been able to make the shift to a digital business model with the assistance of digital technology and have done so effectively have gained dominant positions in digital marketplaces. Some examples of digital technologies that have the potential to positively affect the level of customer satisfaction include artificial intelligence, machine learning, fuzzy logic, artificial neural networks, the internet of things, robotics, virtual reality, augmented reality, the metaverse, blockchain, digital twins, and web 3.0. Other examples of digital technologies include robotics. Because of this, the process of digital transformation necessitates the implementation of a significant number of digital technologies that have an immediate impact on our lives and will continue to do so for the foreseeable future. These technologies have an immediate impact on our lives and will continue to do so for the foreseeable future.

For this reason, digital entrepreneurs and innovators should give some thought to making investments in a number of digital technologies, such as cloud computing, big data, artificial intelligence, and artificial neural networks. They should also focus on doing groundbreaking research in this area and working on themselves to stand out in the digital market. The next step in the development of marketing is the integration of artificial intelligence systems into real and virtual marketplaces. This is an essential step that must be taken.



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## **Chapter 17**

# **Transformation of Training of the Central Bureaucrats in the Ottoman Modernization Period**

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*"The whole administration of this huge country depends on the education given in the palace; there, the fortune of every nation is equal, and everybody stands out only by his virtue or sins. It is useless there to boast of the nobility of one's race. Only by virtue, one can rise above others, and rewards are always given to those who deserve."*<sup>1</sup>

Santuri Ali Ufki Bey

## 1. Introduction

The Ottoman State administration needed to renew its institutions in the 19th and 20th centuries, and all institutions received their share from this modernization process. The modernization period observed severe transformations in the state administration, where the ruling class's education was directly in the Sultan's palace. The transformation of the selection and education of the bureaucrats was inevitable. Enderun School has served the Ottoman Empire for about five hundred years and is one of the most traditional institutions of the Ottoman Empire. This institution, which was seen in the Ottoman education system from the early ages, had the task of educating the palace officials and those who would later become senior public administrators. Since the school's human resource consists of specially selected children, it has been the subject of studies on gifted or talented students. The school, which appears as an exclusive palace school, constitutes the perfect example of the palace school tradition seen in the previous Muslim-Turkish states. Especially in the 16th and 17th centuries, the school made significant contributions to the bureaucracy, culture, and science with statesmen, scientists, and artists raised there. However, this situation changed with the state's renewal movements in the 18th and 19th centuries. Enderun School gradually transferred some of its functions to other institutions with the innovation movements and finally closed in 1909. There are very few sources about Enderun School from the Ottoman period. People such as Enderunlu Hizir Ilyas Aga, Tayyazade Ata, Santuri Ali Ufki Bey wrote their memories and gave detailed information about the school organization, education, and structure. After the Republic, names such as İsmail Hakkı Uzunçarşılı, İsmail Hakkı Baykal, and Ülke Akkutay made detailed studies about the organization, ceremonial and protocol design and education system of the Enderun School.

However, in all these studies, the closure of the Enderun School was passed by only giving a date without going into details. It is essential to evaluate the history of bureaucratic elites and which institutions were used in this education process. It is vital to assess the transformation process that is a necessary

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<sup>1</sup> Santuri Ali Ufki Bey (2012). *Topkapı Sarayında Yaşam* (Life in Topkapı Palace). İstanbul, Kitap Publications, 110.

example of Ottoman Modernization. The Translation Chamber substitute Enderun School in the Modernization period gradually. In this research, firstly, I will evaluate the history of Ottoman Bureaucratic Education. Second, I will analyze the transformation of classical education in the Modernization period. Third I will examine the Translation Chamber as a kind of 'palace' school. Then I conclude that the transformation carries a paradigm shift in terms of the selection of the bureaucrats.

## **2. History of Ottoman Bureaucratic Education**

Although it has been provided with different names and methods from the first age to the present, the public administration system and law have been essential elements of the state structure. For this reason, we see politics, philosophy, and personal development books on public administration in almost all civilizations throughout history. The historical development of public administration has naturally differed in different societies. However, the critical point common to all civilizations was the selection and training of administrators who would carry out the public administration, knew the code and law, and could implement it with the appropriate institutions of the age. Because the most crucial task to ensure a sustainable public administration was senior public administrators. Senior public administrators undertake the task of ensuring the state institutions and provinces' administration in every sense.

For this reason, there is an essential link between political authority and bureaucratic procedures. The most correct and vital move that political authorities will make is to train senior managers who will meet the need for the referral of bureaucratic works and transactions. Senior public administrators' training and education maintain their importance in all states where public administration takes place. First, a public administrator who will respond to the needs of the age and then work in coordination with the current political authority is necessary. Like today, in the Antiquity and the Middle Ages, the need for senior management class was one of the most fundamental states' requirements. In my opinion, it was more crucial than today due to limited communication opportunities between central authority and provinces. This duty required to take significant initiatives by the public administrators. In the Middle Ages, for political authorities to ensure the continuity of their country; There was a great need for senior public administrators as the representatives of central management. Central authority such as production-consumption balances, the control of the army, administration of the treasury and taxation transactions, and the governance of the people of the distant region were expected to be done by the mediators. For this human resource to adequately

meet the needs, two basic elements had to be appropriately provided: selection and senior public administrators' training.

Towards the end of the Middle Ages, the Ottoman Empire, which was established in the East of Marmara and developed in the Mediterranean basin, needed military and senior civilian managers to protect the production-consumption balance, like many other states based in the same region. On the other hand, unlike the other principalities in Anatolia, the Ottoman State carried out a conquest in Byzantium's direction, thus conquering new lands and meeting new peoples. For this reason, firm administrators were needed to establish solid foundations for this state, whose lands are growing and undergoing demographic changes. Therefore, selecting and training top managers for the Ottoman Empire, like all other states, was on the agenda even when the state was newly founded. Throughout the history of the Ottoman Empire, different motivations were used to select and train senior managers. For instance, during the establishment period, senior managers were mostly elected from the Ilmiye class. In the classical age, these people were chosen from the Seyfiye class or the people who were educated in the Enderun School, one of the classical Ottoman educational institutions. With the start of modernization and the relocation of the government center, senior managers were selected from the Kalemîye class.<sup>2</sup>

Enderun School was a school that palace officials who would serve as sultans were educated here. Therefore, the young people in the school would contact and work with a sultan directly in the following years. In the Ottoman Empire, legitimacy was provided by the ruler in general. The ruler provided his power through a bureaucrat class that he ruled and shaped entirely. This class is called 'askeri's in the Ottoman Empire. The 'askeri's class also consists of two groups, the military bureaucracy, and the religious bureaucracy. While a part of the bureaucratic class that provides the ruler's rulership is represented by the Janissaries who are raised according to the mentality of the *kul*, the high-level officials sent from the center to the provinces ensure that the central mentality prevails in the provinces. The officers' loyalty to the provinces was tried to be protected by shaping the mentality in the palace and the status of *kul*. The slaves and captives who served in the army, bureaucracy, and palace were called 'gulam' in ancient Islamic states. In the ancient Arab-Islamic Kingdoms, Gulams serving in the palace, army, and administrative services were also working in the Islamic-Turkish States. The Kul Method of the Ottoman Empire is nothing more than a continuation of this practice. "Gulâm" is more commonly expressed

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<sup>2</sup>İpşirli, M. (2001) Kalemîye, *TDV Encyclopedia of Islam*, Volume 24. Istanbul: Turkey Diyanet Foundation Publications, 248.

in the Ottoman Empire by the term ‘gilman’ or ‘kul’. However, these servants (*kuls*) were not slaves.<sup>3</sup>

Enderun School can be a military school that trains administrators and is entirely influenced by the state and the Sultan. While madrasahs continue their lives with foundations (*vakıf*), Enderun was fully supported by the state. Accommodation needs, other daily needs, and allowances of the students were provided entirely by the state or, more accurately, by the Sultan himself.<sup>4</sup>

Enderun School was an integral part of the palace school culture, which dates to ancient times, with training palace officials and senior executives' mission.<sup>5</sup> It would not be wrong to say that the Enderun School is the most developed of the palace schools seen in many states in the entire Islamic civilization. Enderun School has established new rules with the demographic, geographical, and political conditions while continuing many traditions of the palace schools seen in the Muslim Turkish states that came before it. Carrying the palace school mentality of the past had many advantages and disadvantages. Before the Ottomans, almost all Muslim and Turkish states established palace schools to meet their state management needs. Enderun School has also taken over the heritage directly. Although it also made contributions to meet the needs of its age, some qualities from the Middle Ages when the Ottoman Empire started to modernize created different effects on Enderun.

Enderun School is the most developed example of the palace school tradition of the Muslim Turkish states. When the Ottoman Empire ruled large geography, Enderun included all the civil servants of the state center. Almost all the ruling elites from the lowest to the highest, all the military ranks from the sipahi soldiers to the commanders, the Imperial Council members (*Divan-ı Hümayun*), the governors, almost all governors, and the governors educated there. He was training many artists. This school is home to young people who are candidates for senior administrators in the civil or military field and is an educational institution where the Ottoman phenomenon, ideology, and mentality are built. It is a school located in the Sultan's palace's inner part, where the sultans personally penetrated and took care of. The sole asset of these young people, who were in servants' status, was the Sultan. Providing useful services to the state and the Sultan at critical points of the state depended on education.

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<sup>3</sup> Özcan, A. (202). Kul (Servant), *TDV Encyclopedia of Islam*, Volume 26, İstanbul, Turkey Diyanet Foundation Publications, 348.

<sup>4</sup> Hafız Hızır İlyas Ağa (1987). *Tarih-i Enderun* (History of Enderun). İstanbul, Güneş Publications, 21.

<sup>5</sup> Simit, E. (2019). Kapatılış Sürecinde Enderun-ı Hümayun ve Enderun Mektebi (The Closing Process of the Enderun-ı Hümayun and Enderun Schools). *Vakanüvis - International Journal of Historical Researches*, Volume 4: 318-353.

### 3. The Turkish Modernization Period and Its Effects on Training of the Central Management

Considering the Enderun School's role in the palace, it was a very significant side element or one of its dynamics, even though it was not the main element of the central Ottoman organization. Consequently, it was one of the most quickly affected in the central organization by degeneration. Enderun School was one of the classical Ottoman educational institutions. Therefore, every approach or innovation related to education in the state would directly affect Enderun School. Besides, Enderun School was built as a school to train senior managing elites. Therefore, it was directly related to all developments in terms of public administration. Considering these functions, Enderun School is directly related to the Ottoman Modernization and Public Administration of the Ottoman State and has penetrated these areas.

For the Ottoman Empire, the 18th century resulted in numerous differences. New problems have arisen because of independent factors since this century. It can be seen that there are both global changes in the world and the challenges facing the state itself when the variables of these problems waiting to be solved are investigated. In the world, balances were shifting. From the 16th century onwards, some European states started to demonstrate their presence in western Africa and the Indian Ocean. They thus began to limit the trade of the Ottomans and Muslims. The growth of Russia in the north, on the other hand, limited the mobility of Ottomans and Muslims further. The Shiite-Sunni struggles continued, as the Safavid presence in the East could not be eliminated. In such a political landscape and such vast geography, the Ottomans continued their presence between the East and the West and multiple battlefields far from one another.<sup>6</sup> In all the Ottoman Empire institutions, there was a visible dissolution due to the perception of the war economy that expected continuous victory and the shock in the market economy exacerbated by the inflationary American Silver.<sup>7</sup> In this context, it would be insufficient to seek this deterioration or wear-out process of the Enderun School only within its structure.

When the Ottoman Empire's organization was being reconstructed by Sultan Mehmet the Conqueror, he took several actions to increase the Ottoman sultan and the central organization's power. It is one of them to introduce recruitment-based managers to senior management. This mission is also fulfilled by Enderun School, which is located in Topkapı Palace. Naturally, with recruiters'

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<sup>6</sup> Sander, O. (2014). *Anka'nın Yükselişi ve Düşüşü*, (The Rise and Fall of Phoenix). Ankara, İmge Kitabevi Publications, 99-105.

<sup>7</sup> Yalçinkaya, M.A. (2002) "XVIII. Yüzyıl: Islahat, Değişim ve Diplomasi Dönemi (1703-1789)", *Türkler*, Volume 12. Ankara, Yeni Türkiye Yayınları, 479.



arrival to senior management positions, Muslim and Turkish elements have lost their effectiveness. While this practice was criticized for various aspects, after Fatih, the Kul Method began to constitute one of the state's classical traditions.<sup>8</sup>The principles and practitioners of the Recruitment Method (devşirme) were defined by legislation and contained strict rules. First of all, the method's dominant focus was that it eliminated the Muslim and Turkish elements. All bases are designed on this core principle.<sup>9</sup>However, by ignoring the Enderun procedures by the hand of the sultans,<sup>10</sup> people began to be brought to Enderun from outside of the recruitment, and thus the Turks were also enrolled in the school. In the short term, the recruitment process, which began to ease in Sultan Murad III and Sultan Murad IV, will not instantly reveal itself but will have undesirable effects in the long term. According to Christian children taken at their adolescence age, the Kul Method, which was prevalent in the Ottomans, was arranged in all ways. However, other than the recruitment, those who entered the palace and the guild with the sultans' blessing induced the entry of others like them.<sup>11</sup>

Enderun was such a school that the majority of the palace members were raised in it. Those who have risen over time and took essential places in the palace could turn crises into opportunities. From the beginning of the top management positions around the Sultan, with the people who were not properly selected, the administrative staff's organization in the middle deteriorated. As Koçi Bey depicted in his brief which was given to the Sultan:

“Turk, Yoruk, Gypsy, Jewish, Irreligious, Sectless, and many treacherous and drunk city boys entered the Harem-i Hümayun illegally. If no precaution is taken after this, if the enfeoffing is not given to their masters, this makeshift soldier cannot competently serve religion and the state. No task can be done.”<sup>12</sup>

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<sup>8</sup> Demir, A. (2017). Osmanlı Devleti'nde Devşirme Sistemi (Devshirme System in Ottoman Empire), *International Journal of Social Sciences*, Volume 1, Issue 1: 20.

<sup>9</sup> Akdağ, M. (1947) Yeniçeri Ocak Nizamının Bozuluşu (Deterioration of Guild of Janissaries), *Ankara University The Journal of the Faculty of Languages and History-Geography*, Volume 5, Issue 3: 291.

<sup>10</sup> Ergin, O. (1977). *Türkiye Maarif Tarihi* (The Education History of Turkey), Volume II. İstanbul, Eser Publications, 14-15.

<sup>11</sup> Simit, E. (2019). Kapatılış Sürecinde Enderun-ı Hümayun ve Enderun Mektebi (The Closing Process of the Enderun-ı Hümayun and Enderun Schools). *Vakanüvis - International Journal of Historical Researches*, Volume 4: 318-353.

<sup>12</sup> Danişman, Z. (1972). *Koçi Bey Risalesi* (Booklet of Koci Bey). Ankara, MEB Publications, 23.

A "nepotism" within the Ottoman central management began to be adapted.<sup>13</sup> It could be seen that the process for recruitment has been discontinued. The new exceptional trainees came to administrative positions in various ways without merit, but kinship or friendship ties contrary to the merit-based tradition of Enderun.<sup>14</sup>In essence, the recruitment practice was a cultural legacy from the previous Muslim Turkish states to the Ottomans. By revising the Gulâm in line with regional sociology, the Ottomans generated the Devşirme method and operated the Kul Method with this resource. Kul Method, which makes up a substantial part of the state's administrative and military personnel, has become one of its fundamental traditions. However, the Devşirme system, which began to worsen with many variables after the 17th century, also affected many of its associated institutions. One of them was Enderun School. As this approach began to stretch, the Enderun system, set up according to the recruiters, did not give the desired output. Enderun's long period of erosion thus had begun.

We know that before the Sublime Port was organized, at least sixty grand viziers<sup>15</sup> were from Enderun. Those who raised in Enderun were still favored since the establishment of Sublime Port, but bureaucrats from the *Kalemiye* class also come to the grand viziership. This indicates that, in the face of modernization and the state's new needs, the Enderun School has transferred its functions not at once but gradually. In the 19th century, the members of *Kalemiye* would have a significant influence on the strengthening of the central government, and they would profit from this situation. During this period, the old pen masters turned into civil servants of *Mülkiye*<sup>16</sup>, which was formed after *Seyfiye*'s division into two classes *Askeriye* and *Mülkiye*<sup>17</sup>. Enderun became insufficient after the state's Modernization period. In 1839, Mekteb-i Maârif-i Adliyye (The Academy of Bureaucratic Education) was opened in the Sublime Porte's vicinity. Turkish, Arabic, Persian, and French were included in the school curriculum's first program where the children of the sublime scribes and the children of those who served there were brought in. It was also intended to be concentrated on the lessons of calligraphy, literature, logic, and, in particular, the subtleties of the art of writing. Later, from this educational institution, many people who served in significant state services were raised. In 1862, Mekteb-i

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<sup>13</sup> Sander, O. (2007). *Siyasi Tarih: İlkçağlardan 1918'e* (Political History from the First Ages to 1918). Ankara, İmge Publications, 128.

<sup>14</sup> Santuri Ali Ufki Bey, *Topkapı Sarayında Yaşam*, 110.

<sup>15</sup> Tayyâr-zade Atâ, (2010) *Târih-i Enderun* (History of Enderun), Cilt 2, (Edited by Mehmet Arslan). İstanbul, Kitabevi Publications, 150-154.

<sup>16</sup> Reyhan, C. (2012) Osmanlı Devleti'nde Siyasal İktidar ve Seyfiye Sınıfı: Vezir-i A'zâmlık Örneği, (Political Power and the Class of Seyfiye in Ottoman State: The Sample of Grand Vizier), *OTAM*, Volume 31, 221.

<sup>17</sup> İpşirli, Kalemiye, 248.

Maârif-i Adliyye was changed to Mekteb-i (Mahrec-i) Aklâm (Academy of Bureaus).The next chapter will be about the alternatives of Enderun, especially Translation Chamber under the Foreign Ministry, in the new managerial center 'Sublime Port.'

#### **4. Translation Chamber of the Foreign Ministry as an In-Service Training Hub**

Mahmud II established the Sublime Port Translation Chamber of Ottoman Palace in 1821. The bureaucrats who trained in the bureau took crucial duties in the central management and the political life of the Empire in their careers.Namely, Ali and Fuad Pashas, Ishak Efendi, Namik Pasha, Ahmed Vefik Pasha, Arifi Ahmed Pasha, Namik Kemal, Ziya Pasha were some of the crucial peoples in their time. The Translation Chamber was an in-service training academy for the Sublime Port Bureaucracy.

The Sublime Translation Chamber emerged due to some domestic and foreign political developments in the Ottoman Empire. Since the Greeks could speak languages and talented in terms of international diplomacy, they took many diplomatically important positions in the Ottoman Empire.<sup>18</sup>For a long time, the Imperial Council (Divan-i Hümayün) translators, who were obliged with translating the writings sent from other states to the Ottoman government or the government sent to foreign states, were chosen from Greeks who were from Fener neighborhood of Istanbul. When the Greek revolt broke out in Morea in 1821, Ottoman officers discovered the hidden letters of the translators of Divan-ı Hümâyün, Constantine Mourouzi, Hançerlizâde Mihayilaki and Aleksandr Mavrokordato to the rebels in Moldova and Wallachia. On April 16, 1821, the translators were executed.Besides, it was acknowledged that the Greek charge d'affaires had misinformed the Sublime Porte, and all of them were dismissed. Whereas this task was assigned to Yahya Efendi and his son, it was realized that his French was not adequate for translations, and new translators began to be educated.<sup>19</sup> With the dismissal of the Greeks and the beginning of teaching to train translators, the 'Translation Chamber' was thus established.

The fact that the Egyptian issue threatened the state's existence and became a part of international politics, diplomatic relationsdraw more attentionthan ever. The foreign ambassadors in Istanbul were in a challenging situation due to not

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<sup>18</sup> Balcı, S. (2006). Osmanlı Devleti'nde Tercümanlık Ve Bab-I Ali Tercüme Odası (Translatorship in Ottoman Empire and Sublime Port Translation Chamber). Institute of Social Sciences, Department of History, Ph.D. Dissertation, Ankara, Ankara University, 55-57.

<sup>19</sup> Akyıldız, A. (2011) Tercüme Odası (The Translation Chamber). *TDV Encyclopedia of Islam*, Volume 40. Istanbul, Turkey Diyanet Foundation Publications, 504.

find any bureaucrat to communicate. In addition to that, from 1834, Mahmud II sent ambassadors to European capital cities such as Paris, London, and Vienna and assigned officers from the Translation Chamber to their entourage. These officers had the opportunity to improve their language in their countries, increase their experience, and establish relations with diplomatic circles. Mahmud II transformed the 'Chief of The Scribes' (Reis-ül Küttab) into the Ministry of Foreign Affairs on March 11, 1836,<sup>20</sup> to carry out more complex foreign relations. The Translation Chamber was transferred to the ministry. With all these developments, the need for diplomats who can speak languages increased, and the number of personnel started to grow.<sup>21</sup> During the Crimean War (1853-1856), the workload of the Ministry of Foreign Affairs and, therefore, the Translation Chamber increased even more.

The Translation Chamber was subjected to a substantial regulation on August 26, 1856, in line with Mehmed Kabuli Efendi's suggestions, the translator of the Imperial Council. On the other hand, the language lessons given there had been abandoned for a year or two. The Chamber was converted into a full language school, and the attendance rules were determined in detail. The room officers were divided into four classes, and Emin Efendi and Tiryaki Bogos were appointed as teachers. For the first time, an English class was opened, and these four classes to be taught in French. The language of diplomacy and foreign communication was generally French during this time. Due to Britain's active role in world politics in this period, English entered the Translation Chamber's curriculum. Besides grammar in the French schools and grammar, translation, and speaking lessons in the English class, it was agreed to teach geography, history, calculus, and similar lessons. Civil servants in the Chamber were required to attend one of four levels appropriate to their rank, and wages were raised for those who completed the studies and mastered the language. Two English translators were employed in the Chamber on June 8, 1857. It was agreed to hold an examination at the suggestion of Divân-ı Hümâyûn's translator, Ahmed Arifi Efendi, following the outstanding efforts of the civil servant candidates and civil servants to enter the Chamber.<sup>22</sup>

The Translation Chamber could not meet the growing need, as the need for officers who spoke foreign languages increased over time. A language school within the Academy of Bureaus (Mekteb-i Aklâm) was opened in 1866. French, then Greek, and Bulgarian were taught here at first, but after 1870, the school

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<sup>20</sup>Sander, O. (2014). *Anka'nın Yükselişi ve Düşüşü*, (The Rise and Fall of Phoenix). Ankara, İmge Kitabevi Publications, 95-96.

<sup>21</sup>Balcı, Osmanlı Devleti'nde Tercümanlık Ve Bab-I Ali Tercüme Odası, 113-114.

<sup>22</sup>Balcı, Osmanlı Devleti'nde Tercümanlık Ve Bab-I Ali Tercüme Odası, 106-107.

was closed for an unknown reason.<sup>23</sup> On August 20, 1869, the Translation Chamber's internal regulations were prepared.<sup>24</sup> To learn calligraphy, composition, and language lessons, candidate civil servants employed there were classified into three grades. In the meantime, qualified personnel in both the Chamber and the Ministry of International Affairs decreased due to the appointing of their personnel at various positions across the Empire. Young civil servants who served in the Chamber and Foreign Office were sent to the Language Academy, reopened to study the language in October 1883. The Translation Chamber's senior clerks were the teachers of some of the school's classes, which had five years of instruction and were taught, French.<sup>25</sup>

In summary, there are two reasons why the Ottoman Empire needed the Translation Chamber. One is the Greeks' betrayal and the lack of bureaucrats from the founding nation, that is, the Muslim Turks who speak foreign languages. The internal and external civil servants were educated with the same required qualification was the other factor. The Chief of the Scribes supervised the Empire's foreign affairs; he was also the head of the internal offices. Those offices managed both external and internal duties. The lack of specialized bureaucrats who mastered diplomacy and foreign languages brought the Ottoman Empire in a challenging situation in the 19th century.<sup>26</sup>

## 5. Conclusion

In the Ottoman Empire, by being trained in the palace, the ruling class must have acquired a position in the bureaucracy by being selected from the elements which could not assert any administration privileges or dare to make any attempt to overthrow the Sultan for their claim on the throne. The Muslim-Turkish factors were mainly eliminated in the election of these elites to prevent them from reaching positions that could threaten the sultanate. These were chosen based on abilities and merit, with strict rules, and no classification was permitted. In the Ottoman Empire, these elites, whose personalities were formed by strict and sometimes marginalized discipline, had crucial bureaucratic duties. The Ottoman approach of divide and rule the central elites in favor of the Sultan, which aimed to reduce the camps in the central authority, was eroded during the modernization period due to the Nepotic elections. As Topkapi

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<sup>23</sup> Cihan, A. (2007). *Osmanlı'da Eğitim* (Education in Ottoman Empire). İstanbul, 3F Publications, 60.

<sup>24</sup> Balcı, S. (2008). Osmanlı Devleti'nde Modernleşme Girişimlerine Bir Örnek: Lisan Mektebi (An Example to Modernisation Attempt in Ottoman State: Language School), *Journal of History Researches*, Volume 44: 77-98.

<sup>25</sup> Akyıldız, A. (2011) Tercüme Odası (The Translation Chamber). *TDV Encyclopedia of Islam*, Volume 40. İstanbul, Turkey Diyanet Foundation Publications, 505.

<sup>26</sup> Ersoy, H. (1999). *Batılılaşma Girişimleri ve Osmanlı Hariciye Nezareti'nin Kuruluşu* (Westernization Initiatives and the Establishment of the Ottoman Foreign Ministry), Ankara, Yeni Türkiye Yayınları, 265.

Palace was abandoned and Dolmabahçe became the new center, Enderun was no longer the old palace academy. In the 18th and 19th centuries, it was duly continued and finally closed. When this was all happening, languages that were not mastered by Turkish-Muslims due to their barbarian languages label were prized in the golden ages of the Empire, so the Translation Chamber became the new 'palace school.' The development of a Translation Chamber aimed at raising Turkish Muslim elements rather than Greeks, precisely the opposite of Enderun. The 'paradigm shift' in the Empire can easily be seen in Enderun and the Translation Chamber in this respect. In Fatih Sultan Mehmed, whose early reign passed striving with his viziers and the reign of his father passed with internal throne struggle and external disputes, the 'national perpetuity' (Milli Bekâ) issue left its position in the modernization era to a different national perpetuity concern.

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## Chapter 18

# Woman in Cormac Mccarthy's Border Trilogy<sup>1</sup>

Muharrem ÜNEY<sup>2</sup>  
Aydın GÖRMEZ<sup>3</sup>

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<sup>1</sup> This study is extracted from the first writer's master's thesis done in September, 2022 at Van Yüzüncü Yıl University under the direction of the second writer.

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## INTRODUCTION

Cormac McCarthy is one of the most prominent novelists of American literature. His Southern Gothic novels have been compared to the works of great novelists such as William Faulkner and Herman Melville by many literary critics. One of the most important characteristics that distinguish him from these novelists is the pessimist tone of his writings. Nevertheless, the fascinating lyricism pervading his works makes him a distinctive author (Grammer, 2008, p. 360).

Known as *the Border Trilogy*, his novels *All the Pretty Horses* (1992), *The Crossing* (1994), and *Cities of the Plain* (1998) are more humane and positive in style and mood than his previous works, in which he explores the nature of evil. In this respect, *The Border Trilogy* and *Blood Meridian or the Evening Redness in the West* are both a transition from the Southern Gothic to the Western genre and a turning point in terms of recognition for McCarthy.

The Western genre was introduced to literature with dime novels before being adapted to movies (Saunders, 2001, p. 2). Owen Wister (d. 1938), one of the notable authors in this genre, is the most significant figure in the creation of the cowboy cult in literature with his novel, *The Virginian*, which was inspired by his personal experiences. Wister is the greatest source of inspiration for almost all works produced after him in the Western genre (Payne, 1985, p. 5). Tompkins (1992, p. 132) also introduces Wister as the person who gave this genre its classical form.

According to Tompkins (1992, pp. 4–6), the west has a critical place in American culture. It serves as a good destination for an escape from the community life. Besides being a symbol of freedom and victory, it is also a tool for personal transformation. Every image belonging to the west makes the individual more authentic, which has increased the demand for the Western genre. In the twentieth century alone, the number of sales of such books hit hundreds of millions. All kinds of people enjoyed reading the Westerns, which is partly because all the images that come to mind when the Western genre is mentioned are reflections of the society they belong to.

Westerns are powerfully related to historical perceptions of male identity (Dudley, 2013, p. 176). The Western genre, according to Lee Clark Mitchell (1996, pp. 151–152), is all about being “man”. Here, proving physical masculinity is at the forefront rather than acting like a man. Bathtub and barber scenes, which are frequently used in western movies, serve this purpose. It is also not accidental that the re-emergence of this genre coincided with the feminist movements in America. At a time when women’s rights were being emphasized more strongly, the Western genre, with masculinity at its centre,

came to the fore in cinema and literature, causing the impression that it was a conscious counter-reaction against women's movements (Tompkins, 1992, p. 132). After comparing the Westerns of the twentieth century and the sentimental novel of the nineteenth century in terms of basic elements such as heroes, environment, and plot, Tompkins concludes that there is a stark contrast between the two genres. According to her, this situation is not accidental. The Western is the "answer" to the most popular genre preceding it. The antithesis of everything in the female-dominated sentimental novel can be found in the male-dominated Western novels. In contrast to the naive female characters who enjoy the safety of the old-fashioned domesticity, male heroes with high levels of masculinity are blessed in this new genre, where the wildness of nature permeates all the characters and events (Tompkins, 1992, p. 39).

In general, the way the Western genre treats women has been the target of criticism for experts who conduct women's studies. In such novels, in which the adventures of cowboys on horseback are depicted, women are treated as ornamental objects with marginal qualities. Criticisms like these have led to a need to read works written in the modern period with a different eye, and as a result, some authors have been labelled as misogynist. One of the most striking textual features of the trilogy, which will be examined in this study, is its perspective on women. According to Nell Sullivan (2001, p. 229), McCarthy deliberately pushes women out of the narrative. It is impossible to find a female character that is not stereotypical in all aspects in almost all of McCarthy's works. With such level of masculinity, which seems to be a necessity of the Westerns, McCarthy's novels are good examples of the genre (Kollin, 2001, p. 569). Accordingly, Cormac McCarthy's *Border Trilogy* will be examined from the perspective that feminist movements have provided, and the place of women in McCarthy's works will be discussed in this context.

### **1. WOMAN IN *ALL THE PRETTY HORSES***

Edwin T. Arnold (1999) describes *All the Pretty Horses* as "a modern bildungsroman set on a foundation of philosophical and ontological speculation" (221), which is "rife with allusions to chivalric romance, primitive masculinity, and violent struggle" (Dudley, 2013, p. 176). The novel was published in a background in which westerns were becoming a popular genre in the cinema. Although it intends to help build a new western tradition, *All the Pretty Horses*, still, carries the ideals of the old west, which the main character of the novel cherishes so much (Kollin, 2001, p. 570). The protagonist, John Grady Cole, whose physical and personality traits are representations of American masculinity (Sugg, 2001, p. 128), yearns for the old times and that is

why he takes up a long and dangerous journey to the Mexican side of the border after his grandfather's death. He is the perfect masculine hero according to Nell Sullivan (2001, pp. 241–243). Just like his ancestors, his life will end viciously in the last novel of the trilogy. The way he dies, as well, ratifies his masculinity. He is always the dominant character in his relationships. He is an exemplary western hero as he does not talk and weep too much. The amount of blood that he loses during the trilogy serves as proof of his claim of masculinity. It also proves him a serious man, which can be considered the most anticipated tribute of masculinity (Dirda, 1994).

Because his mother decides to sell the ranch and pursue a career in acting, John Grady's lifestyle faces a great threat (Hage, 2010, p. 170). Not possessing a ranch anymore indicates the death of the old times. Therefore, to revive those days, John Grady finds himself on another ranch on the Mexican side of the border. Mexico's still-untouched nature offers many possibilities that disappeared in the U.S. after the Second World War (Sugg, 2001, p. 118). John Grady's search for those new possibilities changes his life dramatically. All these result from his mother's choice. His mother's decision poses a threat to the cowboy lifestyle, which is firmly related to masculinity. Accordingly, John Grady's quest in Mexico can be interpreted as an epic journey to find the lost masculinity. Susan Kollin (2001, p. 572) points out the dialogues between John Grady and Lacey Rawlins in the first chapter after they head to the border in the search of lost masculinity, leaving everything behind. The fact that they address one another as "son" and "pardner" indicates their longing for the old west and its affiliate concepts of masculinity and national loyalty, which gradually fade away day by day.

The passing of those times in question becomes clearer when John Grady's father tells him that "the country would never be the same. People don't feel safe no more, [...]. We're like the Comanches was two hundred years ago. We don't know what's goin' to show up here come daylight" (McCarthy, 1992, p. 25). According to Katherine Sugg (2001, pp. 141–142), the pronoun "we" represents masculinity and the father is referring to the critical situation that American manhood confronts. The developing petroleum industry threatens the ranch life all through the state of Texas. The big ranches get closed one by one, as the number of drilling companies increases. Such fundamental changes in the dynamics of the society are intimidating according to John Grady's father.

The emphasis on masculinity never ceases all through *All the Pretty Horses*. At the very beginning of the novel, the narrator gives a detailed depiction of an approaching train: "It came boring out of the east like some ribald satellite of the coming sun howling and bellowing in the distance and the long light of the

headlamp running through the tangled mesquite brakes [...] (McCarthy, 1992, p. 2). James Wood (2005) interprets the train as a phallus and that is why McCarthy calls it “ribald”. John Grady, with his hat in his hands, stands there until the train becomes a faint image and is gone. This scene can be interpreted as an allusion to the changing times, as a new era is on the western threshold. John Grady looks as if he is giving homage to the dying western masculinity.

The changing times compel John Grady to leave his home. He tries to persuade Lacey Rawlins, his best friend, to go with him. As an argument, he tells him that there is no reason to stay, and no one will leave him anything if he stays. Lacey tries to speculate by comparing the states of Alabama and Texas, to prove that there is worse. Lacey’s father is from Alabama, but he ran off to Texas, where he met Lacey’s mother. If he did not, according to Lacey, he would have been born in Alabama. The point Lacey misses here is that his mother is from San Angelo, Texas and, as John Grady reminds him, he “wouldnt of been born at all” (McCarthy, 1992, p. 26). Lacey grows up in a patriarchal society, and that is why he thinks he would have been born no matter whoever his mother was. Such male-centred thoughts give clues to the place of women in the novel.

Nevertheless, John Grady seems to be a little different. He educates Lacey about the absurdity of what he thinks is possible concerning human reproduction. He is also knowledgeable about the reproduction of horses, a skill that makes him recruited as a cowboy in the Nuestra Señora de la Purísima Concepción ranch where he meets and falls in love with Alejandra, the daughter of the ranch owner, Don Hector. When Don Hector hears about John Grady’s talent, he wants to meet him. He asks John Grady about horse breeding and wants to hear his opinion about whether the stallion or the mare is important while breeding. John Grady declares that both are equally important (McCarthy, 1992, p. 121). He does not elevate one against the other. In this respect, this might indicate that he is out of traditional western hero codes and more liberal than many of McCarthy’s male characters.

Although John Grady serves a liberal representation of men in the novel, there are still other men to save masculinity. The Mexican police captain that kills Jimmy Blevins on the way to the prison of Saltillo personifies a masculine character with a level of toxicity. He tells John Grady and Lacey a story about his experience with a prostitute when he was young. He tells them that when he was young, he used to befriend boys older than him, and that they went and slept with prostitutes. At a visit like this, he was the last one to visit the woman as he was the youngest one. However, the prostitute rejected him for he was too young. With his sketchy English, he expresses his feelings:

What does a man do? You see. I can no go back because they will all see that I dont go with this woman. Because the truth is always plain. You see. A man cannot go out to do some thing and then he go back. Why he go back? Because he change his mind? A man does not change his mind. (McCarthy, 1992, p. 188)

Then, he holds his fist up to show how he managed to handle this situation. He was a “serious man”, which is an essential attribution of masculinity (Sullivan, 2001, p. 241).

Even Alejandra has her share from masculinity. The first time she appears on the text, she is riding a black Arabian horse in full gear. On the way to her father’s ranch, she comes across the two American cowboys who ride with Mexican cattle drivers. Apparently, she has passed across a river as the horse and her boots are partly wet. She touches the brim of her hat to greet the cattle drivers. They do the same and she rides on until she disappears down the road (McCarthy, 1992, p. 99). Firstly, her depiction as a horse rider with the necessary equipment passing through rough lands all alone, and her salutation manner do not ring female tones. The interesting thing is, John Grady cannot help himself looking to the horizon where she has disappeared. He seems to be impressed by her masculine appearance; however, this brings out a hypocritic situation for him. As a matter of fact, he has come upon a woman who showed manners that were peculiar to men before. Yet, he felt offended in that case. When Mary Catherine, his ex-girlfriend from San Angelo, sees John Grady in the town before he leaves for Mexico, she tries to talk to him. She feels bad for she left him for another boy. Before John Grady moves off, she holds out her hand for a friendly shake. The narration goes like this: “At first he didnt know what she was doing. [...] He’d never shaken hands with a woman before” (McCarthy, 1992, p. 29). Then he touches his hat brim as a goodbye and leaves. He finds her attempt for a handshake strange, because, according to him, men shake hands, not women. He shows his displeasure with not returning her good wishes for him. He just turns and walks on without looking back to her.

Although Alejandra’s first introduction to the text contains some masculine elements, she still suffers counter effects of her femininity. When her grandaunt, Alfonsa realizes their relationship, she warns John Grady to keep away from her grandniece. She tries to protect Alejandra from possible harm that may come from this foreigner. Her free will is not under consideration. For Alfonsa, she cannot distinguish between good and evil herself. Therefore, her grandaunt, whose character will be discussed later, makes the decisions for her, as she is more experienced and authoritative. The fact that the pressure comes



from a woman, who has similar experiences to Alejandra's, is ironic. Yet, what if Alejandra was "Alejandro"? And John Grady was "Johanna"? Would Alfonsa play the protective aunt for her "grandnephew"? Probably, she would not even notice their relationship, and if she did, she would interpret it as an ephemeral youth fever. Such hypothetical questions and answers might seem to sidetrack reality, but the reality is Alejandra feels sick and sorrowful for facing such a treatment. She feels confined, yet she sneaks out with John Grady at night when everybody is sleeping. They maintain their love just like sinners, far from the eyes of rule-makers (McCarthy, 1992, pp. 139–148).

On one of these nights, when they have an intercourse for the first time, the narrator's description is pointed out by Sullivan (2001, p. 248): "Sweeter for the larceny of time and flesh, sweeter for the betrayal" (McCarthy, 1992, p. 148). The term "larceny" is defined as "the unlawful taking of *personal property* with intent to deprive the *rightful owner* of it permanently" (Merriam-Webster emphasis added). To describe a woman as a property, which can be owned (something that can be owned can be sold, as well), finds its definition in the term "narrative misogyny" (Sullivan, 2001, p. 252).

McCarthy sets forth a world in which women are frequently depicted without agency. After John Grady is released from the prison in Saltillo, he goes back to Don Hector's ranch to find Alejandra. Yet, she is away in another town and, instead, Grandaunt Alfonsa hosts him and at this point the reader is informed that it was Alfonsa who mediated John Grady's and Lacey's release from the prison. However, the price is parting with Alejandra, his beloved. Alfonsa has taken Alejandra's word for not seeing John Grady anymore in exchange for his freedom. She does not ask John Grady to keep away from her niece as she is so sure that Alejandra will not break her word (McCarthy, 1992, pp. 237–248). He leaves the next morning for Torreón. During one of the breaks on the long way, some children come and join him for the lunch. John Grady tells his story, and they give him some interesting advice.

The older of the girls said that if his novia truly loved him she would marry him no matter what but the boy was not so encouraging and he said that even in families of the rich a girl could not go against the wishes of her father. The girl said that the grandmother must be consulted because she was very important in these matters and that he must take her presents and try to win her to his side for without her help little could be expected. She said that all the world knew this to be true. (McCarthy, 1992, p. 250)

The expression “even in families of the rich” needs attention here. As an adverb, “even” indicates the actualization of the least probable option in this context. What about the other options –that is the situation of girls in poor families? Hence, it is possible to make a generalization about girls –no matter rich or poor- that they cannot do anything that is not approved by the patriarch. As controversial as it sounds, in this case, the patriarch is the grandaunt Alfonsa.

When John Grady reaches Alejandra on the phone and wants to see her again, she does not want to break her word to her grandaunt. Nevertheless, she agrees to see him for a farewell. During this last meeting, she tells John Grady that she has informed her father about their relationship before he was arrested. The reader can infer that Don Hector summoned the police to the ranch after his daughter’s confession, as there were already rumours about some Americans committing horse theft and homicide in the region. When John Grady asks her why she did that, she tells him that her grandaunt had threatened to tell her father. She states that “I couldnt stand for her to have that power. I told him myself” (McCarthy, 1992, p. 258). This way she evades her grandaunt’s blackmail without knowing the consequences. John Grady asks her if she hates Alfonsa, she answers:

I dont hate her. But she tells me I must be my own person and with every breath she tries to make me her person. I dont hate her. She cant help it. But I broke my father’s heart. I broke his heart. (McCarthy, 1992, p. 258)

She reveals her displeasure with the way Alfonsa treats her. She is aware that she lives in confinement with her grandaunt, but she cannot break her father’s heart. This might indicate that she is experiencing a Jungian Electra complex. Alejandra chooses her father over his lover. She cannot do otherwise because the grandaunt is there to claim for what she denies. The rival is powerful; thus she has to stand still even if it means renouncing the lover.

Grandaunt Alfonsa, as the landlady of the la Purísima Concepción, seems to be the strongest woman character in trilogy. She is Don Hector’s aunt from his father’s side, and Alejandra’s godmother at the same time. She is educated, speaks good English, and has had a teaching career. She is not old-fashioned, and she does not like the oppressive environment they live in. She thinks Alejandra does not like it, either. She admits that she was like Alejandra when she was at the same age. She is missing some fingers, as she lost them in a shooting accident when she was seventeen, at Alejandra’s present age. She is

self-esteemed and does not need any advice. She is as dominant as a super-masculine can be. Her authority imposes itself with such statements addressing John Grady: "It's not a matter of right. You must understand. It is a matter of who must say. In this matter I get to say. I am the one who gets to say" (McCarthy, 1992, p. 144). She is raised in a men's world; however, she does not abide by its rules. She is still rebellious as she was in the past (McCarthy, 1992, pp. 138–142). According to Erik Hage (2010, p. 170), Alfonsa is the only character that defies feminist criticism levelled at McCarthy. Nevertheless, she is still guilty for not letting John Grady and Alejandra unite. Even if she poses a strong feminine personality, she only serves as a means for John Grady's maturation against the difficulties of life.

She is extremely protective of Alejandra. She thinks her grandniece is living in a dream and is not aware of the hazards of the real world. People gossip and Alejandra seems to ignore the consequences of such things, according to Alfonsa. She has seen fatal repercussions of gossip in her family before (McCarthy, 1992, p. 143). Therefore, as her godmother, she assumes the protective role toward Alejandra. She tries to compensate for her inexperience and ignorance with oppression and enforcement of a lifestyle that she is not willing to live. When the rumours about John Grady and Alejandra's intimacy reach her ears, she does not warn Alejandra in the first place, as she knows that she will not listen to her. That is why she talks to John Grady to ask for his respect for Alejandra's reputation. A woman's reputation is a very serious issue in the society they live in. Readers are informed about this fact with Alfonsa's following statements: "There is no forgiveness. For women. A man may lose his honor and regain it again. But a woman cannot. She cannot" (McCarthy, 1992, p. 143).

Later, Don Hector gives some background information about Alfonsa while playing billiards with John Grady. Here, the novel procures some real-life backdrop. Their family used to have ties with Francisco Madero, who became the 37<sup>th</sup> president of Mexico after the revolution of 1910. Alfonsa was engaged to Francisco's brother, Gustavo; however, because they were regarded as radicals, Alfonsa's father did not allow their marriage. As Don Hector comments, she never forgave her father for that. She was sent to Europe for her education, where she got revolutionary ideas, and now, she urges Don Hector to send Alejandra to France. Don Hector is unwilling, but he knows he will not be able to withstand his aunt for too long. He complains to John Grady as follows: "Why do I bother myself? Eh? She will go. Who am I? A father. A father is nothing" (McCarthy, 1992, p. 153).

Her father's interception of her possible happiness becomes a trauma for Alfonsa. She never forgives her father and never marries. However, as a woman whose happiness was hindered by her closest family member, she should have more understanding of Alejandra's case. Yet, she acts like her father when her grandniece finds somebody that she can love. Understanding the reasons behind this attitude might need a closer reading. She is a woman of great social ideals and the man she loved was someone like her. As revolutionary characters, they fought against the despotism and atrocities of the state, and she paid its price with her beloved's life. According to Wikipedia ("Francisco"), Madero's presidency lasted only a little more than two years. He was overthrown with a military coup backed by the American ambassador and assassinated shortly after. Gustavo, as well, had his share of this misfortune, as he was lynched by the supporters of the coup (Wikipedia "Gustavo").

The coup was backed by U.S. officials, which is another thing that Alfonsa cannot forgive. As an American, John Grady represents everything that Alfonsa used to fight against. The revolution was made to establish social justice in Mexico, however, the capital owners backed by the U.S. tumbled everything down. Thus, she regards John Grady's attempt as another intrusion movement made by the enemy. As was stated before, she sees herself in Alejandra; hence, she tries to accomplish everything that she had failed through her. If she lets John Grady take Alejandra, she will lose the second round with the enemy. Therefore, she cannot allow their union.

Later, when John Grady comes back to the ranch after he is released from Saltillo prison, Alfonsa talks to him revealing some of her arguments on why she cannot let them be together: "I can scarcely count on my two hands the number of women in this family who have suffered disastrous love affairs with men of disreputable character. [...] One does not like to entertain the notion of tainted blood" (McCarthy, 1992, p. 237). John Grady's reputation is tainted as he becomes the subject of a crime. Accordingly, his entrance into the family will violate the chastity of the bloodline, which makes it impossible for Alfonsa to let him in.

Then, she forbids him to think of her as jealous of others' happiness. She continues her discourse by explaining the reason for her solitude.

I am not a society person. The societies to which I have been exposed seemed to me largely machines for the suppression of women. Society is very important in Mexico. Where women do not even have the vote. In Mexico they are mad for society and for politics and very bad at both. (McCarthy, 1992, p. 238)

She sounds like an advocate of women's rights. It is not a surprise if her intellectual background is taken into consideration. She cultivates her independent thought as early as the age of sixteen, which is frightening for her family. However, her father is not a traditional patriarch. He is an intellectual and has many books in five different languages in his library. The world they lived in was not a woman-friendly one. She was aware of this fact, and she chose to try the world in the books. The schools that she studied in Europe also strengthen her intellectual background. As can be seen, her father is a "libertine", and except for his denial of Gustavo as a son-in-law because of his preoccupations relating to the nature of the revolution, he does not intervene in his daughter's choices. His attitude toward Gustavo can make sense if evaluated with the results of the revolution.

Nevertheless, Alfonsa is not as liberal about Alejandra as her father was about Alfonsa. She is so consumed with her grandniece's future that she is ready to risk everything for her. The dimensions of her oppression reach a point where she stakes a claim on Alejandra's marriage choice:

I would like my grandniece to have the opportunity to make a very different marriage from the one which her society is bent upon demanding of her. I won't accept a conventional marriage for her. [...] there is nothing to lose. I don't know what sort of world she will live in and I have no fixed opinions concerning how she should live in it. I only know that if she does not come to value what is true above what is useful it will make little difference whether she lives at all. (McCarthy, 1992, p. 247)

If relieving feminist concerns means having masculine traits, then, Hage (2010, p. 170) can be regarded as right in his claim, as Alfonsa is by far the most liberated female character of the trilogy, yet, the most masculine, either.

## 2. WOMAN IN *THE CROSSING*

The second novel of the trilogy might be the most ambiguous one. It is the story of Billy Parham who crosses the Mexican border three times, each time with a particular aim, none of which he achieves completely. The novel exhibits contradictory features to the first novel of the trilogy. The adventurous nature of the previous novel gives way to a more spiritual journey in *The Crossing*. Edwin T. Arnold (1999, p. 221) thinks the novel is some kind of a return to self for McCarthy. With its heaviness and difficult-to-read tiresome style, it is almost like an atonement to the popularity that McCarthy got with *All the Pretty Horses*. Yet, it offers an abundance of critical cases for the researchers who want to make an analysis of women's place in McCarthy's narrative.

One of them is the androcentric language used by the characters. After Billy buries the wolf and takes a spiritual journey into the Mexican wilderness, he comes across Indian tribes living in wickiups or caves. They share their food with him, wash and mend his clothes. In one of these encounters, an old Indian man approaches and gives him advice. He addresses him as the “orphan” as if foreshadowing the massacre of his parents. The old Indian speaks Spanish, but the readers only see the narrator’s translation. In this translation, the narrator uses the word “men” for seven times to indicate humankind (McCarthy, 1995, p. 134). Referring to humankind with male-gendered vocabulary so many times in such a limited amount of text is meaningful as it shows the narrator’s inclination toward male-centred language.

In another scene, Billy leaves and comes to a town devastated by an earthquake after riding for a few days. Here, an ex-priest, as the only human being in the town, welcomes him and offers him food in the half-destroyed church building where he lives. This man tells Billy a long story about himself and a man who used to live in that town before the earthquake. Just like the narrator’s account of the old Indian’s speech, the man’s story contains many androcentric language features. The words man/men are frequently used to refer to humankind. Even God is referred with He/Him (McCarthy, 1995, pp. 142–158). Of course, this issue is not peculiar to McCarthy. Many novelists before him have attributed God with male pronouns. However, it is worth readers’ attention that McCarthy has not managed to escape from traditional mindsets about the masculine language assets.

Another case that reveals women’s place in the novel is stereotypes of women. Almost all the female personalities contain cliché characteristics. Billy’s mother prepares the dining table and after they say grace, she hands the tray of steaks to her husband. Then, he passes it to Billy. The action is cut here because they start talking about a wolf that haunts their cattle (McCarthy, 1995, p. 15). If not, the mother would probably be the last to have her share of the meal. She is self-sacrificial for her husband and children. All through the novel, women do stereotypic errands like cooking, serving, washing, and cleaning for men while men eat, drink, smoke, and ride horses (McCarthy, 1995, pp. 69, 106, 123, 132, 134, 225, 235, 374). Some of the women help Billy when he is in a miserable situation from fatigue and hunger. The narration of one of such scenes follows: “a woman came out into the street [...] and looked up into the child’s face under the hat and asked if he were sick” (McCarthy, 1995, p. 132). Billy is referred to as “child” to invoke a mother-child relationship in this scene and to indicate the maternal instincts of the woman who helps and nurtures Billy.

For all that emphasis on childhood, Billy becomes a symbol of destabilized gender roles, according to Nell Sullivan. Sullivan (2001) claims that the title of the

novel also refers to Billy's "gender crossing". By feminizing male characters, McCarthy builds a "closed system of desire that effectively makes women unnecessary" (233). This brings forth another problem with McCarthy's novels, which needs to be scrutinized.

The problem of misogyny might be the most prominent critique directed at McCarthy's writings. *The Crossing* bears many elements that can be counted as sexist. When the Parham family is talking about a wolf that terrorizes the neighbourhood and kills the cattle, the father refers to it as "she". Boyd asks how he knows that it is a she-wolf even though he has not seen it. The father explains: "You could see where she had done her business" (McCarthy, 1995, p. 16), indicating the disturbing visual quality of the area of the wolf attack. A male wolf would not cause a rampage that a she-wolf can produce. This apparent allegory implies that women are prone to a kind of violence that men cannot generate.

The she-wolf also represents an ideal spouse for her mate. She wears a scabbed wound made by her mate that was caught in a trap. When the she-wolf rejects to leave her mate alone in the trap, the male wolf bites her to send her away from the reach of harm. She does not leave the male wolf at any rate (McCarthy, 1995, p. 24). An ideal wife is always loyal to the husband and does not leave him in the face of calamity even if she is treated badly, as depicted with the she-wolf and her mate. Maltreatment is not an excuse for deserting a male spouse.

However, being loyal to the spouse sometimes is insufficient. The old rancher that Billy encounters while returning from setting traps for the wolf asks him if he is married. Billy tells him that he is not and that he is too young to get married. In response, the old rancher warns him against marriage: "Dont get married. Women are crazy. [...] You'll think you've found one that aint but guess what? [...] She will be too" (McCarthy, 1995, p. 38). By the time *The Crossing* was published, McCarthy had divorced two wives and would divorce the third one eleven years later. Hence, this old rancher sounds like McCarthy's inner voice. After catching the wolf and making up his mind to take her back to the Mexican mountains, Billy comes across the same man. Billy is struggling with the wolf and wants help, for his horse has run away. The old rancher accuses him of being crazy (McCarthy, 1995, p. 60). If Sullivan (2001, p. 233) is right with her claim that Billy is the major feminine character in the novel, then this accusation dubs the old rancher's previous judgment about the craziness of women.

Women and craziness go on escorting each other through the novel. Before crossing the border with the wolf, an acquaintance of Billy's father invites him in to have supper. When Billy asks where to keep the wolf, he jokes:

[The rancher] Well I guess it'll just have to lay around the kitchen till we get done eatin.

[Billy] Lay around the kitchen?

[The rancher] It's a joke, son. Hell fire. You brought that thing in the house you could hear my wife in Albuquerque with the wires down. (McCarthy, 1995, p. 69)

They lock the wolf in the smokehouse and the rancher tells Billy that he is "peculiar" (McCarthy, 1995, p. 70), which again evokes the old rancher's claim. When the time for leaving comes, the rancher's wife sees the wolf and pities her as its leg that was caught in the trap is in a bad shape. She goes to get some help for the wolf. Her husband's comment "[m]ore craziness, [...]" (McCarthy, 1995, p. 72), relates madness to his wife's act of mercy. The wife is not afraid of the wolf, as the husband joked about it. Instead, she feels sorry for it. An act of mercy occurs when someone powerful pities the weak. Here, the wife proves her strength, but strength is not something a woman can have in the men's world, so that is why she is blamed for being crazy.

There are various negative personality traits deemed suitable for women other than craziness. When Billy and his brother Boyd find out three cattle that are killed by the wolf, Billy cautions Boyd not to tell their father. He does not want his father to worry, but Boyd insists that they inform him. After Boyd asks a series of questions to falsify Billy's judgment, Billy tells him that he is worse than their mother (McCarthy, 1995, p. 41). Boyd tries to find out the logic behind Billy's demand for not notifying their father about the dead livestock. As the dialogue between them indicates, Billy is not very comfortable with the questions his brother asks to understand the motives for his behaviour. The reasoning is generally attributed to men, but here it makes Billy recall his mother with a negative feeling.

Billy's recollection of his mother with unfavourable feelings is mediated by Boyd's actions. However, some of the women in the novel do not need a mediator for arousing such feelings. The author's depiction of their looks and manners does the job. Billy is looking for a man called Don Arnulfo to have his advice about trapping wolves. Don Arnulfo is a very old man and is being looked after by an eccentric woman. She opens the door and Billy reverently takes off his hat and politely asks if the old man is inside. She stays indifferent to him and goes on biting an apple in an unpleasant manner. When Billy repeats his question, she finally answers "maybe". Billy interprets her answer as a racketeering attempt, so he tells her that he has no money. Then, she tries to get rid of him by telling him that Don Arnulfo is sick, and he will not be able to talk to him, so he should come later. Billy insists and finally, she lets him in (McCarthy, 1995, p. 42). This woman quickly



invokes detest in readers' minds as soon as she opens the door. Her depiction of biting the apple indifferently in the face of Billy reverently standing in front of her with the hat in his hands does not arouse favourable feelings, which is the main aim of the narrator.

The insults that women are exposed never cease. Billy, dragging the wolf behind his horse, comes upon muleteers on a path to Mexican mountains. When the mules get the scent of the wolf, they run away in fear and scatter their load all around. The caravan men go get them back, and an old woman and a young girl stay behind. Billy feels sorry for the chaos he has caused, but the old woman does not blame him, as she thinks it was the muleteers' fault. The things she says from the narrator's point of view are as follows:

She said that the revolution had killed off all the real men in the country and left only the tontos. She said moreover that fools beget their own kind and here was the proof of it and that as only foolish women would have aught to do with them their progeny were twice doomed. (McCarthy, 1995, p. 88)

According to her, the revolution spared only idiots, while "the real men" gave their lives for the country. The women who married the idiots that survived the revolution are equally foolish, and as a result, their offspring cannot escape from the same fate. The old woman is apparently pro-revolution, and she blames women for the current state of the country. The misogyny that she propagates asserts itself when she compares the wolf's pregnancy with the young girl's: "Va a parir, [...] Como la jovencita" (McCarthy, 1995, p. 89). The girl is the old woman's daughter-in-law. She is very young, around fourteen, and pregnant. The comparison of the pregnancy of a woman and a wild animal does not sound woman-friendly or human-friendly, especially if it is considered with the fact that the compared human being is her son's wife, who carries her grandchild.

Just like this, misogynistic elements continue to emerge from the text almost each time a woman shows up in the narration. Billy's journey with the wolf does not go on too long, for the Mexican authorities confiscate the wolf shortly after his treading on the Mexican soil. The police hand the wolf to a circus to be exhibited during a carnival. The local women start making up stories about the wolf:

An old woman said that the wolf had been brought from the sierras where it had eaten many schoolchildren. Another woman said that it had been captured in the company of a young boy who had run away naked into the woods. A third said that the hunters who had brought the wolf down out of

the sierras had been followed by other wolves who howled at night from the darkness beyond their fire and some of the hunters had said that these wolves were no right wolves. (McCarthy, 1995, p. 105)

They are making up stories about the things they know nothing about. The quality of fantasizing might be a good trait for a storyteller, yet these women are not storytellers. They are real women whose ignorance is presented through gossip-mongering as a means to show their irrational nature. This character trait is undergirded by another argument that labels women as superstitious. The old woman, who compared her daughter-in-law with the wolf, tells Billy about her memory of a priest that was shot during the revolution. She remembers how the women came and soaked their handkerchiefs with the priest's blood and blessed themselves as if it was a token from Christ himself (McCarthy, 1995, p. 89). Irrational and superstitious woman depictions serve as proof of misogyny in McCarthy's narratives for the scholars of women's studies.

The narrative misogyny that Sullivan (2000) detects in McCarthy's southern novels *Child of God* and *Outer Dark*, makes appearances throughout *The Crossing*. While describing the crowd that gathered for the dogfight that will host the wolf, McCarthy creates an atmosphere that every single person there has an important role in the society they live in. With their professions and attire, they represent the upper class. However, McCarthy excludes women from this scene (McCarthy, 1995, p. 116), which implies their inferiority. In another case, when McCarthy informs the reader about the Tarahumara people, he notes that they had seen so many things during their a-thousand-year inhabitation of the area: "Armored Spaniards and hunters and trappers and grantees and their women and slaves and fugitives and armies and revolutions and the dead and the dying" (McCarthy, 1995, p. 195). It is noteworthy that in this expression, the word "women" has a possessive adjective, which at the same time modifies "slaves". Belonging to someone means becoming property, which can be bought or sold. In another scene, Billy and Boyd are at a café for eating something. The narrator emphasizes that the waitress has no pad to write the orders (McCarthy, 1995, p. 197). Two different misogynistic implications might be extracted from this short scene. First, the woman is illiterate, which is a characteristic of ignorance specific to her gender; second, she dares to keep the orders in mind, which is not very easy because she is a woman. A notepad would complete her deficiency, yet she goes without it. While waiting for the meal they ordered, Billy and Boyd see a Mennonite family going by on the street "in their overalls with the women behind them in their sunfaded motherhubbards carrying marketbaskets" (McCarthy, 1995, p. 197). Let alone stereotyping them with "motherhubbards" and "marketbaskets", the place of women in the line the

family walks in tells too much. Description of women coming from behind is not just a narration of a visual fact, but also a metaphor for women's value both for the Mennonite family and McCarthy. Billy, too, has prejudices that can be counted as misogynistic. He asks The Primadonna about the show they stage every night. He wonders why the clown kills her in the show. The Primadonna tells him that the clown kills her because he knows her secret, and the secret is that it is the mask that is true in this world. The Primadonna secretly knows that the clown is the real personality of the man who wears the mask. That is why he kills her every night. However, Billy thought that it was because of jealousy (McCarthy, 1995, p. 233). Billy's statement offers an excuse for killing a woman. Considering the number of femicides committed every day out of jealousy all over the world, it is a widely accepted excuse in the patriarchic world.

Misogyny goes on coming into the sight in its ugliest forms. Two men abduct a young Mexican girl in their camp. In an attempt to save her, Billy and Boyd act as if they are just passing and join them for a break while they are drinking. One of the men wants Billy to guess the girl's age. Billy tells him that she is very young, but the man educates him: "if they were old enough to bleed they were old enough to butcher" (McCarthy, 1995, p. 212). This being verbalized in the narration does not surprise the readers of McCarthy. Yet, these men deprived of the most basic ethos have their own moral codes. Near the end of the novel, Billy comes across one of those men, from whom they have saved the young Mexican girl. As Boyd is dead, Billy is alone and unarmed, therefore he fears that the man would seek revenge. However, the man declares that he will give him no harm as reported by the narrator.

[H]e harbored no grudge toward any man over a woman for they were only property afoot to be confiscated and that it was no more than a game and not to be taken seriously by real men. He said that he had no very high opinion of men who killed over whores. (McCarthy, 1995, p. 388)

According to their moral codes, women are properties, on which the strongest or the swiftest man has a claim. Therefore, he regards their rescuing plot for the girl as a game. Reviving this man in the narrative after more than a hundred and seventy pages must serve something important for McCarthy's narrative aims. The first encounter and dialogues of these men arouse a sense of alarm and detest. Readers can easily hate these two scoundrels and their ideas. However, the second encounter is much softer. The man poses no threat to the protagonist, with whom the reader builds a strong empathy during his demanding journey. Billy is in such a vulnerable position that the reader is almost thankful to the man who expresses the cited

statements. Such emotional fluctuations moderate harsh misogynistic messages for the reader. McCarthy generates both positive and negative feelings in a single scene and waits for them to be accepted at the same time.

The girl is an important figure, with the role she serves in the novel. She is the reason for Boyd's ultimate destruction, at least Billy thinks this way. When in search of his brother in the last chapter, Billy finds the man who gave their stolen horses back. The man informs Billy that Boyd is dead. When the man asks why Boyd did not return home like him, Billy refers to the girl as the reason (McCarthy, 1995, p. 394). According to him, Boyd's love for the girl brought him his doom. The fact that McCarthy does not even bother to give her a name feels like he punishes the girl for the trouble she has caused.

### **3. WOMAN IN *CITIES OF THE PLAIN***

The last novel of the trilogy brings together the protagonists of the first two novels, John Grady Cole and Billy Parham. The novel opens on a rainy day. Billy, John Grady, and Troy, a fellow cowboy, enter a brothel and sit at the bar. They have drinks and start commenting about the prostitutes while making their choices. Here is an extract from their troubling dialogue:

I come down here for a fat woman and that's what I'm havin. [...] when the mood comes on you for a fat woman they just wont nothin else satisfy.

[...]

How about that old big'n in the green pajamas?

[...]

She'd bounce John Grady off the ceilin.

[...] What about the one with the blue windercurtain wrapped around her?

[...] She looks like her face caught fire and they beat it out with a rake.

[...] Parham yonder actually claimed that a man ought not to date anything he couldnt lift. Said what if the house caught fire.

Or the barn.

[...]

You remember the time we brought Clyde Stapp down here?

[...] Picked him out a gal with some genuine heft to her.

[...]

We told Clyde he looked like a monkey fuckin a football. (McCarthy, 1998, pp. 2–3)

Every sentence in this dialogue harbours misogyny. The brothel itself is a product of that hate. A woman in a brothel is nothing but a property that can be

bought or sold. Therefore, the brothels are products of the androcentric world because they serve to fulfil men's primordial desires by utilizing women. If they are properties, then men can choose their specifications. The right of choice should be met with the diversity of the goods. The brothel has women in diverse sizes and looks to appeal to men who want to buy them. Here, Billy and his friends are picking women, as if they are shopping in a supermarket trying to choose among different brands. The statements cited are between Billy and Troy. John Grady is mostly mute in this dialogue; however, he would probably join them if he was not distracted by a young girl, named Magdalena. A few dozens of pages later, John Grady is looking for her in other brothels of the city, as she has been removed from the one he has seen her first time. The taxi driver, who takes John Grady to a couple of brothels in Juarez in his search to find Magdalena, comments about the qualities of the prostitutes and the things that must a man pay attention to while choosing one. The driver tells him "that men out for an evening were often likely to accept the first proposal but that the prudent man would be more selective. [...] [I]n a healthy society choice should always be the prerogative of the buyer" (McCarthy, 1998, p. 57). When he asks him if he understands, John Grady simply says that he surely does. Therefore, one can say that, despite his romantic properties, John Grady, too, regards some women as property. Eduardo, the pimp, is the most overt man regarding this issue. After Magdalena is killed and John Grady is lost, Billy goes to the White Lake, the brothel where Magdalena used to work, to confront Eduardo. Eduardo tells Billy that John Grady is the one to be blamed for Magdalena's death, which was the outcome of John Grady's "coveting of another man's property and his willful determination to convert that property to his own use without regard for the consequences" (McCarthy, 1998, p. 247). A property is something one has full rights on, so the owner can do whatever he/she wants with it. Eduardo regards himself as the rightful owner of Magdalena, which gives him the liberty to do whatever he wants with her. In this case, the owner decides to take the life of the property.

The commodification of women in this masculine world is sometimes disguised as zoomorphism. Oren, an elder worker in the Cross Fours Ranch, wants John Grady to assess a filly for a man who does not know much about horses. According to Oren, the man wants to give the filly to his wife as a gift. When John Grady asks if she is wild or domesticated, Oren answers with a joke: "The wife or the horse?" Another fellow worker JC joins him: "I'll lay eight to five they aint either one [...]. Sight unseen" (McCarthy, 1998, p. 44). Here, women are reduced to wild animals, which men must tame. Such belittling jokes that radiate woman hate are quite common among cowboys. In the first brothel scene, Billy and Troy make their choices among the women and leave. John Grady stays there staring at the girl

sitting on the couch. When the other two come back, they see John Grady's interest in the girl and Troy tries to encourage him to go and take her. However, Billy has a better idea; he advises him to take the one he just slept with, because "[s]he is five gated" (McCarthy, 1998, p. 5) just like a well-tamed breed of horse. Attributing animal traits to women with a hurting sense of humour is a normal behaviour in the world of cowboys.

Billy is not the same boy as the one in *The Crossing*. He did not have an overall relationship with a woman to make a comment about his attitude toward women in the previous novel. However, in this novel, he has a misogynistic tone. There is an implication that he has had maturing experiences with women during the time that passed between the two novels. When talking with John Grady about Margaret, the deceased wife of Mac McGovern, the owner of the Cross Fours Ranch, he feels the liberty of making comments about women when he says "[y]ou dont get over a woman like that" (McCarthy, 1998, p. 11). Margaret had grown up outdoors, which made her less domestic. According to Billy, "a woman raised on indoor [... never] turn out worth a damn" (McCarthy, 1998, p. 12). This is what made her so special and why Mac "aint goin to be gettin over" her death (McCarthy, 1998, p. 12). His criteria for women's worth impel the masculine ideals of Westerns. Interestingly, Alejandra of the *All the Pretty Horses* would fulfil the requirements of the perfect woman, if not constrained by her grandaunt. Maybe that is why John Grady manages to get over her parting without major harm.

Others are not as lucky as John Grady is. Mac has difficult times trying to consolidate his state of mind. However, Troy's brother Johnny is one of those unfortunates who could not overcome the depression caused by the separation from his beloved. The woman that left Johnny for another man is demonized by Troy's elder brother Elton: "Satan hath power to assume a pleasing form. Them big blue eyes. Knew more ways to turn a man's head than the devil's grandmother. I dont know where they learn it at" (McCarthy, 1998, p. 25). Troy immediately provides an answer: "They're born with it, [...]. They dont have to learn it" (25). Identifying physical beauty as a satanic characteristic has troubling hypocritical implications for men. Troy and Elton agree that beautiful women are evil, yet men cannot help falling for physically attractive women. Even if the description of beauty may differ from man to man, they still judge the women whom they want to be with by their looks as seen in the brothel scene. Then, the hypocrisy is if men intentionally choose evil over good, why do they complain when bad things fall upon them?

The innate evil that women harbour in McCarthy's world shows itself again when Mr. Johnson talks about his failed marriage attempt. John Grady and Mr. Johnson are talking about the changes that land and people are going through. When John Grady wants his opinion about marriage, he tells him that he cannot

give him any advice since he has never been married. That is not because he is opposed to marriage. Once, he had an attempt, but the girl refused him because he was poor. She married another man and died during the birth of her first child. She was very beautiful and under the age of twenty when she died. Mr. Johnson cannot forget about her (McCarthy, 1998, p. 193). Here, another demonizing personality trait for the women in McCarthy's universe shows up: Greed. Mr Johnson's girlfriend chose money over love, which indicates her lack of virtue. Her choice had broken a man's heart, so she was to be punished to purge masculine emotions. The catharsis comes with a plot twist for the woman. McCarthy kills her while waiting for her happiest moment.

In *Cities of the Plain*, the problematic partner in intersexual relationships is always the woman. Men are victims and generally suffer from the wrongdoings of women, which alienate men to women and drag them to a reclusive life on a female-free ranch. Oren is one of those hermits, whose pursuit of happiness has been hampered by his mother-in-law. However, he had been warned by his friends. They called him "crazy", an allegation of femininity that was discussed previously. Yet, he married her anyway, before her "goddamned awful" (McCarthy, 1998, p. 209) mother caused their breakup. The father-in-law was not alive then, but if he was, his wife would not have left Oren (209). He indicates that the existence of the man functioned as a tenderizing agent for the wild nature of the woman. When his wife's father died, the mother-in-law became loose of the strings that attached her to a civilized personality.

Women are either demonized or insulted in this masculine world. Even Magdalena's epileptic seizures are utilized for hateful communication regarding women. While reading the details of the first seizure she has, the readers "find her bowed in the bed and raging as if some incubus were upon her" (McCarthy, 1998, p. 73). Next time Magdalena has a seizure, she is with a "client" and Eduardo's sidekick Tiburcio comes to deal with her: "He bent over her slightly in his black silk. The soft false whisper of it. A morbid voyeur, a mortician. An incubus of uncertain proclivity [...]" (McCarthy, 1998, p. 190). Both depictions emphasize some "incubus", a mythical malignant spirit believed to violate women sexually while in their sleep. In the first one, the narration exploits Magdalena in her cramped body posture. This narrative abuse develops into Tiburcio's actions in the second attack. This time, the incubus is material in the form of a sadomasochistic scopophilic, Tiburcio.

Magdalena's sickness generates confusion among other prostitutes. As ignorant as they are of the medical facts, they tend to explain her suffering with supernatural causes. When one of the women sees her having a seizure, she likens her to demons. Another one cleans the blood that comes out of her mouth with a piece of



cloth and keeps it as if it is a relic from the heavens. Some others start chanting hymns, and more others bring little idols either to help the sick girl or to protect themselves from the demons that have seized the poor girl (McCarthy, 1998, pp. 73–74). Women are again humiliated by being depicted as prejudiced and superstitious. Eduardo warns Magdalena about the other girls' superstitions. He tells her that it should not make her feel special, as her illness was not a divine sign of her sanctity. The other girls assign meanings to what they fear and do not understand. If they believed that it would keep them safe, they would easily give harm to her no matter what they believed about her seizures (McCarthy, 1998, p. 220). The only woman that is aware of the worldly grounds of epilepsy is the one-eyed old housemaid, Josefina. However, she has her own preconceptions about women. When she helps Magdalena to prepare for a ceremony, she praises her beauty and tells her that she looks like a princess. Magdalena does not agree with her, and she wretchedly says that she looks more like a prostitute. Josefina gets angry and tells Magdalena that she will "marry a great rich man and live in a fine house and have beautiful children" referring to Eduardo's love for her (McCarthy, 1998, p. 103). Such stereotypic models for women, as in Josefina's words, evoke the ideals of women in sentimental novels of the nineteenth century, which, according to Tompkins (1992, p. 39), caused the emergence of the Western genre as a reaction. Therefore, Josefina represents the traditional woman, and because Magdalena refuses such preconceptions about women, she exemplifies the modern version of female characters in the New Western History.

This does not mean that Magdalena enjoys a life free of male dominance. McCarthy compensates for that minute statement of free will when she expressed that she does not want to marry a rich man by making her endure an unbearable amount of suffering. Magdalena is only thirteen when her father sells her to a brothel to pay his gambling debt. She runs away and takes refuge in a monastery. However, the prioress gives her back to the pimp in exchange for money. Then, she gets whipped and beaten but Magdalena manages to run away again, this time to defect to the police. The police, too, rape her, and sell her to the inmates in return for whatever they possess. When they are done with her, the police sell her back to the pimp again. The pimp breaks her arm and makes her sleep with other men while her broken arm is still in plaster. She tells John Grady her story; however, he cannot stand it anymore, so he silences her with tears in his eyes (McCarthy, 1998, pp. 143–144). Sullivan (2001, pp. 237–239) claims that, in Westerns, crying means weakness, so she relates John Grady's weeping with femininity. When Magdalena recounts the story of her bitter life, she draws a quite weak image of herself. That much dose of weakness infects John Grady, the perfect masculine hero, and as a result, he weeps like a woman. The previous novel, as well, contained contagious



femininity. Billy's craziness had turned into an epidemic according to the rancher whose wife tried to help the wounded wolf (McCarthy, 1995, p. 72). Such patterns in the trilogy help understand McCarthy's perspective about women.

Women have a controversial place in *The Border Trilogy*. Sullivan (2001, pp. 232–233) compares the wolf in *The Crossing* with Magdalena in *Cities of the Plain*. According to Sullivan, they face almost the same fate. Billy Parham thinks the wolf does not belong to the plains of the southwestern New Mexico, so he catches it and crosses the border for the first time to take her to the mountains of Mexico where he thinks is the homeland of the wolf. The wolf is later taken from him by the Mexican authorities, and it faces a brutal end. Just like the way Billy thinks of the wolf, John Grady Cole thinks that Magdalena, an epileptic prostitute, does not belong to the brothel in Juarez, so he tries to convince her to flee and live with him in an adobe in the far end of the Cross Fours Ranch. This metaphorical crossing of the border will lead to the death of Magdalena by the hands of her pimp. Both Billy and John Grady do not respect borders and pay for it with the life of the female character they try to save.

*The Border Trilogy* hosts many such controversial roles for women, yet the most feminine character is not a woman according to Sullivan (2001, p. 233). As a part of dewomanization of the narrative, McCarthy sets Billy Parham as the most prominent feminine character in the trilogy. He goes through multiple feminizing experiences in *The Crossing*. On the other hand, John Grady is the perfect masculine hero. His fate is not any different from his ancestors; like them, he meets a brutal end that ratifies his masculinity. He is always the dominant character in his relationships. John Grady reminds Billy of his brother Boyd, who was superior to him (McCarthy, 1998, p. 151). John Grady is a better example of a western hero as he does not talk and weep too much. More than this, the amount of blood that he loses during the trilogy serves as more accurate proof of his claim of masculinity. Billy, too, is depicted in blood in the second novel of the trilogy. However, John Grady's bleeding is different from Billy's bloody depiction in *The Crossing*. While the bleeding of Billy is a metaphorical menstruation, John Grady's loss of blood opens the door to exhibit his masculinity in *All the Pretty Horses*. When he sears the bullet wound with the hot barrel of his pistol, which represents a figurative phallus (McCarthy, 1992, p. 283), he displays his control over the bleeding, which distinguishes it from female menstruations. Here John Grady does not need a nurse to take care of his wounds. He treats himself, and this self-adequacy helps him build the most robust masculine character in the trilogy (Sullivan, 2001, pp. 241–243).

Nevertheless, John Grady goes through feminizing experiences in *Cities of the Plain* very similar to the ones Billy endured in *The Crossing*. Instead of a she-wolf, John Grady has Magdalena to put him in the category of lunacy (McCarthy, 1998,

p. 122) which is related to femininity according to Sullivan (2001, pp. 243–244). Like Billy, John Grady has to give up the gun descended on him by his elders for his love (McCarthy, 1998, p. 96). Tasting the blood of the dead wolf sterilizes Billy from his masculinity. In the same way, having intercourse with Magdalena infects John Grady's manliness, and this will bring him to his death in the end. The atonement for this sin will be to reincarnate as a girl (McCarthy, 1998, p. 297) in the epilogue according to Sullivan (2001, pp. 244–245).

Yet, McCarthy does not let masculinity die with John Grady. In his last moments, John Grady wants Billy to recover his gun from the pawnshop (McCarthy, 1998, p. 267). Sullivan (2001, pp. 251–252) claims that this way John Grady demands Billy to take up the masculine role of their relationship. In the last page of the novel when Betty calls Billy as "Mr Parham" (McCarthy, 1998, p. 298), one can deduct that he has assumed that role.

## CONCLUSION

Cormac McCarthy has gained a significant place in American literature with his remarkable works. He has been compared with major novelists such as Faulkner and Melville in terms of style and literary value. Published in 1985, *Blood Meridian* is his first work in the Western genre. With *The Border Trilogy*, published between 1992 and 1998, he both increased his recognition and clinched his success in this genre. Since the Western genre is directly related to masculinity, its view of women has always been the subject of discussion. As the same criticism is directed at McCarthy's *Border Trilogy*, these novels are analysed in terms of their treatment of femininity in this study. While doing this, the perspective provided by Feminist literary criticism was used.

All of McCarthy's novels have been the target of feminist criticism. According to some researchers, the attempt that started in 1989 to rewrite the western history, which was founded on myths, could not find full support from McCarthy's novels in some respects. The role of women in McCarthy's novels could not go much beyond the old traditional images of women. In his male-centred westerns, women are used as instruments for filling gaps in the narration. Almost all of McCarthy's novels are written with themes that reinforce male dominance. To ensure this, women were excluded from the text. For instance, relationships that have implications of homosexuality appear between male couples in this male universe, according to some critics. Yet, according to some others, these relationships do not go beyond homosocial desires. Nevertheless, the most criticized feature of McCarthy's fiction is its misogynistic tone. McCarthy's novels are full of events and descriptions that insult or humiliate women. Although *All the Pretty Horses* is McCarthy's first novel to feature a romantic relationship between a man and a

woman, it is a novel in which masculinity is at the forefront even in its female characters. In particular, the grandaunt character is the most striking in this regard. For some, she is still the ideal female character in McCarthy's novels. However, in this study, it is argued that the situation is exactly the opposite; the grandaunt is the most dominant masculine character in this novel. She tries to prevent her grandnephew from being with John Grady and she succeeds. In doing so, she disregards her grandnephew's free will and desires. Even John Grady has to submit to this masculine pressure from the grandaunt in the end.

The second book of the trilogy, *The Crossing*, is far from the adventurous character of the first. This novel, which is about Billy Parham's transition from young adulthood to adulthood, includes narratives in which androcentric language is frequently used. Stereotypical female characters do not do much except fill in the gaps between the events. In fact, this novel is like a desert in terms of the presence of female characters. So much so that the most developed female character is a wolf, not a human. The human woman, who has the most narrative time, lacks even a name. Although women have been pushed out of the text, misogyny itself persists. Throughout the novel, women are humiliated with accusations like being fools, crazy, superstitious, prostitutes, etc. In some cases, they are treated as objects or slaves. In other cases, women are the causes of the evil that falls upon men.

*Cities of the Plain*, the last novel of the trilogy, is also not lesser than second in misogyny. The novel opens with a brothel scene where women are humiliated. While the characters compare women to animals for their sexual appeal, there is not only misogyny but also a reference to animal abuse. Regarding women as properties continues in this novel, as well. Also, again, men suffer because of the wickedness of women. Thus, women are demonized as a reflection of the inherent misogyny of the text. In addition, women are portrayed as illogical, unrealistic beings living in a world of dreams. Even femininity itself is treated as a contagious disease.

In conclusion, McCarthy has drawn controversial depictions of women in *The Border Trilogy*, as in his previous novels. In this respect, it was concluded that the accusation of misogyny directed at his narrative might be justified. It is hoped that this study can be beneficial as a guide for future research on the female image in McCarthy's novels that have not yet been published.

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## **Chapter 19**

# **Technology Readiness Levels from Basic Research to Product**

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## **1. Basic Research to Product**

### **1.a. Research**

Research comes from the French word *rechercher*, meaning 'detailed search'. Search, on the other hand, is used in the sense of making a search derived from the word *chercher*. Unlike the search word, research is an active and careful systematic inquiry process to review and interpret existing data, information and knowledge in order to make an invention. It is a careful inquiry from the known to the unknown. At the end of this process, if new information (technology) is produced and a technological innovation is caught, development is started to show the innovation.

The strategic tool of the new age has been information and communication technologies. Using these technologies, world trade has increased many times since 1950. While the previous era revolved around cheaper transportation fees, globalization is associated with cheaper communication fees. Developing countries can become major players in the global economy by managing innovation well in the global village built with communication networks. In order to be able to innovate in the globalized economy, it is necessary to collect data first, reach information from the data, and then produce knowledge by giving meaning to the information with the reflection and synthesis of the human mind. The concept of globalization affects Technology Management in this process. In Technology Management, concepts such as Technology Monitoring, Technology foresight, Globalizing ethics, Local and global competition, Talent planning, international relations in science and technology come to the fore.

R&D (Research and Experimental Development) is the creative work carried out on a systematic basis to increase the knowledge of people, culture and society and to use this knowledge to design new applications (OECD Oslo Manual, 1997, p.90). R&D activities generally consist of 3 types of research: Basic Research, Applied Research and Experimental Development (Frascati Guideline, OECD, 2002).

Basic Research is experimental or theoretical studies that do not seem to have any specific application or use, primarily to obtain new information on the basis of phenomena and observable events (Frascati Guideline, OECD, 2002). It has no application and no commercial income. It is a theoretical work and is only published in journals. The output of the Basic Research is the Article.

Applied Research is original research undertaken for the purpose of obtaining new knowledge (Frascati Guideline, OECD, 2002). It is primarily aimed at a specific practical purpose or goal. It is a unique enrichment of information. It has an application and is a commercial study. Its output is patent.



Experimental Development to produce new materials, new products or devices using existing knowledge from research and/or practical experience; It is systematic work directed towards establishing new processes, systems and services or significantly improving those already produced or installed (Frascati Guideline, OECD, 2002). It is the enrichment of knowledge by applying the knowledge obtained through basic research with Applied Research. As a result, a new product, service or process emerges.

The main difference between research and development activities is that while research is mostly the activities to reveal a technology, product or knowledge and direct them to application, development consists of the activities of directing existing technology and knowledge to application areas related to new products or production techniques. Research and development activities have the feature of complementing each other, and development activities take place after research activities.

### **1.b, Product**

It is a physical or virtual product, process or service described from the product. Each product has a research, development, demonstration, production, maintenance and disposal processes. It is TRL that define the maturity level of product-oriented developments.

## **2. Technology Readiness Levels**

### **2.a. Technology**

It is defined as Technology, techne "art, skill, craft" and logia "study of-" in Greek (Oxford Greek Dictionary: 1995: 109). It is the knowledge and ability necessary for the development of tools and tools to facilitate the life of human beings. According to this, technology is "any of the tools, equipment and tools that are used in an industry, application knowledge covering the ways of their use, the tools developed to control and change the material environment of man, and the information related to them". Technology is the making, modification, usage and knowledge of tools, machines, techniques crafts, systems and materials of an organization in order to solve a problem, improve a preexisting solution to a problem, achieve a goal, handle an applied input and output relation, perform a specific function. the application of scientific knowledge to the practical aims of human life or, as it is sometimes phrased, to the change and manipulation of the human environment (Burgelman R.A. 2004, p.7)

## **2.b. Managing Technology Development**

Technology management in universities is carried out at the level of technology development and technology demonstration through laboratories in techno parks. In the field of industry, technology management is realized by using engineering sciences, basic sciences and management sciences disciplines in order to anticipate, plan, acquire, transfer, integrate, evaluate, benefit, protect, market and commercialize technological capabilities in order to realize the strategic and operational goals of institutions and organizations. Technology management is also the effective use of technical knowledge and capabilities in order not only to produce products and processes, but also to develop existing technology by taking it further, and to transform science and technology into economic and social benefits. Technology management is managing information, managing change and differentiation (Chanaron, J.J., Grange T., 2006, p.955-959). In the field of industry, technology development and management lie in making money. The main motivation is to make a profit. The solution of problems in technology development and management processes includes research, and the duration can only be estimated. Time and cost include the degree of difficulty of the problems tried to be solved at the beginning of the program. The basic management principle in the technology development program is to maximize the probability of success.

## **2.c. Innovation**

Former Prime Minister of Finland, Esko Aho, defined innovation as "R&D is the process that turns money into knowledge, and innovation is the process that turns knowledge into money". Innovation is the realization of a product, a process, a new marketing method or a new organizational method consisting of a new or significantly improved good or service in internal business practices, workplace organization or external relations (OECD Oslo Manual, 1997, p.50).

Invention is the first concrete indication of a new product or service on the market. Innovation, on the other hand, is the commercial identity of this invention. Not every invention can be called an innovation. The key word in innovation is commercialization. Austrian economist Joseph Alois Schumpeter innovation activities; It is defined as developing new products or making qualitative changes in the existing product, developing new processes for the sector, opening new markets, finding new sources of supply for raw materials and other inputs, and realizing changes in industrial organization (OECD Oslo Manual, 1997, p.29).

The innovation system is the key to the innovation process, which describes the flow of technology and information between people, private and public

institutions. It describes the interaction of all the actors that make an idea turn into a process, product or service in the market.

#### **2.d. Innovation Cycle**

- The idea is to identify the market opportunity
- Organizing resources, human resources, finances and facilities
- Research, examine possibilities
- Patent, securing intellectual property rights
- Design, model and test for users
- Develop, improve technology
- Build, craft a lot
- Sell, inform people, advertise
- Service, keep in touch with your customer

#### **2.e. Technology Readiness Level (TRL)**

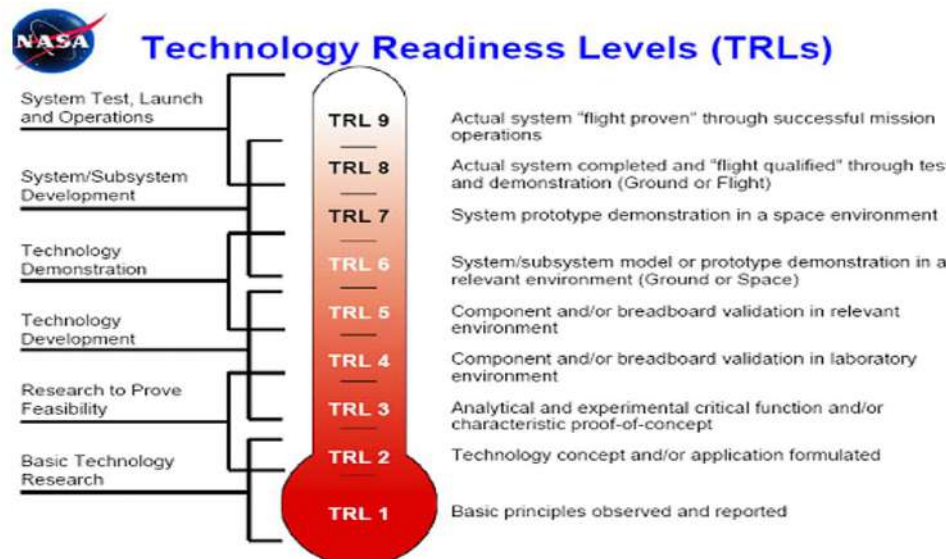
Currently, those who make a difference in the competitive environment, especially in the defense industry, are those who produce new technologies, catch change and differentiation, and market them to other countries. As long as institutions, organizations and companies manage technology, they can survive in the market. Achieving superiority is achieved by producing rational and sustainable policies adopted in technology management, determining technologies correctly, making road maps, monitoring technology and analyzing the current state of technology well. The main reason for this analysis is to ensure the correct management of performance, calendar and budget.

The stages in the technology development process are measured by Technology Readiness Levels (TRL), which is a subjective metric that defines the maturity level of the developments related to the developed technology (Mankins, 1995, p.1). TRL lays the foundation for harmonious communication between technologists and managers in the technology development process. TRL expresses the risk of failure in the application of new technologies to complex operational systems, and gives ideas about risk management, budget size, and the actors that will take part in the realization of the activities in the process (DoD TRA Guidance, 2011; DoD TRA Desk book, 2005).

TRL was started to be conceptually developed by NASA in 1974, initially 7 levels were defined and then it was increased to 9 levels (Fernandez, 2010). TRL is one of the assessment tools used in technology readiness assessment and was first used by NASA in the 1980s to assess the risk and readiness of space technology.

The aim of TRL is to follow the development of three types of technology, hardware, software and production technologies, and to create a common jargon for the development of technology in a certain time period.

In the assessment, approximately 90 questions are asked, one for each of the 9 levels. It started to be used by the American Air Force in 1990, and by all technology producing institutions, organizations and countries in the following years. Currently, TRLs have been determined by NASA level by level (Nolte, 2003: 19) (Figure 1).



Şekil 1 -Technology Readiness Levels  
<https://www.grenoble-inp.fr/en/research/trl-what-is-it-for>

TRL1 is the lowest level of Basic research Technology preparation. It is a systematic study to understand the essence of events and/or the causes of apparent phenomena and to obtain more information. Observing and reporting key principles in the context of a deficiency. Scientific research starts to be evaluated for applications. Example: Outputs may include written studies of key features of a technology and potential for a specific application.

TR2 is to formulate the Technology concept and/or application. Invention begins. Once the basic principles are observed, practical applications can be suggested. The application is speculative and there is no proof or analytical work to support the assumption. Example: Outputs are often written studies.

TR3, Analytical and experimental proof of critical function and/or characteristic concept. Verification of the different elements of the technology

is carried out by analytical methods or laboratory studies. Example: A&T outputs are software and hardware components; they are not combined at this stage and do not represent the final system or capability.

TR4 is validating components and/or test-platforms in the Laboratory. Basic technology components are combined. The operational environment is defined. This is a 'low fidelity' display relative to the final product. Example: involves a one-off laboratory integrating or testing of results.

TR5 is components and/or test-model validation in the appropriate (operational) environment. Subsystem fidelity has increased significantly. The main technological components are integrated with realistic support elements to test the technology in the simulated operational environment. Example: laboratory integration of high-fidelity components.

TR6 is the system/subsystem model or prototype representation in a Realistic (operational) environment. The qualification model, sub-system model, development model, or prototype, which is defined as the more advanced representation, is tested in a more realistic environment. It is an important step in demonstrating the readiness of the technology. Example: testing the prototype in a high-fidelity lab or field environment or in a simulated operational environment.

TR7 is the system representation in the operational environment or context (exercise). Prototype close to or equal to operational system level. It is a step significantly ahead of TR6. Here, the actual system prototype is the appropriate platform or trial in the 'system of the system' operational environment. Here information is collected for supportability. Example: prolonged testing of the prototype in a military exercise or test vehicle.

TR8, Qualified, completed with real system testing and demonstrations. In the case of the latest technology, it will be proven to work under expected conditions. In nearly all cases, this TRL appears as the end of the display. Example: testing and evaluation of the system within the weapon system in which it will be used. Investigation of compliance with specifications, including supportability.

TR9 is operational proof of real system in successful missions. Applying the latest state of technology to mission requirements. These are operational testing, evaluation and reliability trials. Example: testing the system under operational mission conditions.

Technology readiness levels also describe the 'elements of the innovation system' or the 'procurement process' (DoD, 2002: 183, 184). Various terms are used to describe these processes, such as Defense Science and Technology Organizations DSTO, Capability and Technology Demonstration CTD.

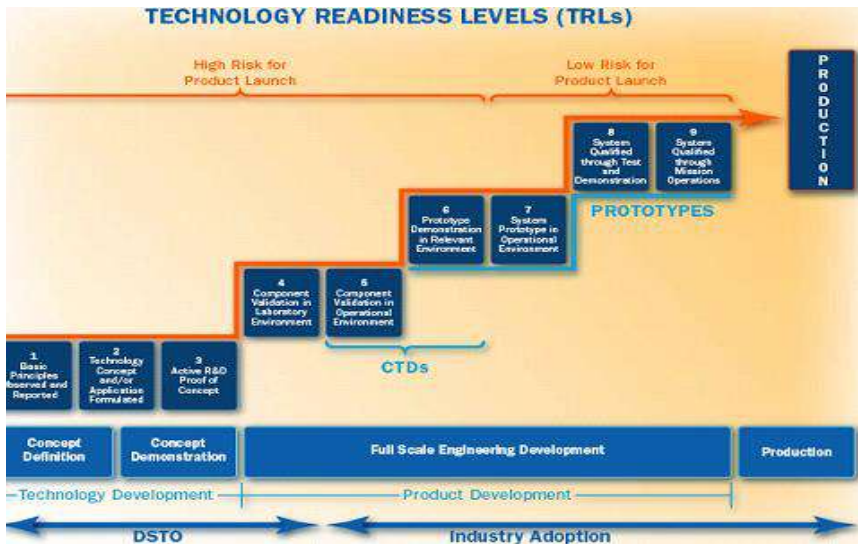


Figure 2- DSTO and CDT

<https://www.twi-global.com/technical-knowledge/faqs/technology-readiness-levels>

While TRL is determining the technology level in accordance with the structure and needs of the system to which it will be integrated, technology maturity indicates the level of compliance with the objectives of the system to which the technology will be integrated. Mature technology is a technology that has been used for a long time by gaining experience, whose faults are detected, commercialized and ready for use (Roussel, 1984, p.29). Technology maturity refers to the level of compliance with the objectives of the system to which it will be integrated and has a very important place in risk assessment.

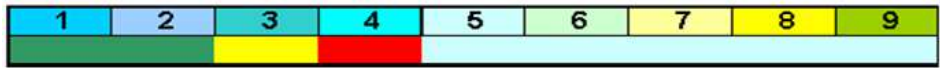
## 2.f. TRL Calculator

It is a 9-level tool used to apply TRLs to technology development programs. The TRL Calculator is a Microsoft Excel spreadsheet that seeks and contains answers to a set of questions about a technology development project. The level of TRL is determined by the percentage of answers to the prepared questions and choosing the most appropriate one among the questions. After the answers are found, the Calculator displays the TRL level results obtained. TRL Calculator is often called "How To?" It is a tool that provides an answer to the question (Bilbro, James W, 2007).

Looking at the TRL Calculator shows a segmented horizontal screen stretching horizontally across the top of the page. When the page is scrolled

down to enter or review data, the display area will still be displayed at the top of the monitor screen. The screen sections below the TRL numbers change color when data is entered into the spreadsheet. The horizontal screen shows the result of the TRL reached. TRL from the answers given to the questions;

- Fully providing (green),
- Provider (yellow),
- Provides very little (red),
- Shown as none (light blue) (Figure 3).



Şekil 3- TRL Colors

The numerically obtained green and yellow TRL representations are as shown in Figure 4. The screen contains areas where the TRL obtained in both “Yellow” and “Green” degrees of completion is displayed numerically instead of graphically. Thanks to this feature, the readiness level reached is easily transferred from the TRL calculator to other software tools used (Figure 4).



Şekil 4- TRL Demonstration

There are basically two ways to answer questions. Some questions are answered by ticking a checkbox (Figure 5). The checkbox means that the task in the question asked has been done.

% Complete		Level of Knowledge (Check all that apply)	
100	<input checked="" type="checkbox"/>	Basic scientific principles observed	
40	<input type="checkbox"/>	Possible application exists	
95	<input type="checkbox"/>	Paper studies confirm basic principles	
60	<input type="checkbox"/>	Paper studies show that application is feasible	
80	<input checked="" type="checkbox"/>	Physical laboratory experimental evidence confirms basic principles	
	<input checked="" type="checkbox"/>	Laboratory experiments verify feasibility of application	
	<input checked="" type="checkbox"/>	Rigorous analytical studies confirm basic principles	
	<input checked="" type="checkbox"/>	Physics underlying the technology is well understood	
	<input checked="" type="checkbox"/>	Overall system requirements for end user's application are known	
	<input type="checkbox"/>	Science known to extent that mathematical and/or computer models and simulations are possible	
	<input type="checkbox"/>	System interface requirements known	
	<input type="checkbox"/>	Operating environment for eventual system known	

Figure 5- Level of Knowledge

[https://ndiastorage.blob.core.usgovcloudapi.net/ndia/2011/system/13132\\_NoIteWednesday.pdf](https://ndiastorage.blob.core.usgovcloudapi.net/ndia/2011/system/13132_NoIteWednesday.pdf)



While answering the questions asked, the percentage of completion can also be entered using the slider. A task is considered complete in the TRL calculator when the percent complete is greater than or equal to the specified threshold. If the color of the value in the background of the screen is 50% and below, it turns red, from 55% to 80% yellow, when it is high enough to be counted for 85% or more, it turns green (Figure-6).

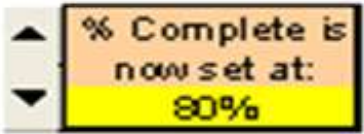


Figure 6- Completion Percentage

Some questions are answered by choosing the most appropriate one among the options by using the radio buttons (Figure 7). Selection from the related question group is made by clicking the correct radio button.

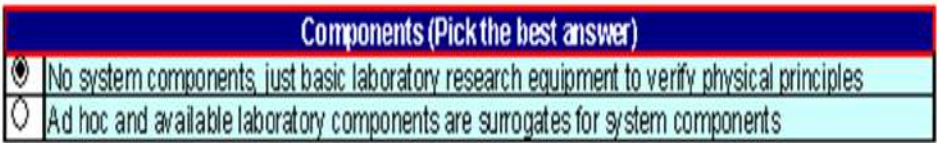


Figure7- Radio Buttons

**2.g. What does the TRL Calculator do?**

TRL Calculator provides a snapshot of the maturity level of the developed technology in a certain time period (James W., 2001, p.9). TRL shows users the improvements made so far. However, it does not give an idea about the future of technology or the risks that may be encountered and the next level of technology readiness to be reached. However, the TRL Calculator can also support a risk management program. The questions and completion percentages information in the TRL Calculator helps a program manager monitor the activities carried out, monitor the technology maturation process, and the current status. TRL will also be a guide for other technological investments to be made in terms of determining the level of technology ownership and readiness.

As we worked on the definitions of the readiness levels of the technologies and the measurement calculation methods, the need for groupings such as hardware, software and manufacturing emerged. With the understanding that not everything can be described with a scale, new levels of readiness such as



“Integration Readiness Level (IRL)” and “System Readiness Level (SRL)” (Sauser et al., 2006a: 7) have begun to be used. All efforts are made to ensure that the product is used on the battlefield with the least risk.

2.h. Decision Algorithms

The decision algorithm works to give a color value (Figure-8). Checking the previous color prevents the TRL calculator from displaying a green TRL higher than red or yellow, and yellow from appearing higher than red. Starting from this point, excluding TRL 1, the decision of the colors of the other TRLs is made by examining the color of the previous TRL and considering the number of questions answered according to that level. The function to check the color of the previous level causes the TRL calculator to give a green color to a level higher than the red or yellow level, and a yellow to a value higher than red.

In general, the algorithm for all levels works like this: Show Green if all colors inside this level are Green and all questions are verified. Show Green or Yellow if the previous level was yellow and the number of questions answered at this level corresponds to the yellow or green level. Show Yellow if the previous level is Green and the number of questions answered points to the yellow level, but there is little difference to the green level. Show Red if at least one question or more has been answered at this level but has not met the green or yellow rank. If no questions are marked at this level and at the level before this level, leave this level blank.”

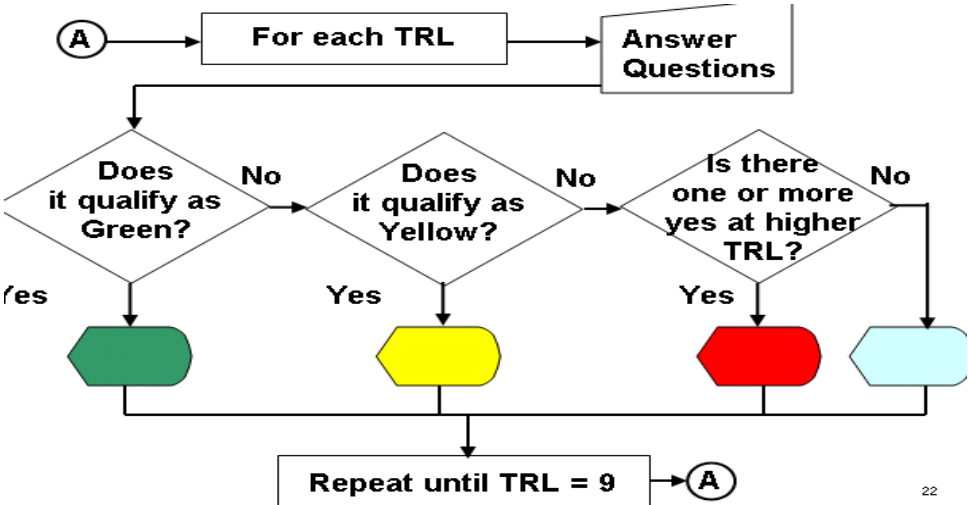


Figure-8 Decision Algorithm

<https://www.sciencedirect.com/science/article/abs/pii/S0965997809002816>

### **3. Result**

The development of information technologies has begun to affect communication technologies, and the phenomenon of Globalization has emerged as information communication technologies ignite the socio-economic system. As a result of technological developments, international agreements in trade and finance started to be realized easily and quickly, and employees, workforce and information have easily passed through national borders.

Today, engineering and technology strive to design, develop products, cycle energy and serve for human beings. Environments are prepared in which the knowledge or technology necessary for the realization of all these cycles is produced. In traditional understanding, technology management activity is called project management, innovation management or engineering management in product research and development. The stages in the technology development process are measured by Technology Readiness Levels (TRL), which is a subjective metric that defines the maturity level of the developments for the developed technological product. The goal of TRL is to follow the development of three types of technologies, hardware, software and production technologies, and to create a common jargon for the development of technology in a certain time period.

Technology readiness levels have been accepted as a common language between technology managers and technology developers to express technology maturity and readiness to integrate with the system. It is an important guide in the effective planning of the cost and time of the technological programs carried out and in determining the investments to be made in research and development programs for the future. TRL also provides guidance for other technological investments to be made in terms of determining the level of technology ownership and readiness. All efforts are made to ensure that technology is used most cost-effectively and with the least risk.

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## **Chapter 20**

# **The Effectiveness of Central Bank Interventions in Turkey: An Event Study Approach**

**Ömer DEMİR<sup>1</sup>**

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## **1. Introduction**

After the collapse of the adjustable fixed exchange rate system in the early 1970s, developed countries started to implement free-floating exchange rate systems. Accordingly, the value of local currencies, which was previously determined by the monetary authority within the framework of a fixed exchange rate system, started to be determined by the supply and demand in the global foreign exchange markets within the framework of flexible exchange rate regimes. With the disappearance of the protection provided by the Bretton Woods system against the negative pressures of short-term capital flows, the monetary authorities of developed countries have also taken some measures to protect the value of their local currencies. Thus, most countries did not allow the value of their currency to be fully determined within the framework of the free market mechanism and tried to influence the value of their local currencies through exchange rate interventions(Ağcaer, 2003, s. 30).

In the historical process, interventions have been made in exchange rates in Turkey. Interventions have intensified especially in the 1980s and beyond. However, the amount and frequency of interventions varied depending on the exchange rate policy. Since there was no foreign exchange legislation in the 1923-1930 period, the exchange rates were left to fluctuate freely. However, with the “Law on Protection of the Value of Turkish Currency”, enacted on February 20, 1930, the foreign exchange control regime was introduced. The foreign exchange regime until the 1980s was a complete fixed exchange rate regime based on strict controls. However, in 1980, the authority to determine exchange rates was taken from the Council of Ministers and transferred to the Ministry of Finance and then to the central bank by the finance ministry in 1981, and the central bank began to determine and announce the exchange rates on a daily basis(Engin, 1985).

With the January 24, 1980 decisions, a more flexible exchange rate policy was implemented. Accordingly, exchange rates were devalued by approximately 50%. With “Decision No. 32 on the Law on the Protection of the Value of the Turkish Currency” adopted in August 1989, it was aimed that the TL would become a convertible currency and the restrictions on foreign exchange and effective movements were largely lifted. It tried to prevent fluctuations in interest rates. For the control of exchange rate fluctuations which are created by political uncertainties and high public expenditures in 1991, and especially after the 1994 crisis, in the 1994-1995 period, interventions were made from time to time. A managed floating exchange rate policy was implemented in the 1996-1999 period. In this framework, the exchange rates

were increased in parallel with the inflation rate and thus it was aimed to stabilize the TL in real terms (Yeldan, 2001).

The structure of this study which investigates the effects of the CBRT's interventions in foreign exchange markets in the form of auctions and direct sales, as a stabilizing factor during periods of extreme movements in the foreign exchange market, is as follows: In the first part, the historical background of exchange rate interventions is reviewed. In the second part, the results of previous studies are summarized. The third part includes data, methodology, and findings. In the fourth part, the empirical evidence is discussed and policy recommendations are given.

## **2. Literature Review**

First of all, it is necessary to explain the concept of exchange rate intervention. Interventions on exchange rates by the central bank or monetary authority as a policy tool to ensure price and exchange rate stability are controversial in terms of application, use, and effectiveness (Schmidt & Wollmershäuser, 2004) (Schmidt and Wollmerschauser, 2004). Inconclusive findings obtained from previous empirical studies prove this situation (Dominguez, 2003; Sarno & Taylor, 2001; Edison, 1993). A study by Dominguez (1990), using daily data for the 1985-1987 period, used regression models based on return difference as an analysis method in his study on the USA, Germany, France, Japan, and England. As a result of the analysis, the source and size of exchange rate interventions can be predicted by market agents, and unilateral interventions in the short run and joint interventions were found to be effective in the long term. On the other hand, Klein & Rosengren (1991) analyzed Fed interventions with the signal hypothesis, using daily data in the context of the 1985-1989 period. As a result, an inconsistency was found between exchange rate interventions and monetary policy. There is also evidence that interventions are effective in the short term.

Dominguez (1992), examined whether FED interventions in the 1977-1981 period contained information about future monetary policy. As a result, it was determined that the interventions only gave signals about monetary policy during a part of the research period. (Dominguez & Frankel, 1993), using daily data for the 1982-1988 period, showed that instrumental variables and M-GARCH models and FED and Bundesbank interventions were effective on exchange rates through the portfolio channel. Kaminsky & Lewis (1996), used the Markov Switching Regime Change Model as the analysis method in their study on the USA using daily data from the 1985-1990 period. As a result of the analysis, no evidence was found to show the change in the monetary policy of

the interventions. Fatum & Hutchison (1999) concluded that FED interventions do not include information on monetary policy and increase volatility in exchange rates. However, Hopkins & Murphy (1997) concluded that the interventions of the Australian Central Bank contain information about the planned changes in monetary policy. Baillie & Osterberg (1997) found that FED interventions slightly increased the volatility in exchange rates. Similarly, Dominguez (1998), concluded that particularly covert interventions by the FED, the Bundesbank, and the BOJ increased the volatility of exchange rates.

Fatum & Hutchison (1999) state that the event study approach is more advantageous than time series techniques in determining the structure of the relationship between central bank interventions and exchange rates. In the event study approach, periods in which intense interventions are observed are considered as a single event and the effect of each event on exchange rates is examined independently. Using this method, researchers have found that sterilized FED interventions have an effect on exchange rates.

Beine vd. (2002) used FIGARCH models in their study on the USA, Germany, and Japan using daily data for the 1985-1995 period. As a result of the analysis, it was determined that the exchange rate interventions made through foreign exchange purchases caused the depreciation of the exchange rates. Working with a larger sample, Edison vd. (2003) analyzed the exchange rate interventions of the Australian Central Bank in the 1984-2001 period using the event study method. The researchers concluded that the Australian Central Bank was successful in its interventions, especially when the Australian dollar depreciated. Testing the relationship between exchange rate interventions and the reactions of market participants, Dominguez (2003) used the event study approach and regression techniques as an analysis tool in his research on the USA, Germany, and Japan for the 1987-1995 period. As a result of the analysis, it was found that the exchange rate interventions by central banks were understood by the market participants in a very short time and that the interventions highly affected the market reactions.

Disyatat & Galati (2007) investigated the exchange rate interventions made by the Czech Republic central bank in the 2001-2002 period using daily data using regression analysis techniques and an event study approach. As a result of the analysis, it was stated that the exchange rate interventions were carried out in response to the acceleration of the depreciation of the local currency. In addition, there was no evidence of an increase in exchange rate volatility in the short run due to the intervention. Scalia (2008) analyzed the exchange rate interventions carried out by the monetary authority in the Czech Republic in the



period 2002:7-2002:12 using daily data with simultaneous equation systems. As a result of the research, it was determined that the news of the intervention caused a strong price effect on the exchange rates, and the interventions made to reduce the depreciation of the local currency gave more effective results.

Lahura & Marco (2013), using interbank exchange rate data, examined the interventions in the foreign exchange market in the form of buying and selling dollars in the Peruvian example with the VAR method. The findings show that the exchange rate interventions in Peru are effective. In addition, buying interventions were found to be more effective than selling interventions. Omojolaibi & Gbadebo (2014) examined the effect of exchange rate interventions on the national currency Naira in Nigeria for the period 1970-2006 using the ARDL technique. In the study, analysis was carried out with the variables of money supply, accumulated net foreign assets, accumulated foreign private inflows, real GDP, and structural deterioration. The findings show that there is a long-term relationship between central bank interventions and money supply variables.

Herrera & Özbay (2005) analyzed the effect of the central bank's interventions on exchange rates in Turkey, using the dynamic censored regression method. The researchers modeled the interventions in complex foreign exchange markets in a non-linear fashion using CBRT data with their lagged values. As a result of the analysis, continuity in exchange rate interventions was determined. This situation was evaluated as a signal of future monetary policies by CBRT. In addition, according to the Tobit model of the reaction function, the model is not normally distributed and the problem of varying variance is strongly encountered.

Akinci vd. (2005a) investigated the reasons and effectiveness of the exchange rate interventions carried out by the CBRT in the post-2001 crisis period using Granger causality tests and probit models. As a result of the analysis, it was determined that the main reason for the interventions was to prevent excessive volatility in the exchange rates, as announced to the public by the CBRT. On the other hand, the presence of the signal channel was investigated, but no definite finding was found. In addition, it was determined that the interventions made through foreign exchange buying and selling did not affect the value change in TL. The results of the analysis showed that there is a positive relationship between the depreciation rate of TL and the interest rate between 16 May 2001 and 31 December 2003. In another study, Akinci (2005) Akinci et al. (2005b) tested the effectiveness of the exchange rate interventions made by the CBRT in the post-2001 crisis period with the event study approach and the time-varying parameter model. It was emphasized that foreign exchange

purchase interventions in the second half of 2003 were generally large in volume and that the CBRT intervened in the market with large foreign exchange purchases. Based on the estimations of the time-varying parameter model, the researchers noted that during the review period, the open interest parity condition operated in an unusual way, such as the risk premium channel. However, these results should be interpreted with caution for two reasons. The first is that rate cuts are often found in the analyses. Since no clear findings were obtained in the operation of the open interest parity condition, the researchers concluded that the CBRT followed a strict policy. Secondly, TL entered an appreciation trend in the post-crisis period. However, when a highly volatile depreciation trend was entered, strong evidence could not be obtained as to whether the CBRT would intervene in the foreign exchange market.

### **3. Empirical Framework**

The empirical framework consists of three parts. In the first part, the data set is introduced. In the second part, the method of the study is explained. In the third part, empirical findings are given.

#### **3.1. Data**

In this study, the value of TL in USD is expressed as USD/TL. In this context, an increase in exchange rates indicates a depreciation of TL against the US dollar, and a decrease indicates an appreciation of TL. Technically, the purpose of the CBRT's foreign exchange selling interventions or foreign exchange selling auctions is to add value to the TL, while the purpose of buying interventions or buying auctions is to depreciate the TL. For this purpose, it is examined whether the CBRT interventions are effective or not. Foreign exchange auctions and direct interventions examined during the study period were made in USD. The analysis is based on the benchmark foreign exchange sales rate data announced by the CBRT. This study uses daily exchange rates, auction sales, and direct sales intervention data regarding the exchange rate interventions carried out by the CBRT within the period of 01.01.2014-31.01.2017. The data set was obtained from the CBRT database.

#### **3.2. Methodology**

Time series techniques are used as a method in most of the studies in the literature investigating whether central bank interventions in the foreign exchange market have an effect on exchange rates. However, Fatum and Hutchison (1999) suggested that the case study methodology is a more appropriate analysis tool than standard time series techniques to determine the

effect of exchange rate interventions on exchange rates. Accordingly, studies conducted with the event study methodology yield more consistent results in terms of capturing the impact of exchange rate interventions. On the basis of this rationale, the case study methodology was used as the analysis method in the study. In the event study methodology, a path such as defining the events, defining the event window, and defining the successful event is followed.

### **3.2.1. Description of Events**

Some financial events are repeated one or more times over time. Each of these events is defined as an independent event (Fatum & Hutchison, 2002). Exchange rate interventions are also included in the group of financial events that are applied intensively at certain periods over time and that occur once or several times. For example, the merger of two companies or the bankruptcy of a company can be defined as a stand-alone event, since it will only occur once in time. However, while the exchange rate interventions are defined as financial events, it is not meaningful to define each intervention as a single event. Instead, it would be more accurate to describe each intervention performed at the same time and in order to achieve a common policy goal as a separate event. Within the framework of the event study approach, the transactions made within a certain time for the same purpose are examined as a single event. For this reason, within the scope of the study, the auction and direct intervention transactions carried out by the CBRT in the exchange rate markets are defined as a single event if they are carried out close to each other and in the same direction. In previous studies, intervention procedures with less than a certain number of days between them were considered within the same event. The number of days varies between 10-30 days in different studies. In this study, auctions or direct exchange rate interventions by the CBRT were evaluated within the same event, with a maximum of 15 days between them.

### **3.2.2. Defining the Event Window**

The event window covers the pre-event and post-event periods of an event. This study compares the exchange rate movements of the pre-and post-event periods. The study was limited to 10 days before and after the event in parallel with the studies in the literature. In the literature, (Fatum & Hutchison, 1999) and (Edison, Cashin, & Liang, 2003) determined 10 days before and after the event in their studies. McLaren (2002) took 5 days before and after the event to avoid conflicts. In the analysis made within the framework of the event study approach, the study of Ağcaer (2003) was taken into consideration. Within the scope of the study, 1 direct selling, 4 auction selling, and 1 liquidity move were

examined. During the working period, the CBRT made more interventions in the direction of selling.

**Table 1. Summary Information on Events for the Period 01.01.2014-31.01.2017**

Events	Intervention Periods	Number of Transaction Days	Exchange rate Beginning	Exchange rate Finish	Intervention Type
Event 1	23.01.2014	1	2.259	2.259	Intervention Selling
Event 2	10.04-12.05.2015	21	2.598	2.699	Auction Sales
Event 3	01.09-09.12.2015	69	2.923	2.917	Auction Sales
Event 4	18.01-18.02.2016	24	3.041	2.969	Auction Sales
Event 5	22.03-27.04.2016	24	2.874	2.839	Auction Sales
Event 6	10.01-18.01.2017	6	3.708	3.789	Liquidity Moves

**3.2.3. Identification of Successful Event**

The success of exchange rate interventions, which are carried out as direct foreign exchange sales and auction foreign exchange sales, is determined by comparing the averages of daily data on exchange rates before and after the interventions. In this study, the Matched Sample Test was used to determine the successful event. The matched sample test is quite functional in terms of comparing first-sample observations (pre-event) with second-sample observations (post-event).In the matched sample test, each observation in the first sample (before the event) is matched with the observations in the second sample (post-event), and after the difference ( $D_i$ ) is calculated, the sample mean ( $D$ ) and standard deviation ( $S_D$ ) are calculated. Under the assumption that the observations in both samples have a normal distribution, the paired sample test with (n-1) degrees of freedom and t distribution is shown as follows (Fatum & Hutchison, 2003, p. 399):

$$\frac{D - \mu_D}{S_D} \qquad \text{t (n-1)} \qquad (1)$$

While  $n$  in this equation shows the number of paired observations,  $\mu_D$  shows the mean value of the difference between paired observations, which allows testing whether there is a significant change between the two samples' mean under the  $H_0$  hypothesis.  $H_0$  and  $H_1$  hypotheses, which were established to test the effectiveness of exchange rate interventions, were tested at the 5% significance level with the matched sample test:

$$H_0: \mu_D = 0$$

$$H_1: \mu_D < 0 \text{ or } \mu_D > 0$$

Fatum and Hutchison (1999) define successful interventions as those that reverse the pre-intervention direction of exchange rates or reduce the speed of pre-intervention exchange rate movements when foreign exchange interventions are made in the opposite direction to the current direction of exchange rates. Edison et al. (2003) defined successful events depending on whether foreign exchange interventions reverse exchange rate movements in the short-term and long-term. In the study, the 10-day exchange rate movements before and after each independent event defined by the matched sample test are compared and tested whether there is a statistically significant change. In this context, interventions that can reverse the direction of exchange rates or create a meaningful change in the speed of the exchange rate movement, even if they cannot change the direction of the exchange rates, are defined as successful. However, success here is success in the theoretical sense. For this, the success of exchange rate interventions should be evaluated in the context of their suitability for the purpose announced by the CBRT. In the study, the purpose of the interventions was accepted to control the depreciation of TL against USD.

### 3.3. Findings

In the framework of the floating exchange rate regime, the event study approach is used to reveal the effect of the interventions of the CBRT, in the form of the auction and direct selling, on the level of exchange rates, as a stabilizing factor in periods of extreme movements in the foreign exchange markets.

**Table 2. Matched Sample Test Results**

Events	p*	t	S <sub>D</sub>	μ <sub>D</sub>	95% Confidence Interval
Event 1	0.0014*	4.5433	0.016	-0.0744	$-0.1115 \leq \mu \leq -0.0373$
Event 2	0.1883	1.4235	0.012	-0.0167	$-0.0433 \leq \mu \leq 0.0098$
Event 3	0.0001*	9.8169	0.009	0.0928	$0.0714 \leq \mu \leq 0.1142$
Event 4	0.0079*	3.3967	0.014	0.0472	$0.0157 \leq \mu \leq 0.0787$
Event 5	0.0024*	4.1677	0.020	0.0817	$0.0373 \leq \mu \leq 0.1260$
Event 6	0.0001*	8.0025	0.022	-0.1744	$-0.2237 \leq \mu \leq -0.1251$

Note:\* Indicates probability values of test statistics at 5% significance level.

**Event 1:** The effectiveness of the CBRT's foreign exchange sales intervention on 23.01.2014 was tested. As a result of the analysis, it was found that there was a statistically significant change. Accordingly, the intervention is successful.

**Event 2:** The effectiveness of the foreign exchange sales auctions held by the CBRT between the dates 10.04.2015-12.05.2015 has been tested. As a result of the analysis, it was found that there was no statistically significant change. Accordingly, the intervention is unsuccessful.

**Event3:** The effectiveness of the CBRT's foreign exchange sales auctions between 01.09.2015 and 09.12.2015 has been tested. As a result of the analysis, it was found that there was a statistically significant change. Accordingly, the intervention is successful.

**Event4:** The effectiveness of the CBRT's foreign exchange sales auctions between 18.01.2016 and 18.02.2016 has been tested. As a result of the analysis, it was found that there was a statistically significant change. Accordingly, the intervention is successful.

**Event 5:** The effectiveness of the CBRT's foreign exchange sales auctions between 22.03.2016 and 27.04.2016 has been tested. As a result of the analysis, it was found that there was a statistically significant change. Accordingly, the intervention is successful.

**Event 6:** The effectiveness of the 6-day intervention of the CBRT to prevent the depreciation of TL in the period of 10.01.2017-18.01.2017 was tested. As a

result of the analysis, it was found that there was a statistically significant change. Accordingly, the intervention is successful.

#### **4. Conclusion**

Interventions by the monetary authority to ensure exchange rate stability are controversial in terms of application, use, and effectiveness. Many studies on the effectiveness of exchange rate interventions give different results. In addition to studies that found that central bank interventions had a positive effect on the level of exchange rates and reduced the volatility of exchange rates, there were studies that found that they did not have the desired effect on the level of exchange rates and increased their volatility, or had the opposite effect. In developing countries, excessive movements in exchange rates can have negative effects on economies. In this context, when compared to developed countries, central banks in developing countries intervene more intensively in foreign exchange markets in order to minimize the negative effects of excessive movements in exchange rates, keep the exchange rates at the desired level, and suppress the volatility of the exchange rates. However, interventions by central banks in the foreign exchange market can be costly. Because the central bank uses its limited amount of foreign exchange reserves while intervening in the foreign exchange market. Therefore, the effectiveness of exchange rate interventions is extremely important for emerging markets. In the light of this policy reality, the effectiveness of the CBRT's auctions and direct selling interventions in foreign exchange markets has been empirically investigated. The findings obtained as a result of the analysis show that the CBRT's bid selling and direct selling interventions generally exert positive pressure on the level of exchange rates. In other words, it can be argued that the CBRT successfully balanced the excessive movements in the foreign exchange markets in the relevant periods. Thus, the fact that the CBRT makes its presence felt in the market as a stabilizing factor in periods of extreme movements in the foreign exchange market within the framework of the floating exchange rate regime is perceived positively by market agents. In the context of these results, in cases where the CBRT aims to affect the level of exchange rates, it may intervene less frequently but with larger amounts.

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## Chapter 21

# The Effects of Military Expenditures on Economic Growth Bounds Test Approach for the Case of Ukraine

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## 1. INTRODUCTION

Military expenditures are a share of national income to maintain the national assets and futures of countries. According to Adam Smith, the primary duty of a state was to protect the country from outside attacks. However, with a certain amount of public expenditure, it is possible to maintain or increase the existing power of this military power. Today, countries are constantly improving their national defenses with new technologies in order to dominate the world. This technological advancement is directly proportional to the proportion of a country's income allocated to military expenditures. However, the effects of military expenditures on economic growth may be different. The first study on military expenditures and growth was analyzed in Benoit (1973). Benoit concluded that there is a positive relationship between military expenditures and growth in a sample of 44 LDCs. Later, Smith (1980), Faini et al. (1984), Biswas (1986), and Atesoglu Mueller (1990) made important studies on this subject. Chowdhury (1991) tested the relationship between military expenditures and growth by applying the Granger Causality Test to 55 Developing Countries between 1961 and 1987, and the effects of variables differing from country to country were found. Batchelor et al. (2000) investigated the relationship between military expenditures and economic growth for South Africa in the 1965–1995 period using the ARDL boundary test method, and no significant relationship was found between the two variables. Payne and Ross (1992) examined the relationship between military expenditures and economic performance for the USA between the years 1960 and 1980 using the VAR model, and as a result of the study, no relationship was found between the variables. Yildirim and Ocal (2006) applied the Toda-Yamamoto causality test to India and Pakistan. As a result of this study, no causality could be found between economic growth and military expenditures for Pakistan, while a causality from military expenditures to economic growth was found for India.

Ukraine's conflicts with Russia since 2014 turned into a serious war with Russia's declaration of operation on February 24, 2022. The war caused very serious problems on the world economies. According to the IMF World Economic Outlook April report, it was estimated that the Ukrainian economy will shrink by 34% and the Russian economy by 8.5% in 2022 due to the war and crisis, while the global growth forecast was reduced from 4.4% to 3.6%. The World Trade Organization reduced the global trade growth rate, which was estimated as 4.7% for 2022, to 3% due to the war.

Due to this war affecting world trade and economies, the study aims to analyze the effects of Ukraine's defense expenditures on economic growth between 1993 and 2020. In the study, income, military expenditures, and trade

openness variables were used, and possible short- and long-term relationships between these variables were to be estimated by applying the ARDL model and Granger (1988) causality tests.

## 2. LITERATURE REVIEW

The researches devoted to investigate the military expenditures (military expenditures)-income (economic) growth relationship are shown in detail in Table 1.

**Table 1.** Literature Review

Research	Period	Frequency	Sample	Method(s)	Findings
Wijeweera and Webb, 2011	1988-2007	Yearly	India, Pakistan, Nepal, Sri Lanka, Bangladesh	Panel co-integration	Military expenditure has positive impact on GDP.
Farzanegan, 2012	1959-2007	Yearly	Iran	Impulse Response, VAR	Military expenditure has positive impact on GDP.
Na and Bo, 2013	1990-2006	Yearly	Bangladesh, India, Pakistan, Nepal, Sri Lanka	Panel Regression	Military expenditure has negative impact on GDP.
Menla Ali and Dimitraki, 2014	1953-2010	Yearly	China	OLS, Markov-Switching	Military expenditure has positive effect during slower growth and negative effect faster growth
Aziz and Asadullah, 2017	1990-2013	Yearly	70 Developing Countries	Pooled OLS, fixed effects, random effects and GMM	Military expenditure has negative impact on GDP.
Ajmair et al., 2018	1990-2015	Yearly	Pakistan	ARDL	In short run, military expenditure has positive impact on GDP.
Su et al., 2018	1995-2014	Yearly	China	Time-Varying Causality	Military expenditure has positive impact on GDP.

Raju and Ahmed, 2019	1980-2017 (India), 1989-2017 (Pakistan), 1989-2017 (China)	Yearly	India, Pakistan, China	Engle-Ganger Cointegration , Ganger Causality	In long run, military expenditure has positive impact on GDP
Sokhatskyi et al., 2020	2010-2017	Yearly	Ukraine, Georgia, Algeria	Panel Regression	Military expenditure has negative impact on GDP.
Maher and Zhao, 2021	1982-2018	Yearly	Egypt	ARDL	Military expenditure has negative impact on GDP.

### 3. MODEL, DATA,METHODOLOGY and FINDINGS

#### 3.1. Model

To examine the linkamongmilitary expenditures, income and tradein Ukraine the modelwhich is given in Eq.(1)is used. Here, Y is income, M is military expenditures, O is trade openness, and t is the time period.

$$Y_t = f(M_t, O_t) \tag{1}$$

The logarithmic form of Eq. (1)is shownwith Eq.(2)

$$y_t = \alpha_{0a} + \alpha_{1a}m_t + \alpha_{2a}o_t + \epsilon_{0t} \tag{2}$$

where y,m, and oshows the natural logarithms of income, military expenditures, and trade openness, respectively.

#### 3.2. Data

To find out the potential relationship among the time series in question, annual data for income, military expenditures and trade openness for the period 1993-2020 is used for the case of Ukraine. Income is proxied with constant GDP per capita in US dollars (2015=100) and constant military expenditures per capita in US dollars which is calculated by the authors by using military expenditures (% of GDP) and population data is used to representmilitary expenditures, and constant trade volume per capita in US dollars which is calculated by the authors by using trade (% of GDP) and population data is used as a proxy for trade openness. All the data is retrieved from the WDI database.

#### 3.3. Econometric Methodology and Findings

To decide the best fitting econometric technique for the data set in question the below steps are followed.

### 3.3.1. Stationarity Tests

Augmented Dickey-Fuller (ADF) [Dickey and Fuller (1979)] test is used to find out the integration characteristic of the series. Additionally, Phillips Perron (PP) [Perron (1989)] test is also employed to serve the same purpose. The outcomes of the stationarity tests are proposed in Table 2.

**Table 2.** ADF and PP Test Outcomes

Variable	ADF <sup>a</sup>		PP <sup>b</sup>	
	C	C&T	C	C&T
<i>y</i>	-1.75 (1)	-3.13 (6)	-1.32 (2)	-2.69 (3)
$\Delta y$	-3.92*** (0)	-3.61** (0)	-4.01*** (4)	-3.82** (6)
<i>m</i>	-4.21*** (0)	-7.34*** (0)	-3.95*** (2)	-6.38*** (2)
$\Delta m$	n/a	n/a	n/a	n/a
<i>o</i>	-1.37 (3)	-3.98** (2)	-4.24*** (10)	-6.34*** (22)
$\Delta o$	-7.33*** (2)	n/a	n/a	n/a

<sup>a</sup> Maximum lag length for ADF unit root test is 6 lags and optimal lag length is determined by using Akaike Information Criterion (AIC) [Akaike (1973), Akaike (1998)]. The values in parentheses are the chosen lag lengths.

<sup>b</sup> Bartlett kernel [Bartlett (1948) and Bartlett (1950)] is used as the spectral estimation method and Newey-West Bandwidth [Newey and West (1986)] is used as the bandwidth for PP unit root test. The values in parentheses are the chosen lag lengths.

\*\*\*, \*\*, \* represent statistical significance at 1%, 5%, and 10% levels, respectively

Above mentioned outcomes suggested that *y* and *m* are stationary in their first differences and *o* is also first-difference stationary according to ADF test which only includes constant. However, *o* is found to be level stationary for the remaining test findings.

### 3.3.2. Methodology

Although stationarity test findings produced conflicting results, the dependent variable is *I* (1), and none of the variables are second or higher difference stationary. Therefore, ARDL co-integration technique introduced by Pesaran and Pesaran (1997), Pesaran and Smith (1998), Pesaran and Shin (1999), and Pesaran and others (2001) is employed.

### 3.3.3. Appropriate Lag Length of the ARDL Model

Unrestricted Error Correction Model (UECM) for Eq.(2) is shown in with (3).

$$\Delta y_t = \alpha_{0b} + \sum_{i=1}^{c_1} \alpha_{1b} \Delta y_{t-i} + \sum_{i=0}^{c_2} \alpha_{2b} \Delta m_{t-i} + \sum_{i=0}^{c_3} \alpha_{3b} \Delta o_{t-i} + \beta_{1b} y_{t-1} + \beta_{2b} m_{t-1} + \beta_{3b} o_{t-1} + \epsilon_{1t} \quad (3)$$

where,  $\Delta$  is difference operator, and  $c$ 's are maximum lag lengths.

By using AIC, the best fitting ARDL model is decided to be the ARDL (1,1,3) model.

### 3.3.4. Co-integration Test

The boundtest findings of ARDL (1,1,3) model which revealed that there exists a co-integration relationship among the series, since calculated  $F$  statistics is greater than the upper-bound at 1% statistical significance level, and calculated  $t$  statistics is higher than the upper-bound at 5% statistical significance level are given in Table 3.

**Table 3.** Bounds Test Findings

Test	Calculated Test Statistic	Lower-bound Value (1%)	Upper-bound Value (1%)
F	26.94***	6.18	7.87
Test	Calculated Test Statistic	Lower-bound Value (5%)	Upper-bound Value (5%)
F	-3.92**	-3.43	-4.10

\*\*\*, and \*\* represents statistical significance 1%, and 5% level.

### 3.3.5. Short and Long Run Findings of the ARDL Model

Significant statistics, coefficient estimations and diagnostic test results for ARDL (1,1,3) model are shown in Table 4.

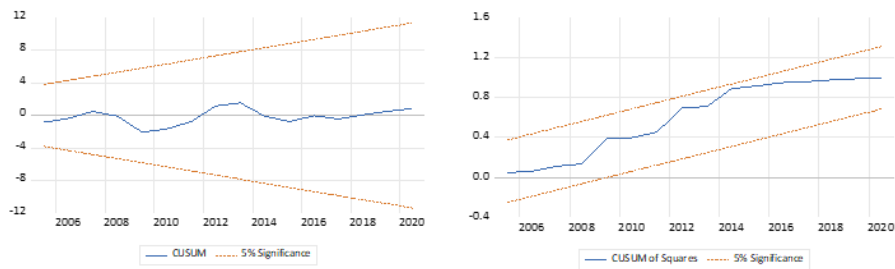


**Table 4.** Estimations of the ARDL (1,1,3) Model

Long Run			
Variable	Coefficient	t-statistics	p-value
m	1.17***	5.05	0.00
o	10.78***	3.94	0.00
Diagnostic Tests			
Test	Test Statistic	Test	Test Statistic
$\chi^2_N$	0.06 (0.96)	$\chi^2_{HS}$	1.23 (0.27)
$\chi^2_{Sc}$	0.13 (0.71)	$\chi^2_{MM}$	1.55 (0.14)
Short Run ECM Model			
Variablee	Coefficient	t-statistics	p-value
C	0.45***	9.94	0.00
$\Delta m_t$	-0.02	-0.49	0.62
$\Delta o_t$	0.61***	9.92	0.00
$\Delta o_{t-1}$	-0.68***	-7.24	0.00
$\Delta o_{t-2}$	-0.28***	-4.63	0.00
$\gamma_1$	-0.14***	-9.53	0.00
Important Statistics for the Short Run ECM Model			
$\overline{R}^2$	0.82	F	23.04*** (0.00)
RSS	0.01	DW	1.75

\*\*\*, \*\* and \* represents statistical significance at 1%, 5% and 10% levels, respectively.

The stability of the parameters for ARDL (1,1,3) model is checked with the help CUSUM and CUSUMSQ tests as well. Findings of the CUSUM and CUSUMSQ tests are represented in Figure 1.



**Figure 1.** CUSUM and CUSUMSQ Test Findings

The results presented with Table 4 revealed that ARDL (1,1,3) model does not have any problems regarding normality, serial correlation, heteroskedasticity, and model misspecification where Jarque-Bera ( $\chi^2_N$ ), Breusch-Godfrey LM ( $\chi^2_{SC}$ ), ARCH ( $\chi^2_{HS}$ ), Ramsey RESET ( $\chi^2_{MM}$ ) statistics are used to test the relevant diagnostic issue. respectively nor parameter stability problems. Moreover, CUSUM and CUSUM square graphs also showed that the parameters of the model are stable.

According to the long run coefficient estimations, it is found that 1% change in per capita military expenditure will cause a 1.17% change in per capita GDP within the same direction. It is also revealed that 1% percentage change in per capita trade volume will lead to 10.78% change in per capita GDP within the same direction as well.

On the other hand, 14% of the disequilibrium will be adjusting back to the long run equilibrium based on the findings of the short-run ECM model where one period lagged error correction term's coefficient is estimated as  $\gamma_1 = -0.14$ .

#### 4. CONCLUSION and POLICY IMPLICATIONS

This study attempted to uncover the relationship between military expenditures and economic growth for Ukraine where the trade openness is used as a control variable. For this purpose, cointegration test method based upon ARDL approach is employed.

The findings of the study indicate that, in the long run, there is a statistically significant and positive connection between both military expenditures and economic growth, and trade openness and economic growth. Therefore, Ukrainian authorities who are responsible for the designation of economic growth policies should take into account the fact that defense and international economics policies will be affecting the growth rate of the country. Thus, to boost the economic growth in Ukraine, a policy combination in which per capita military expenditures are increased and per capita trade volume is raised is needed.

On the other hand, since the adjustment coefficient ( $\gamma_1 = -0.14$ ) is found to be close to zero rather than -1 which points out a relatively slow adjustment process, Ukrainian policy makers need to be cautious about deviations which may occur in the short run to maintain a stable long run equilibrium.

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## **Chapter 22**

# **Absorptive Capacity, Learning and Emotional Capability in the Context of Organizational Culture**

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## INTRODUCTION

Organizational culture is defined as the following: “...the pattern of values and ideas that shape human behavior in organizations, likely affect the understanding and attitudes important in the successful application of knowledge” (Cohen & Levinthal, 1990 also cited in Harrington & Guimaraes, 2005: 1). Accordingly, culture dominates the critical functions and alerts of the organization. As a leading theorist, Schein (1985) defines culture “...as a set of shared, implicit assumptions among a group that determines how it perceives, thinks, and responds to its various environments” (cited in Salk & Schneider, 2009 :72).

Organizational culture is an intangible concept that differentiates itself from climate in that it has an anthropological influence. From the organizational learning perspective, culture is much more composed from the policies, beliefs, activities, and rituals, thereby defining it as the “personality” of organizations. As a result, culture can encourage learning, creativity, etc., and in fact, help from culture can be taken for encouragement within an organization (Bellot, 2011; Ndinya, 2010). For this reason, culture belongs to the organization and is a critical element for the organization. Since the culture varies according to the internal dynamics of the organizations, it has a duty to regulate the behavior of its members (Elmer & Kilpatrick, 2008).

In the early 2000s, due to the influence of studies on the psychosocial effects of organizational change, emotional capability started to be discussed within an organizational context throughout the literature. In addition, with the spread of positive psychology in organizational literature, a growing emphasis on the internal capabilities of the organization began to outweigh focusing on the social position and tactics of the enterprises for competition. Researchers on organizational change argue that change, especially in radical dimensions, is based on micro-cognitive processes at the individual and group level. Much has been written on the subject, for example Walsh (1995), Huy (1999a) are among those who emphasize the need to know more about the social and emotional bases of change. This issue was first mentioned by Jack Welch regarding negative experiences in practice. As he stated, he faced problems not because he thought that emotions were less important than rational calculations, but because he did not know how to deal with these emotions. Moreover, it has been seen that most institutions not only ignore the emotional element but also prohibit negative emotions on the grounds that they are not rational and harm the business (Huy, 1999b). These handicaps in practice, and the gap in the literature, were first addressed by Huy in his studies in 1999.

As stated by Smollan & Sayers (2009), organizational culture, organizational change, and emotions are related: Organizational change impacts emotions,



with some possessing resistance to change and thus exhibiting negative emotions, while others favored change and showed positive emotions. Indeed, organizational culture is based on emotions, with cultural change being particularly emotional. Additionally, an organization's affective culture influences the way emotions are experienced and expressed. Finally, the factors related to the culture, whether the employee is satisfied or not, are also important factors in determining how they will respond to the emotional changes

Culture not only affects emotions but also dynamic capabilities and has a structure that supports and shapes them. Within the scope of the study, the variable of absorptive capacity in organizations is discussed in order to emphasize the relationship between culture and organizational capabilities. The reasoning for this focus, as Eisenhardt and Martin (2000) stated, lies in the absorptive capacity, a higher-order capability that has an important role in the development of other competences and capabilities.

In addition to these, through information and communication channels, organizational culture has an impact on the absorptive capacity. This is particularly true because organizational culture has a decisive role on an organization's learning tendency, communication style, or resistance to policy changes- within the influence of the values and norms of that organization (Antal, Dierkes & Hahner, 1997). Moreover, absorptive capacity is studied within several organizational capabilities in the literature, and as explained in the related section, learning capability and absorptive capacity are found to have a significant relationship (exp. Liao et al.,2009).

As summarized above, although there are studies in the literature on the relationship between organizational culture and competencies and capabilities, there are very few studies in which emotional and dynamic capabilities are discussed together. Within the scope of this study, and by discussing the findings of previous studies it is aimed to reveal the role of organizational culture on capabilities and competencies and any causality that might exist among them.

After the introductory section, the theoretical background is discussed in four parts. In the first part, emotional capability is defined, and leading studies are summarized. The second part focuses on absorptive capacity, and in the third part organizational learning is explained. In the fourth part, the relationship among organizational culture, emotional capability, learning capability, and absorptive capacity is explained. The study concludes by giving recommendations to theoretical studies and practitioners.

## **1. Conceptual Framework of Emotional Capability**

Emotional capability is defined as the ability of individuals to perceive, reach, and develop emotions in order to support their thoughts, and to encourage emotional and intellectual development. As well, emotional capability impacts an individuals' ability to understand their emotions (and information about emotions) and to regulate emotions in a way that reflects to others (Mayer & Salovey, 1997). It is stated in the organizational behavior and management literature that emotions can be attributed to organizations as well as individuals. Druskat & Wolff (2001) used a similarly defined concept as "group emotional intelligence". Huy is the theorist who took the components of the concept of emotional capability holistically, defining "emotional capability" for the first time. Reus & Liu (2004) stated that a similar concept was defined in the aforementioned studies, and the distinction between them was dimensioned in Huy's studies, removing the boundaries between the individual and the organizational level and providing a bridge between the micro perspective and the macro perspective. Therefore, Huy provides the basis for the literature on emotional capability. According to him, organizational emotional capability is noticing, understanding, monitoring, regulating, and using the emotions of the members of an organization while also presenting them in the emotional routines and norms of the organization. According to Huy, these routines reflect organizational behaviors, such as expressing and activating emotional states (Huy, 1999a).

Huy (1999a) discussed the interaction of strategic activities and emotions in his work and explains the emotional foundations that support radical change with three dynamics that he models: 1- receptivity, 2- mobilization and 3- learning. He also argued that emotional capability is a requirement for businesses to realize radical change, but emotional capability alone is not sufficient to realize change. In the study, emotional intelligence, radical change, and emotional capability were defined, and emotional capability was explained by six dynamics.

The six dynamics that constitute Huy's emotional capabilities are summarized in table 1. The behaviors mentioned in the definition of emotional capability are called emotional dynamics, and emotional states that are expressed or activated by six dynamics are also expressed in the second part of the table. The first three are focused on others, and the remainder are focused on the individual himself. Huy also stated that these dynamics reflect the behaviors of people with high emotional capability, and that there is a relative isomorphism between the individual and organizational levels. In addition, Huy argues that emotional capability, unlike emotional intelligence, is not a partly innate feature but can be developed later. And there is no need for many people with high emotional intelligence when people can be influenced by each other (Huy, 1999a).

**Table 1. Emotional Dynamics and Emotional States**

	<b>Emotional Dynamics (Organizational Level Behaviors)</b>	<b>Emotional States (Individual Level)</b>
1	Encouragement: The ability to instill hope in all employees of the organization.	Activating hope
2	Displaying Freedom.: Facilitating the expression of true emotions felt.	Activating real emotions
3	Playfulness: Encouraging experimentation and tolerance for mistakes.	Activate the sense of fun
4	Experiencing: Understanding the emotions of others.	Expression of empathy
5	Reconciling: Reconciling different ideas, managing conflicts.	Expression of sympathy
6	Identification: A commitment to organizational characteristics that encompass core values and beliefs.	Expression of love

Until Huy's study, few studies have been conducted on emotions in the organizational context and its effect on macro phenomena. In this study, the focused on the relationship between micro-theories of emotion and organizational behavior at the macro-strategy level, and additionally, how macro-effects and micro-powers result are presented (Huy, 1999a). The study explained the connection between micro and macro mentioned variables with its models, and in this sense, a multi-level theory was put forward. He stated that the dimensions of feeling, reconciliation, encouragement, freedom and tolerance have a direct proportional relationship for radical change, while the dimension of definition is not a requirement for radical change and shows an inversely proportional relationship when it does. In addition to these, he identified four key organizational skills for change in relation to the dimensions he defined for practitioners: 1) empathy, 2) sympathy 3) encouragement and 4) displaying emotions instead of the other two dimensions (Huy, 1999b).

First of all, Akgün et al. (2007) used the dimensions in their study in the modeling of the mentioned relationship: managerial commitment, systems perspective, openness and experimentation, knowledge transfer, and integration dimensions. Openness and experimentation from four dimensions of learning capability- with a tolerance dimension of emotional capability. Since managerial commitment is similar to the encouragement dimension, the remaining four dimensions of emotional capability are discussed. Based on all these, a scale was developed for emotional capability, which includes four dimensions (display freedom, identification, experiencing, reconciliation) within the scope of

the study. Akgün et al. (2008) developed a 5-point Likert scale by adapting the six dimensions of emotional capability from Huy's 1999a study.

Another study, which makes important contributions to the literature, was published by Reus and Liu in 2004. The performance of organizations is directly linked to the performance of knowledge-based workgroups. It was made with the view that the development of individuals' skills is important for the organization, and that these skills can be possible with integration within the group in order to create added value in organizations. The importance of cooperation and developing different ideas, especially in knowledge-based working groups, was emphasized. Based on the idea that the way to create the added value mentioned in knowledge-based workgroups depends on the emotional capability of the organization, Reus and Liu developed the theory of affective events with a model that includes the role of emotions in knowledge-based workgroups (Reus & Liu, 2004). The emotional capability in this model was defined based on Huy's definition and dimensions.

According to Reus and Liu (2004), social integration, upheavals that affect the workgroup environment will lead to the occurrence of many events that reveal emotions among group members; moreover, social integration also mediates the transmission of emotions to each other. This shows that emotional capability or processes, such as identifying and regulating the emotions of group members, are a critical element in knowledge-based workgroups (Related studies generally include cognitive and behavioral propositions in explaining the success of such groups). The effect of emotions in this sense has been studied recently (Kelly & Barsade, 2001). And, it has been determined that the beginning of many emotions is social interaction (Waldron, 2000). Emotions are an element that reveals behaviors that are beneficial or harmful to the firm, and these interactions are directly effective in the performance of knowledge-based workgroups. The study, which deals with emotional capability in this context, modeled cognitive and emotional factors in the performance of knowledge combination and knowledge-based study groups, and considered emotional capability as an important group-level variable in explaining performance.

Reus and Liu (2004) explained this situation with the theory of affective events. Social integration within the group- and confusion and uncertainty in the external environment- increase with the increase of events that reveal emotions. In environments where these events occur, group members have more common undesirable emotions; on the other hand, as social interaction between group members increase, the transfer of emotions to each other also increases. The transition of emotions between members has an accelerating effect in the events that govern emotions. Emotional capability, on the other hand, is positioned in

this process as the ability to identify and regulate the emotions of the members of the group. In groups with high emotional capability, they more effectively identify and regulate events that reveal emotions, cognitive approaches, and emotional expressions of group members. According to situational needs, the transition of unwanted emotions is encouraged by group interaction. Groups with high emotional capability more easily feel positive and negative emotions among their members.

Based on the theory of affective events, Reus and Liu (2004) revealed that emotional capability is a factor that affects performance at the group level. Groups develop work norms and routines related to behavior patterns in order to manage their emotions. The effectiveness of emotional capability in defining and regulating emotions has been explained in the following ways: identification of emotions, the group's ability to detect and discern emotions, and to understand the emotions of the members impacts how individuals care about the emotions of the members. Regulation of emotions, on the other hand, is an effort to consciously and unconsciously manage the emotions felt and expressed by members. In this way, emotions can be channeled in a way that facilitates intellectual work performance. The role of emotional capability is to facilitate the identification of events that reveal emotions, to direct the cognitive processes of members to nurture functional emotions in the workplace, and to direct the transition of emotions to each other in a way that brings functional emotions to the forefront *for* the business. Emotional capability can enhance members' development towards knowledge integration by promoting functional emotions rather than only focusing on the transfer of positive emotions (Reus & Liu, 2004).

Also, leading studies of Akgün et al. (2007, 2008, 2009) have important contributions within their operational analysis findings. In the following years, both theoretical and empirical studies have continued to prove the importance of emotional capability, not only in the individual but also in the organizational context, and Khalil & Mehmood (2018) discussed the connection among emotional capability, organizational learning, and innovativeness. Recent studies also investigated the link between emotional capability, innovation performance (Sun, Li & Liu, 2022), and absorptive capacity (Arias-Pérez, Alegre & Villar, 2019). Some others, for instance, Li et al. (2022) focused on the scope of human resource management. Studies show that emotional capability in the organizational context is an important resource for the competitiveness and sustainability of organizations. In the following sections, absorptive capacity and learning capability is defined in the scope of related studies, and then connections among concepts will be discussed in the fourth section.

## 2. Conceptual Framework of Absorptive Capacity

Absorptive capacity is a dynamic capability that creates competitive advantage and is studied in various contexts. For instance, according to Lane and Lubatkin (1998), absorptive capacity is relative and a dyad level construct, while Zahra and George (2002) accepted the sum of routine and processes of the organization. Since the absorptive capacity is accepted as a dynamic capacity, it should be considered as the potential (acquisition and assimilation of information) and the actual (transformation and exploitation) absorptive capacity, which, as stated in multiple studies (exp. Jones, 2009), produces the desired organizational outputs and is decisive for the organization to achieve a competitive advantage).

Cassiman and Veugelers (2000) defined two dimensions: (1) the ability to identify the market for technology and (2) the ability to absorb the technology acquired (cited in Spithoven, Clarysse, & Knockaert, 2010). However, absorptive capacity is a tacit and complex construct, and thus, very difficult to measure. Nieto & Quevedo (2005: 1152) generated four dimensions: “(1) *communication with the outside environment*, (2) *level of know-how and experience in the organization*, (3) *diversity and overlaps in the knowledge structure* and (4) *strategic positioning*”.

Cohen and Levinthal (1990: 128), leading scholars in this concept, defined absorptive capacity as “*a firm’s ability to recognize the value of new information, assimilate it, and apply it to commercial ends*”. They also stated that the absorptive capacity in organizations is not the sum of the absorptive capacity of the members of the organization but rather the result of interactions.

## 3. Conceptual Framework of Organizational Learning

According to Argyris (1977: 116), “*organizational learning is a process of detection and correction of error*”. While mistakes are seen as situations that prevent learning, single loop learning occurs when processes mediate action towards sustainability and goals. Again, as exemplified by Argyris (1977), this situation is similar to a thermostat that detects hot and cold, turning the heat on and off according to the situation, just like an employee who can receive work-related information and take corrective action. However, learning at a higher level to question the underlying goals and policies of the organization is seen as double loop learning. It is often implicit because there are structures that prevent this in organizations. In other words, the change in expected and obtained outputs, regardless of whether it is at the level of an individual, group or organization, is determinative for the measures and behavior patterns to be taken at the

next stage. In double-loop learning, the value, assumptions, or policies that cause it- rather than the consequences of the behavior- are taken into account. It is the process of obtaining information about single-loop learning. In their later work, Argyris and Schön (1978) proposed the first model to explain organizational learning, and later models were created based on this structure (cited in Elkjaer & Wahlgren, 2005).

Jones (2009) indicates that the new information obtained through organizational learning is turned into the knowledge of the organization. In other words, it is individual knowledge in its raw form, but it becomes organizational knowledge as it is included in the procedures and processes in the organization. In this sense, it is related to the flow of information between individuals. Therefore, as Huber (1991) states, it increases dependence on the interaction and experience- sharing among individuals. Such communication is not necessary in individual learning. According to him, organizational learning occurs with four structures: knowledge acquisition, knowledge distribution, knowledge interpretation and organizational memory. In addition, Huber explains that learning need not be conscious or deliberate, and in fact, learning does not always increase student effectiveness or even potential effectiveness. He also stated that the behavioral change revealed by learning is not always observable.

While Weick (1991) stated that learning occurs as a result of giving different responses to the same stimulus, he also stated that this is not the case in organizational learning. Taking it further, he stated that organizations do not learn in traditional ways, and that there are structures designed to give the same response to the same situation as the procedures. Therefore, learning in the organization takes place at the point where the members of the organization give the same reactions to the same situation.

Kim (1993), integrates the leading learning models such as Argyris&Schön, March & Olsen and Kofman and proposed a single comprehensive model. Further, in the model he explains the possible information losses and failures in organizational learning. Moreover, Flood (1999) discusses the concept of organizational learning from Peter Senge and the origins of the theory from Argyris and Schön. The author aims to "re-think" Senge's (1990) *The Fifth Discipline* through systems theory. In contrast, Senge's dimensions (systems thinking, personal mastery, shared vision, team learning and mental models) are core disciplines or capacities of organizational learning. And the author develops it in the light of leading theorists such as Bertalanffy, Churchman, Beer, Checkland and Ackoff the author provides contributions to Senge's model, taking into account the effects of the next period for learning (Vasenska, 2013).

Nonaka and Takeuchi (1995), another contributor to the literature, developed a four-stage model for organizational learning. Within the scope of this study, primarily the distinction between tacit knowledge and explicit knowledge is emphasized. While tactical knowledge is formed by people's own knowledge and experience, it should be transformed into explicit knowledge in order to be used in processes in the organization defined as externalization. They mentioned that socialization (sharing tacit knowledge) and combination (dissemination of coded knowledge) processes are used for this purpose. On the contrary, though, it is both the procedures and rules defined in the organization *or* the explicit knowledge internalization process, which is in the form of a sequential loop. Bontis, Crossan and Hulland (2002) contributed to the literature with models that explain organizational learning at both individual, team, and organizational levels.

#### **4. The Role of Culture on Absorptive capacity, Learning and Emotional Capability of Organizations**

Researchers working on the connections between organizational capabilities and capacities have focused on their relations with culture directly or indirectly, or at least have stated that capabilities can be supported by organizational culture. As explained below, the strong link between learning capability and absorbing capacity has been confirmed in many studies, and strong arguments have been presented in the literature for the intertwining of learning and culture, ultimately with learning culture. The least focused ability within the scope of these studies is emotional capability. However, studies support the connection with both theoretical and empirical findings; however, there was no study within the scope of a model similar to this study. Therefore, the connections between constructs, as well as their importance in terms of competitiveness and sustainability, have been revealed in related studies.

Schein (2004) explains the interaction of culture and emotion, while expressing that culture is about both its problems with the external environment and what is learned in the effort of integration. He states that this learning is a behavioral, cognitive, and emotional process and implies that emotional processes contribute to the development of culture with the emotional intensity of real historical experiences. Similarly, Smollan & Sayers (2009) explain the connection of culture and emotional capability with a theoretical example: Before the new CEO comes, a bureaucratic but employee-oriented organization transitions to a competitive culture with the new CEO, and the performance evaluation system focuses on the personal achievements of the employees. While the employees who are pro-of the old culture feel nervous and unhappy, the employees



who have positive thoughts about the new culture found this change exciting and motivating. Based on this, it can be simply explained that culture is a process that makes sense in the emotional dimension. Therefore, it is seen that culture encounters emotions, especially in the process of change, and positive consequences can be obtained if it responds correctly with decision makers. As Beyer and Nino (2001) have stated, culture both creates emotions and enables them to be expressed in socially accepted ways, and culture integrates the members to each other. In this way, if emotions are shared, it is possible to talk about organizational integrity, common assumptions, shared knowledge, and the experience to be brought to the organization.

Furthermore, the relationship of emotions with organizational learning is described by Huy (2005). Accordingly, free expression of emotions during a change period can reveal learning in change. Otherwise, burnout will be experienced, and learning will be adversely affected by this situation. Akgün et al. (2007) conducted an empirical study on 106 companies. In their study, they examined the effect of learning capability and emotional capability on product innovation and firm performance, based on the view that learning capability is an important factor in product innovation and that learning capability can be increased with emotional capability. Researchers examined sensory abilities and learning capabilities and the effects of these capabilities on product innovation and firm performance. They proved that the four dimensions of emotional capability have a strong relationship with the learning dimensions, and as a result, emotional capability affects the learning capabilities of firms. They concluded that emotional capability has an impact on product innovation through learning capability, and that product innovation positively affects company performance with the largest impact shown on the effect of learning capability and emotional capability.

Further, Akgün et al. (2008) examined the moderator effect of environmental dynamisms between the emotional capabilities and performances of firms in a comprehensive empirical study of 112 Turkish companies. The idea that forms the basis of this study is that the competitive advantage of firms can be explained by organizational capabilities and strengths rather than differences in industrial characteristics (as it has been predicted by most researchers). Technology, marketing, integration, and culture, which are internal capabilities of the organization, were seen as important variables in indicators such as the innovation and performance of the company. But, as Huy (1999a) stated, the effect of emotions cannot be ignored. It has been determined that Huy's six dynamics has a statistically significant effect on the financial performance and organizational effectiveness of companies. In addition, it has been determined

that the change in the industry, competition, and the consumer affect this relationship. Within the scope of this study, it was concluded that there is a significant relationship between organizational capabilities and performance, and important contributions are made to the resource-based approach. In particular, they point out that the consensus dynamic has a negative effect on firm performance under dynamic conditions. The firm's ability to bring together two opposing values, (and the ability of people to bridge their own feelings and those of others, and to appreciate the feelings of others while maintaining their own), affect the firm's performance and effectiveness in multiple ways: product brand mix, industry sales strategies, competitors' product brand mix, sales promotion strategies, consumer reduced product features, brands, price, and quality preferences. These findings showed that too much emotional sharing, compromising behavior, and actions that were not sufficiently job-oriented lowered desired business outcomes. This issue is quite complex as it is difficult to know customer needs, understand competitors' strategies, and recognize and predict changes in the industry.

In another study, Akgün et al. (2009) tested the relationship between emotional capability, innovation and firm performance with a sample of 163 Turkish firms. The relationship of six emotional capability dynamics (revealed in Huy's (1999a) study with firm innovativeness) was tested when investigating the hypotheses and the mediator effect of firm innovativeness between emotional capability and firm performance. How the relationship between firm innovativeness and emotional capability is shaped by environmental uncertainty has also been tested with the related hypotheses of the study. The results showed that emotional capability influences firm innovativeness, and it has been determined that through firm innovativeness the emotional capability of the firm affects the performance. Also, it has been seen that if the firm and management give enthusiasm, and that enthusiasm provides a cheerful environment in the workplace, it can enable them to express their feelings without suppression and, facilitates innovation. This situation enables them to change their work processes and their production methods. In addition, if it is difficult to understand customer needs and competitor strategies, there is a strong correlation between promotion and product innovation. In the sense dimension, the opposite is true. In low and high uncertainty situations, people are less successful in developing new products when they understand the emotions of others. However, if the uncertainty is moderate, understanding the emotions of others facilitates the innovative process. Contrary to the hypothesis, freedom affects product innovation in a U shape. From this view, it is possible to state that when uncertainty is at a moderate level, the ability of the firm to encourage people to

say all their ideas without fear decreases. However, expressing emotions easily in an environment of low-high uncertainty positively affects innovativeness. The results also show that environmental uncertainty does not moderate the relationship between emotional capability and process innovativeness. This result is not surprising. Having little knowledge about the environment affects product innovation, but process innovation is not affected by environmental uncertainty as it is about making the product and service more efficient. Findings indicate that emotional capability is not only related with organizational culture but also supports the desired organizational consequences, even as a vital tool for expected solutions.

In addition to these, the connection between absorptive capacity and learning has been thoroughly emphasized in the literature. The difference between experiential learning and absorptive capacity is primarily that a new way of doing a task becomes known using external knowledge (Jones, 2009). Therefore, it can be achieved by creating an environment conducive to the members of the organization to learn from each other. From this point of view, absorptive capacity is very closely related to learning capability. In other words, absorptive capacity can be expanded by increasing learning effort, and absorptive capacity is the sum of learning capability, problem solving skills and the capacity to create new knowledge. Therefore, it is about the transfer of information between units rather than making inferences about the external environment (Kim, 1998). Researchers stated that the same knowledge cannot result in an equal learning for every organization and that the level of learning is determined by the absorption capacity. In addition, it is seen in the studies that the absorptive capacities of the organizations depend on many variables and that the information types and organizational structure are important determinants. Organizational learning is also critical for organizational innovation. It supports creativity, enables the formation of new knowledge and ideas, and is critical in terms of being understandable and applicable for the members of the organization. But, for all of this to happen, the culture must also be supportive (García-Morales, Ruiz-Moreno & Llorens-Montes, 2007). Culture affects learning by shaping the interaction between employees, the knowledge shared, and their approach to new ideas (Salk & Schneider, 2009).

In their article Weick and Westley (1996), while describing organizations as a culture, they explain learning as an oxymoron. According to them, learning is a natural feature of culture. They explained this situation by talking about the implicit existence of knowledge in the three subsystems of culture (language, artifacts, and action routines). Similarly, by organizing the learning pattern and the increase in diversity, forgetting and a decrease in diversity are achieved.

Therefore, when order and disorder come together, learning takes place. Due to the strong connection between organizational learning and studies on culture, the concept of learning culture has become one of the frequently studied concepts in the literature. For example, Salk & Schneider (2009) mentioned the findings supporting the importance of learning culture in their studies. As well, accountability and valid knowledge were identified as important determinants of commitment to learning from the four learning values: accountability brings responsibility of action for members and there is acknowledgment of mistakes and lessons learned. On the other hand, valid knowledge has been identified as a dimension that shows a strong and negative relationship with learning.

Moreover, studies have also shown that culture is determinant on related constructs such as knowledge management (Chen & Hatzakis, 2008), absorptive capacity, and transfer performance (Lin, Tan, & Chang, 2002). Bjorkman, Stahl & Vaara (2007) stated that post-acquisition capability, social integration, potential absorptive capacity, and capability complementarity are affected by the impact of cultural differences. While related studies emphasize the delicate balance of innovation and absorptive processes, they stated that for a culture to be successful in innovative processes, it should focus on both external strategic advantages and the sustainability of the internal sociotechnical system. Also, it has been stated that a culture that is both flexible and focused on order will transform into a structure that takes both situations into account, and thus the capacity to absorb will be affected by this structure (do Carmo Caccia-Bava, Guimaraes & Harrington, 2006).

Additionally, researchers state that creating a successful learning culture is an important prerequisite in studies focusing on the importance of absorptive capacity for organizations. While shaping members on how to approach organizational interaction and technological developments through cultural elements, absorptive capacity focuses on the ability to implement innovations. Taken from this perspective, culture and absorptive capacity function as complements. Moreover, researchers note that group, developmental, and rational culture dimensions have led to the absorptive capacities of organizations, and it has been claimed that the aforementioned cultural dimensions are also effective on learning capability (Harrington & Guimaraes, 2005).

## CONCLUSION AND RECOMMENDATIONS

As a result, in the light of related literature, it is seen that it is necessary to focus on organizational capabilities for sustainable competitive advantage in organizations, and organizational culture is one of the most important instruments for companies. With this study, it is revealed that there are strong connections regarding the connection of organizational skills with culture.

However, the study is limited to theoretical findings. First of all, in future studies, it is necessary to explain the connections with empirical findings. Since discussions regarding the conceptual structure of competence and capabilities at the organizational level continue, and there are few studies on its measurement, it is recommended that research in this field should continue.

As stated in previous studies, the most important organizational capability is the absorptive capacity. In this way, the knowledge and experience revealed in the organization will become a part of the organization and will create value in organizational processes. For this reason, both the measurement of absorptive capacity, an important indicator for organizations and an umbrella for other capabilities, and the increase in academic findings on development will guide both the relevant literature and practitioners. Similarly learning capability, which is strongly due to absorptive capacity, will be developed and organizations will become learning organizations. In today's world, where organizational boundaries are blurred and virtual organizations and remote work are widespread, both transforming the experience into the knowledge of the organization and disseminating the learning culture are also equally important- especially in terms of maximum beneficitation from intellectual capital, which is the biggest actor in the areas of competitive advantage and sustainability.

In addition, understanding the emotions that have central importance in culture while building common emotions will both strengthen the culture and enable change to be achieved. For this reason, this study underlines once again that emotions should not be ignored in the organization. Future empirical studies should support the antecedents of emotional capability, its development pathways, and its contributions to the organization.

Comprehensive studies on how organizational capabilities will contribute to the context of the 'dollar effect' in the organization; in addition, training models to develop organizational skills will also contribute to the practitioners in terms of sustainable competition. For this reason, managers who are effective in strategic decisions in the organization should consider developing learning and emotional capability as one of their fundamental goals in order to increase the value of the organization and its coping skills.

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## **Chapter 23**

# **International Student Mobility in Tertiary Education: Causes and Consequences**

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## INTRODUCTION

As technology advances at an ever-increasing pace and the world becomes a global village, people have many opportunities for self-improvement that would have been unimaginable just a few decades ago. Some of these opportunities are in the field of education. Students today have an almost infinite number of opportunities to develop themselves, not only in their own countries but all over the world, and the mindset and courage to take advantage of them. This situation paves the way for short- and long-term exchange programs, internships, and training opportunities for both students and teachers in the field of education, as well as giving students the opportunity to continue their entire education in a foreign country. This opportunity is mostly used by university students. In other words, today, university students who realize the advantages of attending a school abroad mobilize all their means to take advantage of this opportunity and seek ways to go to countries where they can realize their dreams in the most effective way after their second education.

This study will focus on the causes and consequences of international student mobility and try to make predictions about the future of the movement. The study will start with the definition of the concepts related to the subject.

Although it is not easy to give a complete and clear definition of globalization, it can be expressed as the increase in communication and interaction between societies and states living in different parts of the world and becoming interdependent in the process of cross-border mutual economic integration and inclusion of national economies in world markets as a result of the increasing mobility of goods, services, and capital (Kıvılcım, 2019).

Internationalization is a concept that expresses the intensity of mutual exchange, relationship, and interaction between nations and cultures and is defined with different meanings in social, economic, cultural, pedagogical, etc. aspects.

In terms of education, it mostly refers to the mobility of students and teaching staff between countries. Education is one of the fields where internationalization is most evident, and higher education is the level of education where internationalization is most intensely on the agenda. Another concept that accompanies internationalization is globalization. Universities, which are also classified as global institutions, have achieved global status through the generation of universal knowledge and the mobility of students and academics. The level of globalization and internationalization of universities varies according to the opportunities and conditions of each period. However, in the 21st century, globalization has gained a different dimension with increasing competition in higher education and developments in technology (Er, 2022).

## INTERNATIONALIZATION IN HIGHER EDUCATION

According to YÖKAK (Yükseköğretim Kalite Kurulu), internationalization in higher education refers to the process of integrating an international or intercultural dimension into an institution's education, training, research and development, and community outreach functions. However, a one-size-fits-all or formulaic internationalization policy should not be sought. From this perspective, "internationalization policy" can be defined as the approach an institution follows in the process of integrating its education-training, research-development, and social contribution functions with an international approach. In order to start the internationalization process, the unit (program, department, faculty, or the whole university) to start internationalization should be identified, and the internationalization dimension (curriculum, student mobility, academic mobility, collaborations for research and development activities, or a combination of some of these) should be identified and prioritized (YÖKAK, 2019).

In fact, when the definitions of internationalization are examined, it is seen that this term encompasses not only the mobility of people but also the mobility of courses, programs, institutions, curricula, and projects (Bhandari et. al., 2018). In this context, the following models stand out (YÖKAK, 2019).

- academic partnership model, which includes practices such as developing joint programs and curricula,
- international campus model based on building a physical presence abroad,
- the import model of internationalization, which focuses on bringing students, researchers, and faculty from abroad, and
- export model of internationalization based on sending students, researchers, and faculty members abroad.

As the models indicate, both students and faculty members have the opportunity to participate in education in the country of their choice. So, when an institution determines its internationalization policy, some issues such as student mobility, academic mobility, the establishment of joint academic programs, and partnerships in research and development should be considered (YÖKAK, 2019).

Contrary to what first comes to mind when internationalization is mentioned, this study will only deal with the long-term mobility of students, not through any school but by their individual efforts, not in the short term but in the long term, encompassing their entire university life. Therefore, another term that needs to be defined is "mobile students," who are individuals carrying out all or part of their higher education experience in a country other than their home

country or who travel beyond national borders to carry out all or part of their higher education and training in a country different from their native country (Bhandari, et. al., 2018).

### **CAUSES OF INTERNATIONAL STUDENT MOBILITY**

There are various reasons why students may want to continue their higher education in a country other than their home country. Studies on this subject indicate that these reasons vary from country to country and from student to student.

In their study, Abbott and Siles (2015) showed that the income levels of countries have an impact on student flows and that students from low-income countries want to attend higher education institutions in high-income countries. It was also concluded that students who want to complete their higher education abroad are from economically disadvantaged countries. One factor that plays a role in students' choice of country is the language factor. Students prefer to go to countries that speak the language they speak. Another factor that plays a role in students' country choices is the distance factor. To summarize, the study found that while factors such as geographical proximity or speaking the same language are effective for students from low-income countries, their effect decreases for students from high-income countries. The time factor has a different effect. Students from both low- and high-income countries prefer to go to countries with a small time difference from their home countries (Abbott & Siles, 2015).

King and Songhi (2018) investigated students' reasons for choosing foreign countries for their university education and found that four factors were effective in this regard. These are:

- Attending a prestigious and respected university worldwide
- To have a good education that is internationally recognized and to be equipped to find a job easily all over the world.
- Having the idea that living abroad is a good adventure and wanting to take part in it.
- Family reasons: the family's desire to prepare a successful future for their children and to move up in social class by having their child study abroad; the student's family may have connections abroad or may have lived there for some time and has been exposed to its culture. In such a case, attending a foreign university may provide the student with the opportunity to migrate abroad.

King and Songhi (2018) found that there were four theoretical areas to be considered in international student mobility.

The first is to meet local labor needs with a highly qualified foreign workforce. This is actually a host country motivation that will form the basis for high-skilled migration, as in Canada and Australia.

Second, there are situations where the education provided at local universities does not meet the needs of students. In this case, either there is too much competition for quality education from local universities, meaning that the student is unlikely to receive a quality education in their home country, or the education they receive is not globally-recognized as quality. Sometimes there is no possibility for the student to study in the field of his or her choice in his or her home country. In such a situation, students turn abroad in search of quality higher education.

The third conceptual framework is that students see studying abroad as freedom to travel and "discover" different places and cultures. This is a desirable lifestyle characteristic for middle-class youth.

The fourth concept is that the ability to send one's child abroad for university education can, for some communities, make the family in question privileged and affluent. Although it is claimed that class distinctions are no longer an issue in modern society, in societies where access to higher education is a challenge, access to higher education abroad is a completely remote possibility, and its achievement is a factor that can increase the family's position in society (King & Songhi, 2018).

The reasons for mobility are further diversified in the study by Wintre et al.(2015), who identified eight main themes of motivation. They are: new challenges and opportunities; more contemporary and promising education; better future career and migration prospects; qualifications of the host country; organizational features; economic reasons; geographical location; and family and friends in the host country.

Using a model based on expectancy theory, Sanchez et al. (2008) examined the relationship between students' motivation and their intention to participate in study abroad programs. They compared students in China, France, and the US and found that if the barriers to getting into the university of their choice in their home country are too great to overcome, they try their luck in a foreign country, as Chinese students do. They also found that many students want to have a degree and learn a foreign language, which is possible if they study abroad.

They also found that students in the US or France are not as willing to go abroad for education as Chinese students are. They concluded that this may be because they have many opportunities to attend good schools in their home countries. If they prefer to study in another country, it is not because they want to go to better schools but because they want to gain experience. On the other

hand, barriers related to students' family, psychological, and financial situations are also very important to their intention to study abroad.

Considering the level of study of foreign university students in most OECD countries, the number of foreign students increases as the level increases, i.e., foreign students are more likely to study at the doctoral and master's levels. In 2020, an average of 7% of foreign students were enrolled at the undergraduate level across the OECD. However, in some countries, such as Australia, Austria, Luxembourg, and the UK, this figure was as high as 15%, while in most countries it was below 5% (OECD, 2022).

In terms of gender, the percentage of male students is slightly higher than the percentage of female students except in Belgium, Korea, and the Netherlands. However, in Australia and Latvia, the percentage of male students is 10% higher than that of female students. (Myers and Griffin, 2019) This difference was attributed to the fact that international students are mostly studying in the STEM (Science, Technology, Engineering, and Mathematics) field and that the students studying in this field are mostly male.

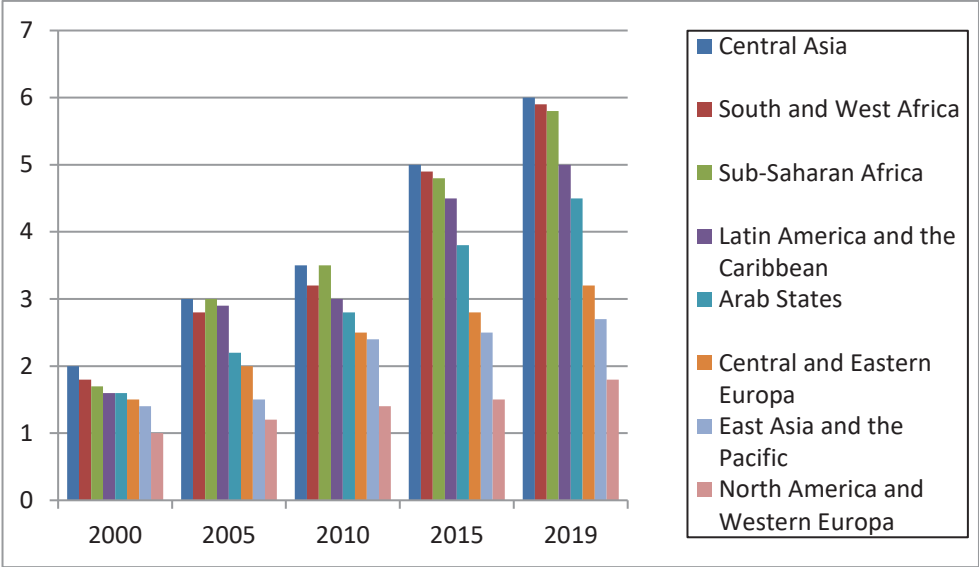
Apart from the reasons mentioned above, there are also some reasons created by the political or cultural situation in a country. For example, in some countries women are not allowed to attend the university of their choice. In such cases, they seek the opportunity to study abroad if they can afford it.

Another reason for educational mobility is war, which is perhaps the most important political reason. Today, schools are closed in countries that are at war, and students either flee to parts of the country that are not affected by the war, attend schools there, or migrate to other countries. Wars and internal turmoil have caused a significant amount of student mobility in recent years.

The number of students going abroad for higher education, the countries of origin and destination of these students vary from year to year. Figure 1 shows the number of international mobile students by host region between the years 2000 and 2019.



**Figure1. The Number of Mobile Students in the Last Two Decades.I**  
**InternTabIT**

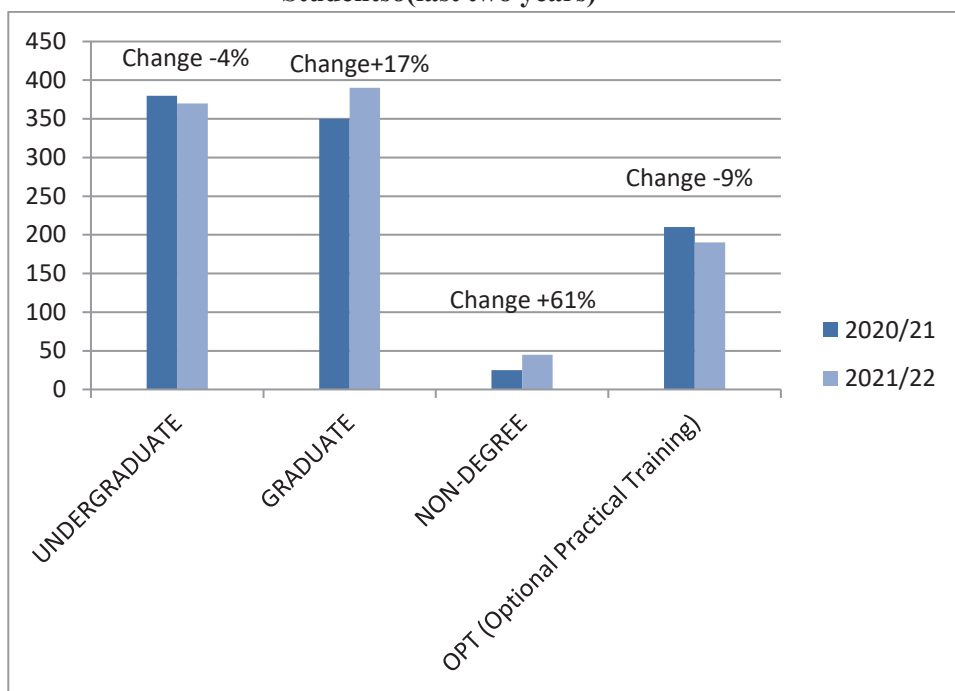


Source: UNESCO, 2022

Over the last two decades, the number of students pursuing tertiary education outside of their home country has nearly tripled. Central Asia has the highest number of tertiary students who go abroad for education. In 2019, there were more than 6 million tertiary international mobile students around the world. This is almost 3% of the total number of tertiary students. Almost half of the world's international mobile students were hosted in countries in North America and Western Europe in 2019 (UNESCO, 2022).

Figure 2 shows the academic level of international students. As the table shows, there is a 4% decrease in the number of undergraduate international students over the last two years. On the other hand, there is a 17% increase in the number of international students attending graduate-level courses and a 61% increase in the number of students attending non-degree courses. It is seen that the number of students taking optional practical training decreased by 9%.

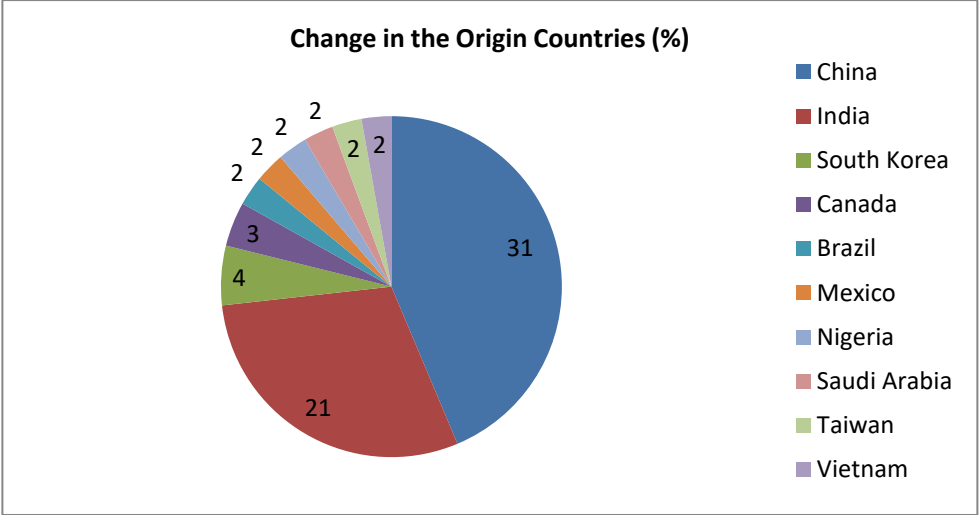
**Figure 2. A Comparison of the Academic Level of International Studentso(last two years)**



Source: UNESCO, 2022

As Figure 3 shows, the majority of international students come from China. That is, students from China make up 31% of the international students. Their total number is more than one million (UNESCO, 2022). China is followed by India with 21%, South Korea with 4%, and Canada with 3%. The remaining top countries with the highest number of students are Brazil, Mexico, Nigeria, Saudi Arabia, Taiwan, and Vietnam, all by 2%.

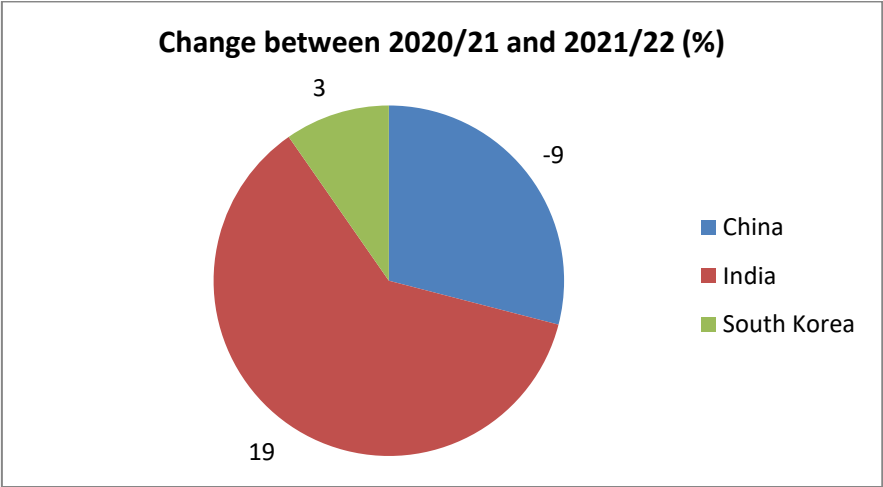
**Figure 3. Leading Places of Origin of International Students (2021/22)**



Source: The Open Doors Report(2022).

The number of students coming from leading countries regarding student mobility has changed in the 2021–2022 academic year. While the percentage of students from India increased by 19% and that from South Korea by 3%, those from China decreased by 9%, as Figure 4 shows.

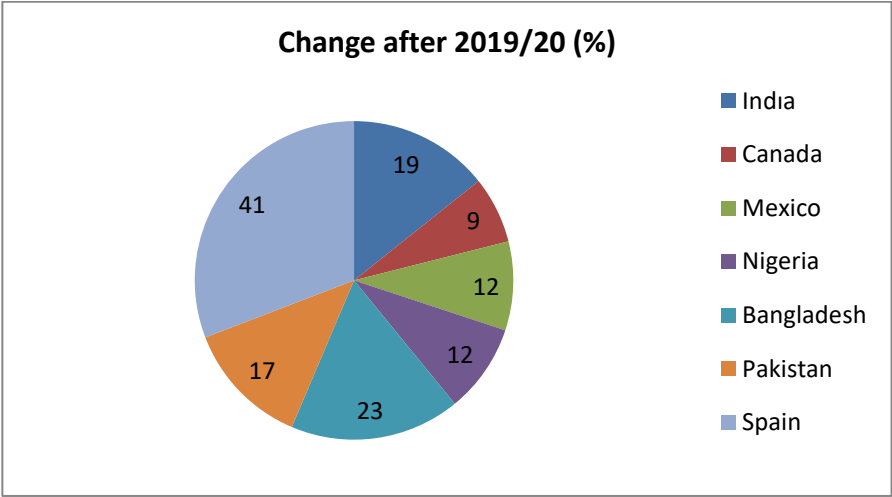
**Figure 4. Leading Places of Origin of International Students (as %)**



Source: The Open Doors Report(2022).

The number of international students from some countries exceeded the numbers reported in the pre-pandemic 2019–20 academic year. Of these countries, Spain was the country with the highest increase with 41%. It was followed by Bangladesh (23%), India (19%), Pakistan (17%), Nigeria and Mexico (12%) and Canada (7%). These percentages are shown in Figure 5.

**Figure 5. The Countries with a Change in the Percentage of International Students**



Source: The Open Doors Report(2022).

### CONSEQUENCES OF INTERNATIONAL STUDENT MOBILITY

Although internationalization and student mobility offer many benefits to students and society, there are also some risks and downsides (Knight, 2009). The consequences of international student mobility can be analyzed under two headings: positive and negative aspects.

#### Positive Aspects of International Student Mobility

Today, the international student market has reached a considerable size. Students not only stimulate the economy but are also seen by their host countries as contributors to their competitiveness since some countries are in competition with each other to attract international students. A study conducted in the UK showed that in the 2018–2019 academic year, 14 non-EU students provided the same economic return as 10 EU students (Halterback and Conlon, 2021). Their economic contribution is not only through the tuition fees they pay but also through other expenditures made by themselves and their families. They also increase employment through various demands, such as dormitories,

restaurants, and transportation, and contribute to the labor force with jobs they do to earn pocket money or gain experience in and out of the university (Levent, 2016).

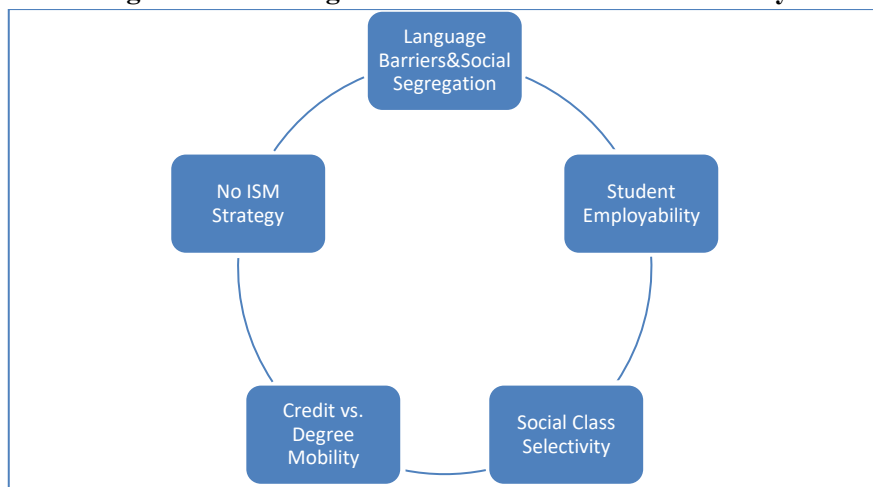
Most international students study in technical fields. Therefore, these students work in technology transfer offices or incubation centers at universities and contribute to the development of science (Guruz, 2011). They also have a perspective shaped by the cultures of both the countries they come from and the countries where they study, and thus they can have the ability to look at things from different perspectives, to recognize the unnoticed, and to be entrepreneurial. In this way, they can pave the way for new enterprises and revitalize the economy.

The internationalization of students provides them with a unique opportunity to experience cultural exchange. They have the opportunity to learn another language well, experience another culture, make friends not only from their home country but also from all over the world, and get to know their culture. This way, they not only improve themselves but also have the opportunity to find better jobs and work in better places. This is a benefit that is as valuable as what they get from education and training (Cosciug, 2013). They also have the opportunity to become part of a social and professional network that they will be members of for their entire lives (Wiers-Jenssen & Storen, 2021).

### **Negative Aspects of International Student Mobility**

International student mobility is a movement that started with the aim of enabling students who study in other countries for various reasons to improve themselves, return to their home countries, and serve the development of the country by putting what they have learned into practice in their home countries. However, host countries see the return of students to their countries as a loss of trained manpower, and in order to keep them, they try to prevent them from returning by offering attractive offers such as living and working conditions and research environments that they cannot find in their own countries. This situation leads to brain drain (Knight, 2009).

**Figure 6. Challenges of International Student Mobility**



Source: López-Duarte et.al., (2021)

López-Duarte et al. (2021), who analyzed international student mobility in the European arena, identified five challenges, as seen in Figure 6, which can be explained as follows:

Although this research was conducted in Europe and its results are limited to Europe, it can be considered that the results of the research can be generalized in our world, which is now a global village. While this may be true to some extent, it is important to bear in mind that regional, cultural, and social differences remain important.

In cases where a student participates in mobility for one or two semesters during his or her university life, there may be problems between the institution of origin and the institution of stay in terms of recognition of the modules studied, strict course organization, credit transfer, and non-consensual qualification evaluation. In some cases, there may even be program overlaps.

Although exchange programs aim to cover all students, they require the students to pay a certain amount of money. For this reason, it is not possible for students who do not have a good financial capacity to participate in student mobility programs. The scholarships provided by the institutions do not cover all expenses, which causes inequality of opportunity.

One of the goals of students who participate in mobility is to improve their employability. The education they receive and the language and intercultural skills they acquire increase their chances of finding a job. However, both the restrictions imposed on the work of citizens of other countries and the high employment requirements prevent students from finding and working after

graduation in some countries. In order to eliminate such problems, legal arrangements should be made. In addition, schools should update their curricula in line with the demands of the business world and make efforts to provide soft skills in addition to technical and vocational skills.

In some cases, especially when communication is difficult due to a lack of language skills, students find it difficult to communicate with local people and prefer to socialize with student groups at school. In these cases, they face problems in terms of adaptation to the environment and intercultural interaction. However, the student's benefiting from international student mobility is a process that can be completed by interacting culturally. For this reason, measures should be taken to increase student interaction.

There are strategic differences between higher education institutions in different countries, and even within the same country. Inconsistencies in terms of the academic calendar, minimum language levels, academic prerequisites, etc. make student mobility difficult. Higher education institutions coming together and adopting and implementing common rules will play an important role in encouraging and increasing student mobility.

## **CONCLUSION**

Student mobility in higher education is a process that has accelerated in recent years with technological developments. Today, most university students are aware of the benefits of this mobility, and many of them want to participate in it.

As with any activity, student mobility has both positive and negative aspects. Students who participate in mobility not only learn the knowledge taught in schools, but they are also socially and culturally enriched; they learn a new language, experience a new culture, and experience the advantages of the international environment of schools, such as interaction and cooperation with students from other countries, increasing their knowledge and experience.

Some students see this process as a stepping stone to living in another country for a long time and do not return to their home country after graduation but instead find a job and start working. This situation, called brain drain, is seen as a loss for the country of origin and a gain for the country of residence.

There are also some unfavorable experiences for students participating in student mobility. Students who cannot adapt to the culture of the country and do not fully speak the language are pushed into loneliness. Instead of participating in social activities, they spend time at school, often with other students from their home countries. Those who want to work and gain experience while they are students sometimes face bureaucratic barriers or financial problems.

However, whatever the situation, the introduction of student mobility in higher education will bring many advantages to students in all aspects. It is important that these issues are addressed as soon as possible so that all students can participate and maximize the benefits of mobility. This will contribute not only to students but also to the brotherhood of all humanity and pave the way to peace in the long run.



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## Chapter 24

# Psychological Enigma of Magical Realism in Toni Morrison's Novels

Pınar SÜT GÜNGÖR<sup>1</sup>

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## 1. Introduction: Theoretical Background

The term “magical realism” was first used by Franz Roh to explain post-expressionism; however, it would not be wrong to say that Latin Americans have been the primary movers of this movement. “Magical realism proves to be universal, is a code that defines limitations of geography, generation, and language” (Schroeder, 2004:1). Indeed, it is a twentieth-century genre that promotes the integration of psychological, mythical, and grotesque elements. Many scholars have defined the term by taking a closer look at its unsettling characteristics. “As a return on capitalism’s hegemonic investment in its colonies, magical realism is especially alive and well in postcolonial contexts and is now achieving a compensatory extension of its market worldwide” (Zamora&Faris, 1995:2). Thus, it may be supposed that magical realistic narratives often situate themselves in postcolonial regions where dissolution and political and social atrocities are common. As a literary mode, this can be regarded as an approach to history. Arguably, this may encode the struggles of individuals by suggesting rational and irrational situations. “It delves into the historical, social, mythical, individual, and collective levels of human reality” (Schroeder, 2004:16). Therefore, it focuses on readers’ attention to real-world issues, especially on human conditions. When it comes to the discrepancy between realism and magical realism, it can be stated that “realism functions ideologically and hegemonically; magical realism also functions ideologically but less hegemonically: it creates space for interactions of diversity” (Zamora&Faris, 1995:3). In this movement, some boundaries such as the mind and body, spirit and matter, and real and unreal need to be erased to suggest diversity in the literary spectrum. Additionally, the engagement of an unconscious mind in the narrative parallels closely with the eradication of the boundaries, which is very clear in realistic approaches. A great deal is being written about magical realism, which seems to be one of the most controversial topics in the twentieth century. Against this background, the main question that motivates this study is how magical realism is applied to Toni Morrison’s *Song of Solomon*, *Beloved*, and *A Mercy* in terms of psychological concerns. Toni Morrison, born Chloe Anthony Wofford in Lorain Ohio in 1931, is one of the most well-known African-American writers. She undertakes the duty of transferring African-American heritage to her generation via folktales, songs, and myths as a formative part of her fiction. A persistent theme in her novels was the effect of slavery at the individual level. According to her, the term slavery refers to the hidden realities of the black community and their memories. For this reason, she presents the raw truth to the reader in poetic discourse with constant touches on the past. “The narrative style, perception of time, and anticipation of opposing views create surrealism unique to Faulkner” (Royot, 2007:125). The novels, in which mystical and mythical elements occupy as

much space as possible, are shaped around characters that have matured with an organic connection with nature. While Morrison states in her speeches that she is not concerned with what slavery is but does care about what it means to a black individual, the point that is tried to be emphasized is undoubtedly a psychological process. Novels in which the effects of trauma on self-perception, time perception, self-expression, and self-esteem are reflected can be considered as a projection of reality. While Morrison writes novels in which psychological paradigms and social processes are effective, she does not reflect reality as it is. Like every author, she shaped reality according to her own point of view, style, and the conditions of the period in which she lived. As an individual from the black world, she does not neglect the use of folkloric elements that are valued and internalized in black society while describing her own people. Myths determine the roots of every society, which enable it to be accepted and maintained as a community. Myths that are valued in the black world are also intense in these novels. By synthesizing reality with these myths, Morrison focuses on the sociocultural structure of the community without trying to surprise the reader in an imaginary atmosphere. Magical realism, which aims to make readers perceive aspects of raw truth that have never been encountered, is common in Morrison fiction. Arargüç (2016) propounds that magical realism can be the voice of the voiceless, the sight of the invisible, the expression of the unspeakable, or a confrontation with what we simply escaped, to express the essence of this movement. It can be claimed that Sethe's dealing with the past in *Beloved*, which tells about the history of slavery in America, which neither black nor white want to remember; in fact, in which humanity is wounded, is one of the most striking examples used by Arargüç (2016) to explain magical realism. Although this movement, which is more valued in post-modern literature than it is in the modern period, is criticized for distorting the truth and portraying non-existent events as if they are, this is not the case. Claiming that literary texts are narratives in which reality is intact can be considered a non-professional approach that disregards the authors' own views. Alternatively, the narratives that are written based on the principles of realism, by giving only external/physical features, cannot meet the requirements of the new age because subconscious processes are not included. Some critics argue that this movement denotes an imaginary atmosphere with collective concerns. However, magical realism in Morrison fiction can be characterized as personal and profoundly realistic. Therefore, criticizing magical realism that aims to present a different aspect of the truth to the reader, as a movement far from being authentic, would be an unjust judgment for Morrison, who tries to unravel the social and psychological authenticity of black people.

“Surrealists believe in the existence of a more real reality beyond the concrete reality, which they see as the product of the mind, and they try to reveal the hidden world of the subconscious through art without mental control, based on the effect of the subconscious on the consciousness” (Arargüç, 2016:37).

With this interpretation, Arargüç emphasizes the importance of providing reality in all its dimensions in the Surrealism movement. In the 20th century, the inadequacy of realistic approaches has become a tendency to be accepted, and psychological processes have become intensively embedded in literary works as a result of changing perceptions of individualism. Being aware of this fact, it would be appropriate to regard magical realism as a trend that attempts to convey what is actually ignored rather than what is not. It can be claimed that African American myths, created to reach a common ground to unite people, have an ontological reality. Therefore, the meaning and place of magical realism in the black community has distinctive features. This movement, as an alternative perspective to raw reality, can be handled as an expression of the individually experienced traumas: delusions pushed to the subconscious and suppressed motivational desires. While realistic and surrealist situations are used side-by-side in the magical realism movement, local myths, dreams, spirits, and fantastic elements occupy a large place. However, the author blends both groups well and the reader does not doubt when reading such narratives. This involves melting the unreal into reality. Considering the geographical parameters in which magical realism is widespread, it may be pointed that this movement exists within the unique texture of places where non-industrialized local populations are common, especially after colonialism. As stated before, these lifestyles have roots in legends, superstitions, and powerful myths that prove their existence. While the racist discourses and actions that indigenous people are subjected to have a negative effect on their self-perception and self-esteem, the huge effect of mythical traditions cannot be denied in terms of obtaining an identity by looking at their own roots. For this reason, “it is quite normal for the locals to embrace the magical realism that reflects their naturalness, while the West prefers movements that pursue the truth with all its nakedness” (Emir&Diler, 2011:53). Furthermore, it is generally agreed that magical realism is closely related to individual perceptions of time. Because this movement is applied in literary texts, it is not possible to discuss the objective, chronological, and spatial time that progresses straight. Depending on the course of the narrative, it follows a curved path in time with frequent jumps back and forth. There are temporal paradoxes in which the past, present, and future are issued together by reinforcing the indeterminate perception of time with the symbols used.



## 2. Analysis and Discussion

*Song of Solomon*, written by Morrison in 1977, is one of the best examples of magical realism. Taking a journey to find his true self, the main character Milkman Dead's traces of his ancestors and confronting a history full of legends are provided to the reader without disturbing the normal course of the narrative. Morrison's rich interweaving of magical reality gives this story great strength for comprehending Milkman's physical and psychological maturity. The first surprise of Milkman, who initially assumed that he was a member of a rather ordinary black family, began when he learned that his aunt Pilate, who had been away from family for years, did not have a belly-button. This difference, which may be regarded a biological abnormality, has sophisticated meaning in black society. Throughout the novel, Pilate is seen as a symbol of strangeness and regarded as one who was not born in a normal way. Although Milkman's father, Macon Dead, remembers his sister's normal birth, when Pilate's bizarre life is integrated with her absence of a belly-button, it becomes inevitable to tell her legends. The magic in this part of the narrative may be attributed to a collective subconscious rather than a biological abnormality. It may encode culturally enforced prejudices against the unnatural world. When Milkman goes after the rumor he heard from his father, some from his aunt, and travels to the places where his ancestors live, he encounters the real legend. First, the woman named Circe, who tells about the tragic death of his grandfather and the harsh experiences of his father and aunt at that time, stands out as a metaphysical entity that was alive and even opens the box of the past for Milkman. Paradoxically, this woman, who should be frightening since she comes from the unknown, is presented as a real character endowed with benevolent, non-betraying, and secret-keeping qualities. Morrison recuperates Milkman's past and unconscious minds using Circe. After talking to Circe, Milkman learns that the "Flying African" myth, in which expelled Africans fly to their own lands and, in fact, to their true selves, is a fact in his roots. When the cultural metaphor "O Sugarman flew gone" is sung as the song of returning home, returning to himself, Milkman, who unwittingly internalizes it, puts himself in the void, and Morrison uses such a plain language in this part that it draws less attention than a normal suicide case:

"Milkman stopped waving, his eyes narrowed. In the dark he could only pick out Guitar's head and shoulders. "Do you want my life?" Milkman was no longer shouting. "Do you need it? Take it." He jumped without wiping his tears, without taking a deep breath, or even bending his knees. As fast and bright as the Shepherd's Star, he flew to Guitar, and it never realized which one had delivered his soul to his brother's

murderous arms. Because now he knew what Shalimar knew: If you surrender to the air, you can fly” (Morrison, 1992:318).

This part, the last paragraph of the novel, is the best instance of the emergence of hybridity by combining fantasy and reality. While Milkman’s dramatic journey to discover himself ends with the realization of the myths that have been told in his community, the reader does not feel any illogicality. Morrison managed the blending of physical and metaphysical elements from the beginning of the narrative. Magical realism, originating in South America, appears in all elements of the novel, from the presentation of the characters to the perception of time and space. The greatest proof that the narrative, in which many different themes can be detected, is a magical realistic work, is the last part where supernatural facts and holy nature intertwined and served to portray the mental maturity of Milkman, who suffered internal psychological conflicts throughout the novel. Therefore, magical realism in the *Song of Solomon* responds not only to metaphysical incidents, but also to the reestablishment of contact with the traditions of the black community and the subconscious of characters.

*Beloved*, which was written in 1987 and is the most well-known novel of Morrison, is another work in which the magical realism movement is most intensely handled. After many challenging years of slavery, the main character Sethe, who escaped from the Sweet Home farm where she has worked since her youth, manages to reach her already liberated mother-in-law Baby Suggs with her children. Certainly, her brave escape from slavery does not mean that she is no longer free. The whites, following Sethe’s trail, find their home shortly after escaping. This scene, which is taken from a real incident and is very touching, is the result of some real actions; however, it is the turning point of the narrative as the beginning of some surreal occurrences. Unwilling to surrender her children to whites, Sethe cuts the throat of her baby girl in her arms and kills her. She says, “I stopped him. I took my babies and put them in a safe place-safe” (Morrison, 2016a:214), and does not hesitate to send her child to the only place she is sure is truly safe. In narrative that is not described in chronological order, incidents become complicated. Sethe and her other daughter, Denver, live in isolation, sharing it with a spirit that haunts the house they live in. Nobody comes and goes, because Sethe massacres her child and there is a spirit in the house. It takes a long time to realize that the strange girl who came home and settled in one day was Beloved and killed by cutting her throat years ago. Always being alone at home because of Sethe’s work, Denver accepts the stranger and always finds excuses for her strangeness. Sethe, on the other hand, feels intimacy that she cannot make sense of, and allows her to live with them. Meanwhile, one of the Sweet Home men, Paul D, struggles to

make a life with Sethe. However, the strangeness of the house starts to become dangerous each day. Even after realizing that Beloved is a ghost, Sethe does not want to give up on her because she sees herself responsible for everything.

“I have a tree on my back, a soul in my house, and between the two, there is nothing but my daughter that I hold in my arms. No longer runs away from anything. From now on, I will not run away from anything in the world. Once I traveled, I paid for the ticket” (Morrison, 2016a:31).

Considering that she has paid the price for what she has done, Sethe does not give up while meeting the unfulfilled desires of Beloved, despite being exhausted in both physical and psychological terms. In the meantime, all events that happened in their houses prove the existence of magical realism. However, Morrison reflects Sethe’s drama so authentically that the reader is not surprised by the spirit wandering around the house. This was accepted as an expected event. From the first moment Beloved comes home, she is embraced by both the characters of the novel and the reader, as if she was one of the missing members of the family. Only Paul D is against this creature, which comes from an unknown source. It is worth noting that the simplicity of the discourse, consistency of incidents, and harmony between real and unreal demonstrate Morrison’s success in magical realism.

“Denver had already noticed how hungry the girl was listening to Sethe’s account. Now there was something else that caught her attention. The questions that Beloved asked: “Where are your diamonds?” “Did your woman never comb your hair?” Most surprisingly: “Tell me about your earrings.” How did she know?” (Morrison, 2016a:91).

After writing these lines, Morrison enters a new chapter without answering the questions and waits for the reader to answer them. These can be regarded rhetorical questions in the text because readers are already aware that Beloved knows everything about Sethe and her family. All details in the subtext are made visible to the reader without any confusion. Trying to escape from the past and delusions of her memory, at least for her daughter Denver, Sethe finds herself in the middle of past trauma with the return of Paul D and the exhumation of Beloved. This does not bother Sethe, as it fills the suppressed but desired void. In this part of the novel, metaphysical events can be expressed as the reappearance in consciousness of an act that was ignored and drawn to the Sethe’s subconscious. Some critics argue that it is not the soul that returns, but Sethe’s subconscious is included in the narrative, indicating how intertwined the two are. With realistic magical tools, Morrison

reappears memories that have been erased by psychological concerns. This nonlinear approach suggests a shift from a collective mind to an individual level. *Beloved* as a metaphysical character in the novel and the spirit that haunts Sethe's home mirrors temporarily eclipsed delusions in black society.

The novel, in which there is a nonlinear cosmic duration rather than a quantitative time that flows linearly, also adheres to the magical realism movement. The flexibility of time is noticeable when Morrison writes about the ghost and its involvement in their lives without the intention of convincing the reader, as Morrison describes real occurrences. Expressing that "life lasts above death" (Morrison, 2016a:149), Morrison connects past and present, life, and death. Towards the end of the novel, trying to save Sethe exhausted by the endless demands of the ghost, Denver seeks help from the women around as a result of Morrison's sympathy for women. "Gender constitutes the raw material of culture" (Butler, 2008:94) reflects Morrison's desire to prove that the woman, whom she sees as the dominant power of black culture, can be influential in the case of unnatural incidents as in real life conditions. Surrounding the house with prayers, the women save Sethe and Denver from *Beloved*, both as a result of coincidence and as if to compensate for what they did not initially do. Just as the house, which has been known to be haunted by its inhabitants for years, does not cause any discrepancy, the purification of the house from spirit is handled so quietly that it does not attract more attention than other real-life events. It may be concluded that Morrison offers amazing harmony between real and unreal events in *Beloved* to dive into the subconscious of characters.

Morrison's latest novel, *A Mercy*, written in 2008, depicts the 1600s when slavery trade was in common. The narrative is about an ordinary farm run by slaves with different regional, cultural, and religious backgrounds. The farm owner Jacob Vaark is a relatively good master compared to the conditions of the time. Jacob, who has an emotional personality due to the hardships of his childhood, always treats his slaves well. When Jacob dies and the affluent years pass, Jacob's wife is left alone with slaves, and she, though not black but a slave-like woman sold by her family, struggles to show her dominance on the farm. The slaves, who initially thought that they formed separate branches of a workforce, began to completely understand what hierarchy meant with the changing attitude of the Lady. The farm, which has carnival-like vitality in advance, turns into a dark environment with Lady's dedication to religious rituals, after which her attitude becomes more dehumanized. Having become ill after a short time, Lady searches for a remedy. The blacksmith, who once made a huge door to the majestic house on the farm and believed to have some talents as healer, is the man to whom slave Florens, the main character of the novel, has dedicated herself. It would not be wrong to say that

superstitions were at their highest point in the novel. Indeed, the struggles faced by Florens along the way to invite the blacksmith, who is believed to heal Lady, to the farm march with intense magical realism. Dreaming of the reunion with her beloved blacksmith through dark forests with a compass written in 1690, Florens tries to find a place to shelter when it gets dark. The questions asked by the landlord when she knocked on the door of a hut far from the village were meaningful:

“She looks at me with suspicious eyes and raises her hand with her palm turned outward. It’s like I am going to break in. Who sent you, she says. I say please. I say I’m alone. Nobody sent me. Your shelter called out to me. She looks behind me and asks if I have a guardian, a companion. No, madam, I say. She squints at her eyes and asks if I am from this world or beyond. Her facial expression is harsh. I’m from this world, madam, I don’t know anywhere else, I say. Are you a Christian or an infidel, she asks. I am definitely not an infidel”(Morrison, 2016b: 114).

Though the awkwardness of the questions astounded Florens, she felt that being able to enter inside, due to fatigue and hunger, was more crucial than the questions. The woman, Widow Ealing, prepares a meal after accepting Florens in, and after walking all the way, Florens is blind to nothing but eating, but only when she feeds herself a little bit, she realizes that they are not alone in the room.

“When the noises of my stomach faded, I notice a girl lying on the straw bed. She rolled the blanket up and placed it under her head. One eye looks at one side, the other, like that of a she-wolf, is straight ahead” (Morrison, 2016b:115).

Introduced as Widow Ealing’s daughter, Jane is the unfortunate woman whose legs are bruised to prove that she is not a demon, whose blood flows like a gutter as soon as she stands up, and her life is thought to be saved by means of these wounds. Florens’ going on an uncanny journey alone with all her blackness is seen as unusual for Widow Ealing and her daughter Jane, as well as for other people who called the demon the Black Man and considered it the decision-making mechanism of that place. While Widow Ealing tries to explain to those who come home to conduct preliminary research the next day that her daughter Jane’s eye is created in that way by God, she does not have special powers, and she is not a demon as her blood flows. Florens’s black presence awakens horror in the room:

“Then the visitors turn to look at me one by one. The women moan. The man with the cane knocks his cane so hard that the only chicken left inside cackles and runs away. He points his cane at me, saying, who is this, and one of the women covers her eyes and says God help us” (Morrison, 2016b:118).

The visitors who think that Florens is the harbinger of the Black Man by looking at her blackness try to understand who she is by reading the compass she gave. After reading the compass and seeing the seal on Florens’ wrist, this unconvincing community disappears, saying they will consult the sheriff. At this moment, Jane does Florens a favor and helps her escape without waiting for approval from the visitors.

While Morrison deals with the 17th century in *A Mercy*, she certainly does not ignore the Salem witch trials of 1692. In fact, the compass that Lady wrote for Florens was dated to 1690. The events Florens experienced on the road; she is mistaken for a demon, her body being examined from head to toe, a jury stepping in to ascertain whether she is from this world, and she is able to escape before her body is cut and ripped present a small sample of witch events that have had a strong reaction in history. “The Salem witch trials, where there were twenty executions and more than one hundred and fifty arrests, are thought to have been caused by religious, cultural and geographical reasons” (Latner, 2008:137). The scrutiny of individuals with mental trauma and the accusation of some witchcraft incidents can be regarded as an attempt to find and punish the culprits of the health problems that were common in the society at that time. Such events in extraordinary reality make themselves feel throughout their work. It may be emphasized that “society and consciousness and self contain each other; so society and memory also contain each other”(Halbwachs, 1992:25) claims that individual memory functions only within a collective consciousness. Therefore, Florens stands as an instance of a black community that suffers from salem witch affairs. To represent a sample of events, Morrison adjusted the cultural, economic, and religious backgrounds. Morrison aims to observe Florens’ individual memories by including her dreams into narrative in a magical atmosphere. Freud suggested that there is a significant correlation between dreams and the subconscious. He asserts that “dreams are the secret expression of wish fulfillment” (Freud, 2019:15). Throughout the novel Florens hears her mother who delivers her to Jacob when she was a child. From Florens’s perspective, it was a harsh choice since her mother preferred to live with her brother. However, Morrison presents this scene to the reader in magical reality by giving permission to Florens’ mother to explain the reason behind this choice. It

has been critically acclaimed that in a magical atmosphere, Morrison allows us to show two facets of reality as a double-edged sword.

The conscious processes of both Florens and her mother unveiled via dreams support the hypothesis that magical realism can be regarded as a psychological approach in Morrison fiction. In addition to personal delusions, the lack of empathy for slave-master relationships, the emergence of epidemic diseases, the fact that even non-slave women are pushed into side roles, and religious beliefs that will accelerate their ruthlessness are carefully discussed in the work as effective parameters in the realization of events in the framework of magical realism. The fact that metaphysical plagues are attributed to women who are especially elderly, poor, and living without men reflects the point of view of that period on women, so it can be regarded as quite normal that all women in the novel perceive life without men as dangerous. Thus, magical occurrences in the novel are mostly influenced by the psychological situations of female characters. In her novel *A Mercy*, reflecting the historical texture of time in a natural and sophisticated style, Morrison dedicates the pathetic side of magical realism appearing in society by examining Salem events, which may be regarded extraordinary.

### **3. Conclusion**

The novels, which allow unreal events to be examined in the social and historical spectra, also reflect the psychological aspect of the magical realism movement. In addition, the presence of an intertwined time phenomenon in narratives is important in terms of including another crucial feature of this movement. The integration of inner monologues with real dialogues and the harmonious handling of the past and present can be viewed as Morrison's efforts to present traces of magical realism. Briefly, in *Song of Solomon*, *Beloved* and *A Mercy* Morrison does not forward unreal incidents just to create a magical atmosphere that persuades the reader to surrender, but she refers to the psychological realities of black females drawn to the subconscious with different reasons to make them apparent. With distinct aims in mind, Morrison focuses on the pathetic fallacy of magical realism in these three novels by individualizing the psychological problems of characters encountered throughout the narrative.

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## Chapter 25

# Determination of Road Users Behavior by Boruta Algorithm

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## Introduction

According to a report from the WHO (2018), traffic accidents are the eighthmost common cause of death worldwide. Injuries and deaths caused by traffic accidents are defined as a major global public health problem, negatively affecting economic and social development (Nordfjærn et al., 2014; Singh & Kathuria, 2021; You et al., 2020). The WHO (2015) defines traffic accidents as a preventable social problem. The OECD (2016, 2018) has emphasized that the human factor is the main contributor to road accident rates. Although the source of the problem has been identified, the problem is still ongoing.

Factors causing traffic accidents are grouped under the headings of human, road, vehicle, and external (de Oña et al., 2014; Hussain et al., 2019). Among these factors, the human factor consists of driver, passenger, and pedestrian behaviors (ITF, 2016; WHO, 2018) and is considered to be one of the leading causal factors in traffic accidents (Farooq et al., 2020; Febres et al., 2019; Song et al., 2021).

Driver behavior is thought to be the most important factor (Ulleberg & Rundmo, 2003; You et al., 2020), significantly affecting the risk of having an accident (Singh & Kathuria, 2021).

Bucsuházy et al. (2020) examined driving style under three headings (defensive, neutral, and risky) and stated that drivers with risky driving styles make exaggerated actions. Drivers who often exhibit risky driving behavior pose a great danger to themselves and other road users. Unsafe driving actions include active, deliberate rule violations, as well as inexperience, momentary mistakes, or carelessness (Song et al., 2021), drunk driving, fatigue, and speeding (Zahid et al., 2020). Thus, it is important to measure the frequency of such behaviors by these (risk) drivers and to identify the actions that increase the possibility of being involved in a traffic accident (Song et al., 2021).

Risky driver behavior consists of both willful and unintentional mistakes that can endanger the driver and other people (passengers, pedestrians and road users). The Driver Behavior Questionnaire (DBQ) is a self-report questionnaire that was developed in the 1990s (Reason et al., 1990) to detect and correct bad driving (Farooq et al., 2020; Sucha et al., 2014) and is widely used (Omidi et al., 2021; Sullman et al., 2019).

When looking at the numbers of deaths and injuries of road users, these figures are higher in low- and middle-income countries than in developed countries (WHO, 2015, 2018). Zihni et al. (Üzümcüoğlu Zihni et al., 2020) stated that investments in road safety in low- and middle-income countries may not be sufficient; therefore, it may be more favorable for drivers to exhibit risky behaviors in these countries. Turkey was included in the lower-middle-income

level during the period from 1953 to 2005 and passed into the upper-middle-income countries after 2005. Since 2010, Turkey has remained in this middle-income trap (Uğurlukol & Tükenmez, 2019). From this perspective, Turkey can be considered one of the countries where drivers are prone to exhibit risky behavior.

According to Krivda (2013), unsafe driving behaviors and violations of road traffic rules and regulations affect not only the driver but also other road users (Hussain et al., 2019). The increase in the number of vehicles in Van (Turkey), migration to and from the city in recent years, the increase in population, and the increased tendency for private vehicle ownership (TurkStat, 2021) have led to increasing traffic problems in the city center and increased the number of traffic accidents. The increases in inspections and training programs by the Traffic Services Department in the city have not been effective and it continues to be an important public health problem, with large numbers (2018; 14 dead drivers, 34 dead passengers, 13 dead pedestrians, 829 injured drivers, 1743 injured passengers, 202 injured pedestrians) of people dying in traffic accidents every year.

Attitudes toward rule violations and risky behaviors affect the tendency to perform risky behaviors, and risky behaviors lead to more accidents (McIlroy et al., 2020; Ulleberg & Rundmo, 2003). To reduce the number of deaths and injuries in traffic accidents, as well as improve user behavior, technical deficiencies must be eliminated (Tazul Islam et al., 2017). Attitudes affect human behavior. To change the risky behaviors of road users, it is necessary to change their attitudes (Girgin & Kocabıyık, 2002). Attitudes and behaviors involve a multidimensional process. Behaviors and associated variables must be identified (Yu et al., 2019). For this purpose, many researchers have attempted to determine the factors affecting risky behaviors (gender, age, socioeconomic status, education level, culture, driver skills, drunk driving, etc.). In the literature, factor analysis (Chu et al., 2020; Dotse & Rowe, 2021; Gupta et al., 2021; Hussain et al., 2019; Hussain & Shi, 2020; Sullman et al., 2019), principal component analysis (Matar & Al-Mutairi, 2020; Tekeş et al., 2020; Üzümcüoğlu et al., 2020), structural equation modeling (Song et al., 2021), years (Ersan et al., 2020; Farooq et al., 2020; Omidi et al., 2021; Öztürk et al., 2019) have recently been used for the DBQ questionnaire.

Since the concept of risky driver behavior has been defined, attempts have been made to understand risky behaviors by using different methods, and the results of the analyses have been interpreted. With the increase in computer speeds and the availability of big data in recent years, machine learning applications have also been used to determine risky behaviors in traffic. Yu et al. (2019) used the

Apriori algorithm to determine the factors causing traffic accidents in Wisconsin, while Song et al.(2021) examined driver risk levels, taking into account driving experience, thrill-seeking, risk perception, and risky driving behaviors. Zahid et al.( 2020) used different machine learning (ML) methods, including a decision trees, AdaBoost, and a heap model, to predict and classify different traffic violations in Luzhou, China. Li et al.(2021) used RF's feature selection feature in the detection of drunk driving, Yuksel and Atmaca(2021)used feature selection, machine learning, and fuzzy logic for modeling risky driving behaviors and creating driver profiles, and Chen and Chen ( 2020) used logistic regression (LR), decision trees (CART), and the random forest (RF) method to discover factors that could reduce damage in road accidents and develop efficient prediction models. Prati et al. (2017) used the CHAID decision tree technique and Bayesian Network (BN) analysis to investigate factors predicting the severity of bicycle crashes in Italy, Zhu et al. (2017)used the BN model in a contextual driving behavior assessment approach to evaluate driving behavior, and Liu and Wang (2020)used BN analysis to calculate the probability distribution of driving behavior tendencies under different emotional conditions. Ma et al.(2020)used BN analysis to analyze the characteristics of pedestrians' illegal crossings at signalized intersections and their effects on behavior selection, and Aghaabbasi et al. (2020) applied RF and BN to analyze adoption and the usage frequency of ride-sourcing among students in a Malaysia public university.

It is important to consider the changes in road users living in the same city between 2015 and 2018, as well as studies examining intercultural change (Ersan et al., 2020; Farooq et al., 2020). The aim of this article is to examine road users' behaviors and perspectives on rules in the period from 2015 to 2018 in Van, using a classification algorithm. The aim is to develop strategies to prevent accidents, take necessary safety measures, provide ideas to policymakers who organize inspections and training, and develop necessary safety measures. Although death and crime rates affect drivers, they are closely related to behavior in traffic accidents, such as pedestrians or cyclists who violate the rules (Tazul Islam et al., 2017). Pedestrian behavior can strongly influence road safety outcomes (Li et al., 2021). Lack of access to a motor vehicle or lack of experience in driving does not preclude the person from having valid experiences, opinions, and concerns about driving (McIlroy et al., 2020). For this purpose, the questionnaire used in this study was designed to apply to all road users who live in the city without discrimination.

Generally, in studies, researchers select the questions and variables to be evaluated based on their knowledge and experience, and examine them. These

conventional methods can sometimes result in bias or variables being overlooked. Feature selection techniques that have been developed in recent years allow the selection of the variables that have the most influence on dependent variables by accepting the variables determined by the researcher independently as dependent variables.

The objective of this study was to determine and evaluate the prominent questions that were classified based on the basic demographic information of the road users and that were effective in this information. The rest of the study is organized as follows: Boruta algorithm is explained in Section 2. The conceptual framework and research methodology are presented in Sections 3 and 4. The results of the study are given in Section 5. Finally, the last section provides a discussion of the results and outlines the contributions of the study.

## **2. Theoretical background and research model**

### **2.1. Feature selection**

Feature selection (FS) is frequently encountered in data mining and machine learning studies. Researchers appreciate the high number of variables (attributes) that can be used, but this also creates a disadvantage in terms of prolonging the processing time. The purpose of FS is to reduce the number of features in the data set by choosing the most important and useful features for the problem of interest (Yuksel & Atmaca, 2021). FS helps to determine the sensitivity to the variations made to the training data sets to the independent variables and the prominent independent variables in the stability measurement of the established model (Kalousis et al., 2007). The purpose of FS is to find the determinants of the target variable with the help of related independent variables (Razmjoo et al., 2017). FS includes the sub-steps of data cleaning, classification, and transformation of features. However, it aims to improve data quality by eliminating existing inconsistencies and errors in the relevant data set (Rahm & Do, 2000).

### **2.2. Random forest and Boruta algorithm**

The RF method is a classification algorithm which is a community learning method and which is derived from a large number of CART decision trees that are set up differently from each other. (Cutler et al., 2009; Nguyen et al., 2013; Wang & Kim, 2019). It aims to reduce the dimensionality of the data and eliminate irrelevant inputs (Aghaabbasi et al., 2020). RF provides an easy interpretation of the established model, which is suitable for multivariate and high-dimensional data (Gao et al., 2018) and has high predictive validity (Qi,

2012). In addition, the RF algorithm is quite successful in dealing with the multi-class classification problem (Apao et al., 2020).

The Boruta algorithm method takes into account the RF classification algorithm. It uses the Z-score obtained from RF classification (Iman & Ahmad, 2020), creates features called shadow variables by using all the variables, compares the Z scores obtained for each variable with the shadow features, and suggests removing unimportant features from the analysis (Mehmood et al., 2017).

### 2.3. Sample and data collection

Data for this study were collected from road users selected by the random sampling method in the Van city center between 2015 and 2018. In 2018, the SRPD received financial support for the implementation of the surveys. After removing missing and erroneous questionnaires, data from 941 people were used in this study.

### 2.4. Measurements

Data for this study consisted of the participants' demographic information and questionnaires measuring participants' attitudes to traffic safety and risky driving behavior. The survey questions were taken from the study conducted by Yılmaz and Çelik (2006) into drivers in Eskişehir.

In order to measure the attitudes of the participants about traffic, 42 five-point Likert-type questions were chosen in this study. For the survey questions used in the study, opinions were sought from the Department of Van Provincial Traffic Services before the study began. Additionally, in this study, the participants' traffic sign knowledge was tested using 18 traffic signs (Figure 1). The data set for this study was obtained through questionnaires based on self-reports by participants.

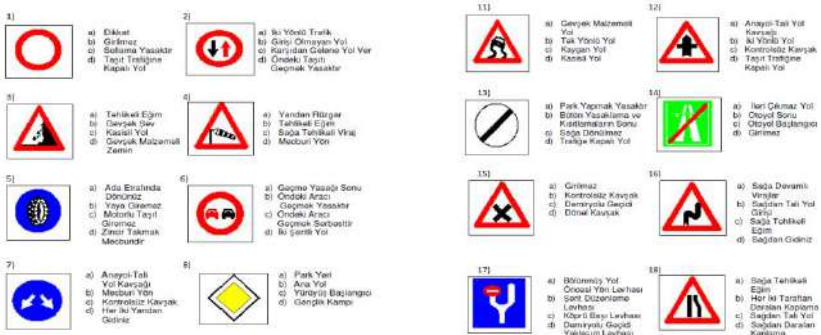


Figure 1. Traffic signs used in the study.



### 3. Results

The R program (Boruta and random forest packages) was used for the analysis in this study. Furthermore, Kruskal–Wallis and Mann–Whitney U ( $\alpha=0.05$ ) tests were applied to examine the differences between the variables. Variables found to be statistically significant were included in the findings section.

Table 1. Demographic information.

<b>Gender (G)</b>	<b>Male (M)</b>	<b>68%</b>
	<b>Female (F)</b>	<b>32%</b>
<b>Education (Edu)</b>	<b>Primary School (Edu1)</b>	<b>5%</b>
	<b>Secondary School (Edu2)</b>	<b>10%</b>
	<b>High School (Edu3)</b>	<b>25%</b>
	<b>Undergraduate and Graduate(Edu4)</b>	<b>60%</b>
<b>Driving license (DL)</b>	<b>Yes</b>	<b>70%</b>
	<b>No</b>	<b>30%</b>
<b>Age</b>	<b>Young (18–30) (Age1)</b>	<b>58%</b>
	<b>Middle (31–43) (Age2)</b>	<b>32%</b>
	<b>Old (44+) (Age3)</b>	<b>15%</b>
<b>Driving experience (DE)</b>	<b>Less experienced - DE(&lt;5) years</b>	<b>47%</b>
	<b>Very experienced - DE(&gt;5) years</b>	<b>53%</b>
<b>Year</b>	<b>Y2015</b>	<b>51%</b>
	<b>Y2018</b>	<b>49%</b>

Of the participants in this study, 68% were male, 58% were young people between the ages of 18 to 30 (Age1), 70% had a driver's license (DLYes), and 60% had an undergraduate or graduate degree (Edu4). Among license holders, 53% were drivers who had been licensed for 5 years or more (DE(>5)) (Table 1). To observe changes in the data over the years, the data collected between 2015 and 2016 were coded as Y2015, and the data collected between 2017 and 2018 were coded as Y2018. On average, the participants correctly identified five signs ( $5.32\pm2.81$ ) out of the 18 traffic signs.

#### 3.1. Feature selection results

In order to teach the model successfully and to produce the most accurate predictions, two-thirds of the data were randomly assigned by the system as training data and the other third were test data. Taking into account the meanImp values of the confirmed variables in the Boruta results, their order of priority was determined. The first five variables in this classification were evaluated in detail. Then, the classification performances were determined using RF.

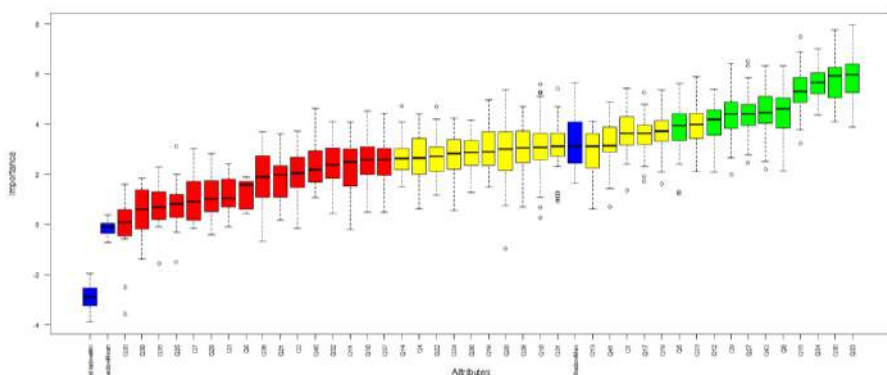


Figure 2. Boruta results by gender.

Taking into account the genders, as a result of the Boruta analysis, 10 of 42 statements( questions)were confirmed, 16 variables were rejected, and 16 variables were recognized as tentative(Table 2,Figure 2).A total of 500 trees were used in the classification of the RF algorithm of ten prominent variables, and the classification performance was 94%.

Table 2. Boruta results by gender.

	Mean Imp	M	F	p
<b>Q33- Sometimes it is necessary to bend the rules to keep traffic moving.</b>	<b>5.84</b>	<b>2.95</b>	<b>2.31</b>	<b>0.00</b>
<b>Q30- Sometimes it is necessary to bend the rules in order to ensure that traffic</b>	<b>5.72</b>	<b>2.95</b>	<b>2.44</b>	<b>0.02</b>
<b>Q34- Sometimes it is necessary to ignore violations of traffic rules.</b>	<b>5.63</b>	<b>2.37</b>	<b>2.04</b>	<b>0.07</b>
<b>Q15- There is no problem getting into the car of a drunk person.</b>	<b>5.38</b>	<b>2.45</b>	<b>1.54</b>	<b>0.00</b>
<b>Q42- I have the ability to read and understand traffic signs and signs on the</b>	<b>4.45</b>	<b>4.00</b>	<b>3.88</b>	<b>0.29</b>
<b>Q8- Having a powerful car means using it to its full potential.</b>	<b>4.43</b>	<b>2.95</b>	<b>2.90</b>	<b>0.62</b>
<b>Q27- It is necessary to follow the traffic rules.</b>	<b>4.41</b>	<b>4.02</b>	<b>3.96</b>	<b>0.54</b>
<b>Q9- It is never fun to take risks.</b>	<b>4.39</b>	<b>4.03</b>	<b>3.75</b>	<b>0.47</b>
<b>Q12- I believe that speed and excitement are inseparable while driving.</b>	<b>4.04</b>	<b>2.03</b>	<b>2.25</b>	<b>0.19</b>
<b>Q5- I believe that many drivers are speeding to demonstrate their abilities.</b>	<b>3.92</b>	<b>3.87</b>	<b>4.08</b>	<b>0.10</b>

The most prominent of the 42 statements is thatsometimes rules need to be bent (Q33) so that the traffic is not disrupted. When the averages of responses they gave to the questions were examined, the women stated that they did not

agree with this question, while the men stated that they were undecided ( $Q33F=2.31$ ,  $Q33M=2.95$ ). The difference between the genders was statistically significant ( $U$ ,  $p=0.00$ ). Q33 is the same question as Q30; these and similar questions were not specifically excluded from the analysis in order to reveal the Boruta algorithm's working principles. The results for the two questions are similar ( $Q30F=2.44$ ,  $Q30M=2.95$ ) ( $U,P=0.02$ ). For Q34 ( $Q34F=2.04$ ,  $Q34M=2.37$ ), it is seen that while both sexes think that the traffic rules should not be ignored, the mean response is higher in males, but there is no statistically significant difference between the genders ( $U,p=0.07$ ). In general, although both sexes indicated that they did not agree with the idea of getting into the car of a drunk driver for Q15, there was a clear difference between the scores that expressed their opinion ( $Q15F=1.54$ ,  $Q15M=2.45$ ), and this difference was statistically significant ( $U$ ,  $p = 0.00$ ). In Q42, all participants thought they had the ability to read traffic signs ( $Q42F=3.88$ ,  $Q42M=4.00$ ), but this difference was not statistically significant ( $U,p=0.29$ ). The results show that both genders agree that many drivers speed to show off their skills, and that speeding and excitement are inseparable, and the average score of women is higher. There was no difference between the genders in the opinions that obeying the traffic rules and taking risks are not fun, but the men's average scores were higher. When we compared opinions on knowledge of traffic signs ( $U$ ,  $p = 0.00$ ), it was seen that there is a significant difference between the sexes ( $F = 8$ ,  $M = 5$ ), and women knew more traffic signs on average.

When we classified the year variable as Y2015 and Y2018, 22 out of 42 variables were determined as confirmed, seven were rejected, and 13 were defined as tentative variables (Figure 3, Table 3).

A total of 500 trees were used in the RF classification of 22 variables and the classification performance was found to be 71%. According to the results of this analysis, which was carried out to capture the change in thoughts between 2015 and 2018, although there was no change in the averages over the years, there was a decrease in the mean score for the opinion that seat belts are important for Q40 ( $Q40_{Y2015} = 4.96$ ,  $Q4_{Y2018} = 4.51$ ). Additionally, this change was found to be statistically significant ( $U$ ,  $p = 0.00$ ). Q32 asked if it is okay to slightly exceed speed limits ( $Q32_{Y2015} = 2.34$ ,  $Q32_{Y2018} = 2.66$ ). While the participants from 2015 did not agree with this opinion, the participants in 2018 were undecided. This change was found to be statistically significant ( $U$ ,  $p = 0.00$ ). In question Q27, It is necessary to obey traffic rules ( $Q27_{Y2015} = 4.01$ ,  $Q27_{Y2018} = 4.11$ ), it was seen that participants agreed with this statement and the average score was higher in 2018, but no statistically significant differences were found ( $U$ ,  $p = 0.99$ ). For Q28 ( $Q28_{Y2015} = 2.83$ ,  $Q28_{Y2018} = 3.05$ ), it was determined

that participants were undecided about the idea that a risk taker does not mean a less safe driver, but the average score in 2018 was higher, although not statistically significantly ( $U, p = 0.19$ ). For Q39, participants have the opinion that the seat belt is necessary ( $Q39_{Y2015} = 1.57, Q39_{Y2018} = 1.98$ ), and the average score for this opinion was higher in 2018. This difference between years was found to be statistically significant ( $U, p = 0.00$ ). The scores for questions such as arriving on time or sometimes stretching the traffic rules, that the rules destroy the pleasure of driving, that speed and excitement are inseparable while driving, and that drunk driving is not as risky as it was thought, were statistically significantly higher in 2018.

Taking into account the classification of the DL variable as qualified and nonqualified, 29 variables out of 42 variables were found to be confirmed, three variables were rejected, and ten variables were determined as tentative (Figure 4, Table 4).

Table 3. The order of importance of the questions according to the year variable.

	Mean Imp	2015	2018	p
Q40- I believe that the seat belt is of vital importance.	12.39	4.96	4.51	0.00
Q32- Driving 5 or 10 km above the speed limit is OK because everyone does	10.89	2.34	2.66	0.00
Q27- It is necessary to follow the traffic rules.	9.74	4.01	4.11	0.99
Q28- If a driver takes risks and violates some traffic rules, it does not mean	9.23	2.83	3.05	0.19
Q39- I think it is unnecessary to wear a seat belt in the city.	9.22	1.57	1.98	0.00
Q10- I believe that traffic rules destroy the pleasure of driving.	9.13	1.95	2.18	0.00
Q18- It is not as risky to drive after drinking alcohol as it is thought.	8.05	1.38	1.65	0.00
Q33- Sometimes it is necessary to bend the rules to keep traffic moving.	8.01	2.95	2.89	0.20
Q13- I believe that adults need fun and excitement in traffic.	7.94	2.00	2.26	0.00
Q30- Sometimes it is necessary to bend the rules in order to ensure that traffic	6.97	2.96	2.89	0.20
Q19- I cannot continue my life as if nothing happened if I injure someone in	6.74	4.00	3.77	0.00
Q37- There is no harm in bending the traffic rules sometimes in order to arrive	6.15	1.99	2.17	0.00
Q23- I think driving is not difficult for me.	6.00	3.96	3.72	0.00
Q12- I believe that speed and excitement are inseparable	5.96	1.97	2.12	0.00

while driving.

Q8- Having a powerful car means using it to its full potential.	5.64	2.93	2.97	0.48
Q36- There are many rules that cannot be followed to keep traffic flowing.	5.20	2.92	2.82	0.07
Q20- If I am going to cause an accident, I hope no one gets hurt.	5.04	4.60	4.29	0.00
Q34- Sometimes it is necessary to ignore violations of traffic rules.	4.96	1.99	2.15	0.00
Q26- Sometimes it is necessary to take risks in traffic.	4.84	2.40	2.41	0.89
Q15- There is no problem getting into the car of a drunk person.	4.61	2.28	2.23	0.53
Q2- I believe that traffic accidents are caused by bad road standards.	4.56	3.39	3.32	0.26
Q24- I believe that when I am angry, I will make more mistakes in traffic.	4.50	3.96	3.83	0.02

A total of 500 trees were used in the classification of the RF algorithm for 29 prominent variables, and the classification performance was calculated as 84%. Participants who do not have a driver's license are seen to be reluctant to violate traffic rules when they are angry (Q25), while those who have a driver's license think they may violate the rules ( $DL_{NO} = 3.43$ ,  $DL_{YES} = 3.77$ ). This difference was found to be statistically significant ( $U$ ,  $p = 0.01$ ).

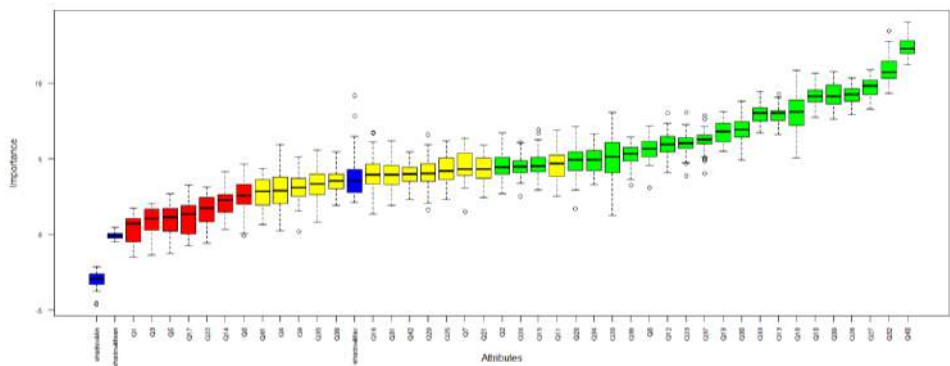


Figure 3. Boruta results for the year variable.

The responses to Q7 also differ ( $DL_{No}=2.47$ ,  $DL_{Yes}=2.85$ ), while those who do not think it is not important for driving to be exciting and those that hold a driver's license remain undecided on this issue. There was a statistically significant difference between these different opinions ( $U,p=0.01$ ). It was determined that all participants had the ability to read and understand traffic signs (Q42;  $DL_{No}=4.02,DL_{Yes}=3.77$ ), but the average score for this question was

lower in those who had a driving license and this difference was statistically significant ( $U, p=0.03$ ). The participants disagreed with the statement that traffic rules spoil the enjoyment of driving (Q10;  $DL_{No}=2.03$ ,  $DL_{Yes}=2.27$ ) and the average score for this question was slightly higher in those who had driving licenses, although not statistically significant ( $U, p=0.10$ ). All participants were undecided on the idea that sometimes it is necessary to bend the rules (Q34) ( $DL_{No}=2.95$ ,  $DL_{Yes}=2.57$ ). The average score of those who have a license was statistically significantly lower ( $U, p=0.00$ ). At the rest of the results, the opinion is found that it is dangerous for drivers who have drunk to get into their vehicles (Q15 and Q16). However, it is seen that the strongest opinion is among the owners. For Q6, Q11, Q12, Q14, and Q32 on speed, both groups were generally opposed to exceeding the speed limits, while driver's license holders gave higher scores for the idea that speed and pleasure are inseparable in Q6, Q12, and Q8. It was determined that the opinions of the two groups were similar for Q27, Q30, Q34, Q36, and Q38 in terms of obeying the traffic rules, and the average scores of those who did not have a driver's license were higher for the this questions that sometimes the rules must be broken in order to maintain the flow of traffic. In terms of the number of known traffic signs, there is a statistically significant difference between the groups ( $U, p = 0.00$ ), and this difference ( $DL_{No}=5$ ,  $DL_{Yes}=7$ ) is because those with a driving licence know more signs on average.

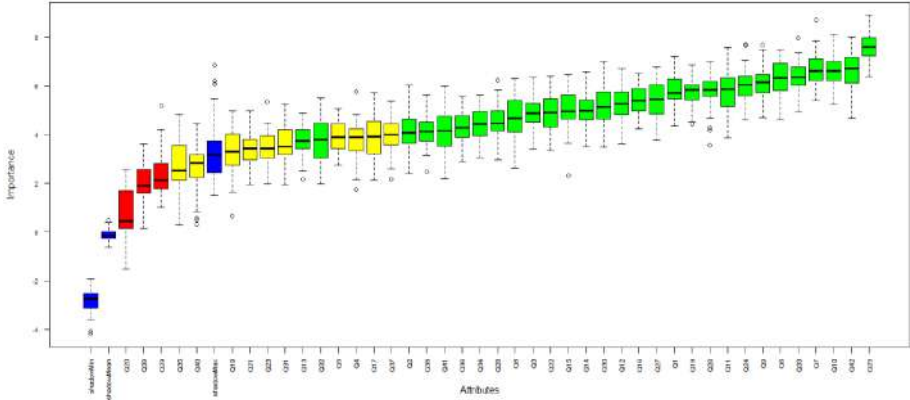


Figure 4. Boruta results by DL variable.

Taking into account the age classification, out of 42 variables, nine of them were confirmed, 17 of them were rejected, and 16 of them were tentative (Figure 5, Table 5).

A total of 500 trees were used in the classification of the RF algorithm for nine prominent variables (Table 5), and the classification performance was determined as 60%. When we examined Q28 (Age1 = 3.01, Age2 = 2.95, Age3 = 2.16), it was found that the Age3 group did not agree with the statement that a driver who does not obey the rules is an unreliable driver, and this difference in opinion was statistically significant (KW,  $p = 0.00$ ). All age groups share the opinion that seat belts are important (Q40; Age1 = 4.69, Age2 = 4.93, Age3 = 4.89). However, the average score for the Age1 group is lower. This difference in score was found to be statistically significant (KW,  $p = 0.00$ ). In Q12, the general opinion is that speed and excitement are not inseparable (Age1 = 2.10, Age2 = 1.99, Age3 = 1.58), but the average score of the Age3 age group was lower. This difference was found to be statistically significant (KW,  $p = 0.00$ ). When we examined Q24 (Age1 = 3.87, Age2 = 3.99, Age3 = 3.11), the Age1 and Age2 groups thought that they would make more mistakes when they were angry, while the Age3 group was undecided. A statistically significant difference was found (KW,  $p = 0.00$ ). Although each age group stated that they had the ability to read traffic signs (Q42; Age1 = 3.99, Age2 = 3.99, Age3 = 3.75), the average score for this question in the Age3 group was lower than the others. This difference was statistically significant (KW,  $p = 0.02$ ). For people who do not agree with the idea of arriving on time (Q37) or breaking the rules when angry (Q25), Age3 has the lowest score average for the opinion that wearing a seat belt is unnecessary (Q39), while the highest score was seen in the Age1 group. Considering the opinions on the number of traffic signs knowledge, there was a significant difference between ages (KW,  $p = 0.01$ ), and when the average number of traffic signs known by the age groups (Age1 = 5, Age2 = 5, Age3 = 7) was examined, the Age3 group knows more traffic signs.

Table 4. Boruta results by DL variable.

	Mean Imp	0	1	p
Q25- When I am angry, I think I can violate the traffic rules.	7.57	3.43	3.77	0.00
Q7- It is important to me that driving is exciting.	6.69	2.47	2.85	0.01
Q42- I have the ability to read and understand traffic signs and signs on the	6.64	4.02	3.77	0.03
Q10- I believe that traffic rules destroy the pleasure of driving.	6.57	2.03	2.27	0.10
Q33- Sometimes it is necessary to bend the rules to keep traffic moving.	6.36	2.95	2.57	0.00
Q6- I believe that the pleasure of driving can only be achieved when speed	6.29	1.68	2.30	0.00
Q9- It is never fun to take risks.	6.06	4.03	3.82	0.14
Q24- I believe that when I am angry, I will make more mistakes in traffic.	6.02	3.90	3.86	0.76
Q1- I believe that most accidents can be prevented by paying more attention	5.78	4.05	4.08	0.71
Q11- I think drivers should obey the speed rules completely.	5.76	4.41	4.04	0.01
Q26- Sometimes it is necessary to take risks in traffic.	5.75	2.43	2.21	0.01
Q19- I cannot continue my life as if nothing happened if I injure someone in	5.73	3.68	3.92	0.01
Q27- It is necessary to follow the traffic rules.	5.46	4.04	3.80	0.08
Q16- I would never get in a car with a drunk person.	5.40	3.61	3.96	0.00
Q12- I believe that speed and excitement are inseparable while driving.	5.24	2.02	2.21	0.12
Q30- Sometimes it is necessary to bend the rules in order to ensure that traffic	5.12	2.95	2.62	0.01
Q15- There is no problem getting into the car of a drunk person.	5.09	2.29	1.96	0.00
Q14- I never want to drive fast.	5.00	3.82	3.58	0.09
Q3- I attribute traffic accidents to adequate education of people.	4.87	4.05	4.39	0.00
Q22- I believe that driving will make me nervous.	4.83	1.71	2.40	0.00
Q8- Having a powerful car means using it to its full potential.	4.69	2.94	3.01	0.63
Q28- If a driver takes risks and violates some traffic rules, it does not mean	4.56	2.97	2.93	0.76
Q34- Sometimes it is necessary to ignore violations of traffic rules.	4.38	2.05	2.21	0.22
Q36- There are many rules that cannot be followed to keep traffic flowing.	4.28	2.88	2.74	0.24
Q38- It is better to drive fluently than to always follow traffic rules.	4.14	2.12	2.10	0.81
Q2- I believe that traffic accidents are caused by bad road standards.	4.12	3.38	3.14	0.06
Q41- I think that traffic lights and signs are unnecessarily excessive.	4.10	2.36	1.85	0.00
Q13- I believe that adults need fun and excitement in traffic.	3.78	2.11	2.27	0.22
Q32- Driving 5 or 10 km above the speed limit is OK because everyone does	3.75	2.53	2.26	0.01



Table 5. Boruta results by age variable.

	Mean Imp	AGE 1	AGE 2	AGE 3	P
Q28- If a driver takes risks and violates some traffic rules, it does not mean that he is a less safe driver.	5.80	3.01	2.95	2.16	0.00
Q40- I believe that the seat belt is of vital importance.	5.59	4.69	4.93	4.89	0.00
Q12- I believe that speed and excitement are inseparable while driving.	5.58	2.10	1.99	1.58	0.00
Q24- I believe that when I am angry, I will make more mistakes in traffic.	5.44	3.87	3.99	3.11	0.00
Q42- I have the ability to read and understand traffic signs and signs on the roads	5.32	3.99	3.99	3.75	0.02
Q37- There is no harm in bending the traffic rules sometimes in order to arrive on time.	5.18	2.14	2.01	1.68	0.00
Q13- I believe that adults need fun and excitement in traffic.	5.03	2.19	2.05	1.84	0.02
Q25- When I am angry, I think I can violate the traffic rules.	4.96	3.49	3.47	2.42	0.00
Q39- I think it is unnecessary to wear a seat belt in the city.	4.93	1.85	1.56	1.53	0.00

Taking into account the education classification, of 42 variables, 17 were confirmed, 15 were rejected, and ten were tentative (Figure 6, Table 6).

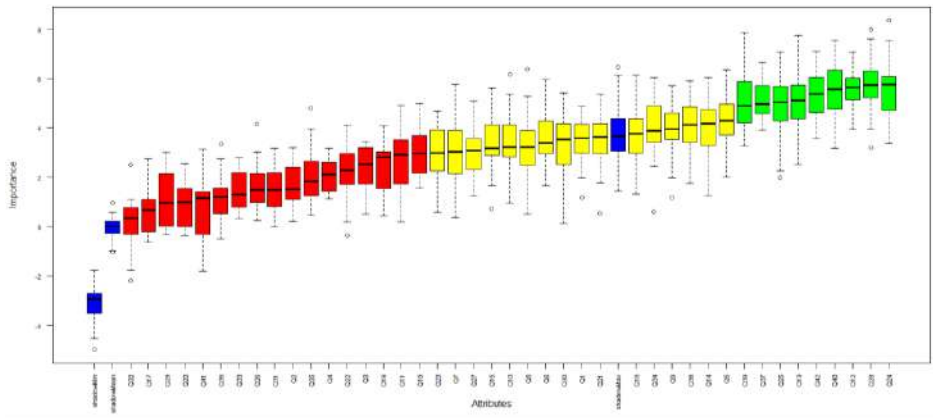


Figure 5. Boruta results by age variable.

A total of 500 trees were used in the RF classification of 17 prominent variables, and the classification performance was 89%. Those with the Edu4 education level disagreed that there is no problem in exceeding the speed limit, everyone does it (Q32; Edu1 = 2.78, Edu2 = 2.74, Edu3 = 3.12, Edu4 = 2.44), while the rest were undecided about this question. This difference was found to

be statistically significant (KW,  $p = 0.00$ ). Regarding Q34, it is necessary to ignore the violation of some traffic rules, (Edu1 = 2.89, Edu2 = 2.21, Edu3 = 2.71, Edu4 = 2.01), the Edu1 and Edu3 groups stated that they were undecided, while Edu2 and Edu4 did not agree with this statement. This difference was found to be statistically significant (KW,  $p = 0.00$ ). While all participants expressed that they were not sure about the idea that the speed limits can be exceeded when conditions are suitable (Q31; Edu1 = 3.11, Edu2 = 3.0, Edu3 = 3.25, Edu4 = 2.54), it was observed that the average score for the general population (Edu4) was statistically significantly lower than for the other groups (KW,  $p = 0.00$ ). In Q2 (Edu1=3.78, Edu2=2.58, Edu3=3.22, Edu4=3.38), the Edu1 group agreed with this idea, while the remaining groups were undecided on this question. Edu4 group opinion was found to be statistically significant (KW,  $p = 0.00$ ). The Edu4 group agreed with the statement “I don't want to drive fast” (Q14; Edu1 = 3.44, Edu2 = 3.05, Edu3 = 3.10, Edu4 = 3.87), while the remaining groups were undecided. This difference in opinion was also found to be statistically significant (KW,  $p = 0.00$ ). All participants agreed with Q9, it is not fun to take risks. The Edu4 group had higher average scores than the other groups in terms of seat belts and thoughts about obeying traffic rules (Q34: sometimes it is necessary to ignore the violation of traffic rules; Q30 and Q37: there is no harm in taking a flexible approach to rules ), but the highest score for Q10, rules destroy the pleasure of driving, was found for the Edu1 group.

Table 6. Boruta results by education variable.

	Mean Imp	Edu 1	Edu 2	Edu 3	Edu 4	P
Q32- Driving 5 or 10 km above the speed limit is OK because everyone does it.	7.60	2.78	2.74	3.12	2.44	0.00
Q34- Sometimes it is necessary to ignore violations of traffic rules.	7.54	2.89	2.21	2.71	2.01	0.00
Q31- When the conditions are right, I think it is okay to exceed the speed limit.	6.96	3.11	3.00	3.25	2.54	0.00
Q2- I believe that traffic accidents are caused by bad road standards.	6.29	3.78	2.58	3.22	3.38	0.00
Q14- I never want to drive fast.	6.02	3.44	3.05	3.10	3.87	0.00
Q40- I believe that the seat belt is of vital importance.	5.88	4.67	4.11	4.18	4.85	0.00
Q28- If a driver takes risks and violates some traffic rules, it does not mean that he is a less safe driver.	5.81	3.11	3.37	3.51	2.92	0.00
Q39- I think it is unnecessary to wear a seat	5.11	2.44	2.47	2.39	1.66	0.00

belt in the city.

Q37- There is no harm in bending the traffic rules sometimes in order to arrive on time.	5.08	2.78	2.37	2.61	2.02	0.00
Q9- It is never fun to take risks.	4.97	4.22	3.68	4.08	4.01	0.20
Q30- Sometimes it is necessary to bend the rules in order to ensure that traffic is not disrupted.	4.81	3.56	2.63	3.12	2.91	0.01
Q3- I attribute traffic accidents to adequate education of people.	4.71	4.56	3.68	4.25	4.06	0.00
Q33- Sometimes it is necessary to bend the rules to keep traffic moving.	4.69	3.22	2.95	3.25	2.88	0.01
Q27- It is necessary to follow the traffic rules.	4.624	3.78	3.84	3.78	4.04	0.04
Q10- I believe that traffic rules destroy the pleasure of driving.	4.451	3.33	2.32	2.35	2.02	0.00
Q29- As a pedestrian, I obey all traffic rules.	4.392	3.89	3.84	3.41	4.23	0.00
Q20- If I am going to cause an accident, I hope no one gets hurt.	3.959	4.44	3.89	4.27	4.48	0.01

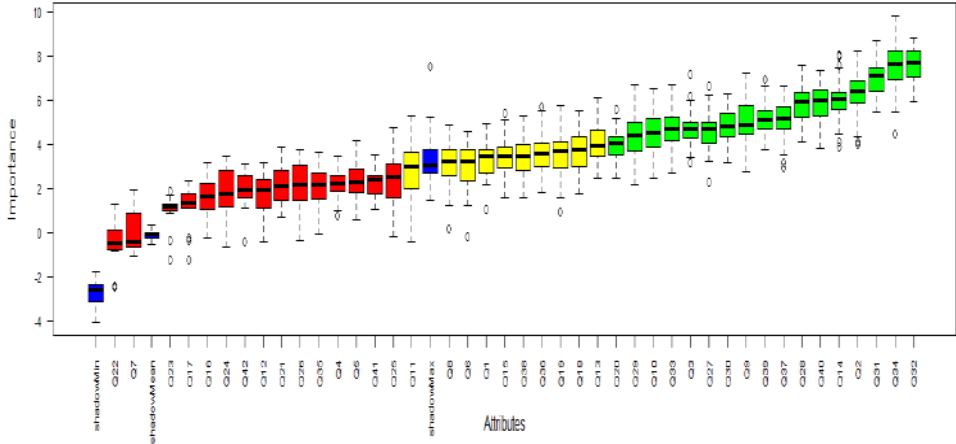


Figure 6. Boruta results by education variable

Considering all the work overall, questions Q12,Q27,Q28,Q30,Q33, and Q34 emerged as a result of four analyses and questions Q2,Q8,Q9,Q10,Q13,Q15,Q24,Q32,Q37,Q39,Q40,and Q42 emerged as a result of three analyses.Althoughthe participants think that the traffic rules should not be violated (Q34) and the rules should not be bent in order to arrive on time (Q37), they are undecided on the idea that sometimes it is necessary to bend the rules in order to ensure that traffic is not disrupted (Q30, Q33). Although they stated that they did not agree that speed and excitement are inseparable while

driving (Q12), they were undecided on the view that having a powerful car means using it to its full potential (Q8). Furthermore, the respondents agreed that it is important to wear a seat belt (Q40) and that it is necessary to wear a seat belt in the city (Q39).

#### **4. Discussion**

The most important feature of the Turkish population is its young age (Kocadaş et al., 2014). Because the region has a young population and a male-dominated cultural structure, more young men participated in the survey. Generally, the participants did not agree with the statements questions about violating and taking risks in traffic.

Considering the differences between age groups, seat belts are of vital importance and three age groups (Age2,3,4) have a common opinion on the idea of using seat belts in the city, but the Age1 group gave this a lower score. While speed and excitement are separable, adults do not seek entertainment and excitement in traffic, and there is a common opinion among the age groups that traffic rules should not be bent to arrive on time. It is thought-provoking that the average number of traffic signs identified in the traffic signs section of the study was five (below average), while the study participants agreed on their ability to read traffic signs. The Age3 group did not agree with the idea that a driver who does not obey the rules is unreliable, but this group thinks that individuals can make more mistakes when they are angry or that they will not violate the traffic rules.

Taking into account the differences between the risk levels of young drivers and the risk levels of older drivers (i.e., more experienced), it is thought that young people are not fully mature and are inexperienced in their actions (ECMT, 2006). Studies generally indicate that young and male drivers are prone to breaking rules and being risky drivers. Jonah (1986) stated that young people tend to underestimate risks and believe that they are invincible. Ulleberg and Rundmo (2003) stated that young drivers cannot fully predict the risks they cause in traffic compared to other age groups, while Şimşekoğlu (2015) stated that young people have tendencies towards risky behavior in traffic, not only as drivers but also as pedestrians. Navon – Eyal and Taubman – Ben-Ari (2020) found that young drivers have difficulties regulating their emotions and this is reflected in their risky driving styles. Tekeş et al. (2020) reported that traits such as selfishness, impulsivity, and sensation seeking are adolescent traits that decrease with age. This explains why young people objected less and older people objected more to statements about risk and rule violations in our study.

Our findings are in accordance with reports in the literature. Our study shows that young drivers have a high tendency to use vehicles in a risky manner and violate traffic rules (Febres et al., 2019; G. Hussain et al., 2019; Nguyen-Phuoc et al., 2020; Reason et al., 1990; Sedaghatzadegan & Sarbandi, 2020; Sullman et al., 2019; Tekeş et al., 2020). Studies have shown that thrill-seeking behaviors and attitudes to risk driving (Song et al., 2021) are higher among young drivers than middle-aged and older drivers (Singh & Kathuria, 2021). Educated and older drivers behave differently in certain situations compared to younger or less educated drivers (Mohamed & Bromfield, 2017). Experienced drivers have better driving skills, attitudes, and behaviors, while drivers with no driving experience are more prone to making mistakes (Lakhan et al., 2020) because driving experience increases the drivers' perception of risk (Lu et al., 2013).

It has been observed in our study that women do not agree with the opinion that sometimes the rules should be bent in order to avoid disruption of traffic, while men are undecided, that speeding and excitement are inseparable, and that drivers speed to show off their skills. On the other hand, Özkan et al. (2018) stated that female drivers approach traffic rules more positively than males and violate rules less. Sabbour and Ibrahim (2010) stated that thrill seeking is more common in men than women in all age groups, especially among young people. Sedaghatzadegan and Sarbandi (2020) stated that there is a significant relationship between gender and different driving violations, indicating that women are safer drivers than men. Özkan and Lajunen (2011) stated that the accident participation of young men is higher in almost every country. Research has revealed that young men are generally more prone to risk-taking, emotion seeking, speeding, and antisocial behavior than women (ECMT, 2006). Research on gender differences shows that women are more careful drivers and show less risky behaviors. The TurkStat report (2021) showed that less women are involved in accidents than men. It should be noted that this is because Turkey has a male-dominated social and cultural structure. However, it should be noted that no female drivers died. The participants stated that they can read traffic signs. However, the results of the analysis showed that the number of plates known to women was greater.

Drunk driving causes traffic accidents that result in death and injury. Alcohol increases reaction times (Vrábel et al., 2020), impairs reasoning ability, decreases emotional control, and increases the self-confidence of the driver. This contradictory situation leads to risky behaviors in drivers (Saygılı, 2009). In our study, the participants generally stated that they were against driving drunk. In addition to being a risky behavior, this view can be thought to stem

from the fact that the city has a Muslim structure. When examined in terms of gender, men did not like the idea of drivers who had drunk alcohol. However, it cannot be overlooked that they did not show as clear an attitude as women. Women objected to the question about getting into the car of someone who had been drinking alcohol and is at risk of driving while drunk at a high rate. The score for the statement about getting into the car of someone who was drunk was higher for men than woman. Özkan and Lajunen ( 2011) supported that being a safe driver is seen as a feminine trait in their study, because femininity is highly correlated with safety skills. Yılmaz and Çelik ( 2006) reported that women consider drinking and driving riskier compared to men, which is also in line with our results.

A driver's behavior is also affected by their level of education ( Hussain et al., 2019). Examining the results by the education levels of participants showed that exceeding the speed limits when the conditions are suitable does not pose a problem for primary school graduates. Taking into account the results that differ according to the education levels of the participants, the view of exceeding the speed limits when conditions are appropriate is not a problem for primary school graduates. While university graduates did not participate, it was observed that the remaining education groups were undecided on this issue. Some traffic rules are ignored; that is to say, they are stretched, speed limits can be exceeded when conditions are suitable, traffic rules destroy the pleasure of driving, and the reason for accidents is bad road standards. In terms of license holders, those who have a driving license think that they can violate the traffic rules when they are angry. Those who do not hold a license think that it is not important for them that driving is exciting, while license holders were undecided about this issue.

Although unlicensed people think that their ability to read traffic signs is higher, they identified fewer signs than those who have a license. It was found that there was a common opinion among the groups about not drinking and driving, but the license holders scored this higher on average. Although both groups had the same opinion on the idea that speed limits should be strictly followed in traffic, the average score was higher for those who did not have a driver's license. This difference may be because non-drivers (no driving license ) realize that speeding is possible in some cases..

Looking at how the answers to the questions changed over time, negative changes were observed over the years, such as a decrease in scores for the importance of seat belts, there is no problem in exceeding the speed limits, the rules can sometimes be bent to arrive on time, and drinking and driving is not as

risky as it is thought. The tendency of the participants to bend and violate the rules has increased in recent years.

## **5. Conclusion**

In this study, an attempt was made to reveal the attitudes, behaviors, and causality affecting road users living in the city of Van, Turkey. In the questions asked directly to the individuals participating in the study, it was observed that they generally did not agree with the statements about risk and violation of rules. However, when the results are examined, some statements are not as clear as seen on the surface, and in fact, details of the underlying rule violations and risky behaviors were obtained. According to Freund and Martin (1993), the automobile is a symbol, a tool that individuals use to present themselves to others. They stated that the automobile has always been used as a masculine symbol and that speed is the most important cultural fetish of contemporary societies. Owing to its urban location, Van has a young and male-dominated structure. The perception and level of violation increase due to youth and the sense of autonomy linked to gender. Women become drivers later than men due to cultural and economic reasons. If women can be more effective as drivers, a balance can be established. The concept of forced migration, which started in the 1990s in the region including the province of Van, caused people living in rural settlements to leave traditional village life and migrate to the nearest cities en masse. In addition to the problems that these migrations created in the cities, adaptation problems also emerged among the newcomers (Sami, 2009), and the migration of capital, brains, and urbanized population to the west could not be prevented. This process transformed those who came to the city from being peasants, but it did not ensure that they became urban citizens. Therefore, despite the demographic growth of the city, the inhabitants of the city did not adapt, could not find their economic identity, and could not become urbanized in terms of socio-cultural aspects. While the city was struggling with problems such as urbanization and economic inadequacy, those who adapted to urban life with education, including those who migrated, left the city after the 7.2 magnitude earthquake that occurred in 2011 (Elmastaş & Yılmaz, 2015). With the arrival of citizens whose houses were destroyed in villages replacing those who left the city, the city again experienced a wave of migration from the countryside. The effects of migration in Van province, which started with forced migration, continue. In addition, the changes over the years and the trends in thinking that show a shift toward selfishness should be taken into account. Society is never static and always changes (Kıray, 1999). The city of Van is still affected by immigration and emigration. Should we, therefore, think

that the sense of belonging of people living in the city is not developed? Or should it be accepted that the road users in Van also have the selfish tendencies displayed by humanity globally? A person does not try to protect what does not belong to them but only takes what they need. This explains why road users tend to be more irresponsible and selfish. It should not be ignored that the use of vehicles gives individuals mobility, freedom, and personal pleasure. There are internal and external dynamics that trigger changes in societies. Society is expected to change and reorganize itself. However, it cannot be said that the outcome of every change will be positive. Therefore, social changes should be monitored by local administrations and these issues should be given priority in training and arrangements for road users. Otherwise, it is possible that if the trend towards increasing selfishness and risk perception is not prevented now, it will have a much greater effect on traffic accidents and traffic deaths in the future.

## **6. Acknowledgments**

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## Chapter 26

# **Turkish Series on the Digital Platform and Implications for Audiovisual Translation Research**

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## 1. Introduction

Today, among the many cultural and commercial elements that come to mind when Turkey is mentioned and are known around the world, Turkish series, which are called soft power, come to the fore. Turkish series, which increase in number with digital broadcasting that removes broadcast and language barriers and take the steps to enrich in terms of genre and storytelling, reach countless viewers in many parts of the world. Turkey started TV series broadcasting as an importer country and now has become a country that exports series to the whole world with its ever-expanding repertoire. With the emergence of private channels after the single-channel TRT period, domestic series production gained momentum in Turkey and countless series were produced in various genres. The export of TV series started with the sale of popular TV series broadcast on Turkish channels and continues with the sale of scenarios. The first Turkish TV series to be exported internationally was the TRT series *Aşk-ı Memnu*, which was sold to France in 1981. After nearly two decades, *Deli Yürek* began to be broadcast in Kazakhstan in 2003 (Erkul, 2022, p. 283). In the process from the beginning of the 2000s to the present, Turkey has become one of the leading countries in the export of TV series to various countries in the world. It is known that the Turkish series, which have reached audiences from 156 countries in the world, ranks second after the USA with an export of approximately 300 million dollars, although the exact figures cannot be reached (Yıldız, 2019). TV series sold abroad from Turkey reach 400 million viewers in approximately 75 countries. With the development of web series, the growth rate of this target audience will further increase, and in addition to the export revenue of domestic productions, web series, like television series, will become Turkey's commercial, cultural and tourism ambassadors (Ergüney, 2017).

With the introduction of digital platforms, which have become the strongest alternative to television broadcasting, it is thought that the influence and success of Turkish series will increase, both by reaching international audiences on these platforms and by producing them specifically for these platforms. As indicated by Özbulduk-Kılıç, with digital platforms, the content of Turkish series has begun to incorporate more creative and novel approaches. Turkish series, which is now considered a separate genre, has taken an innovative approach in itself by airing on digital channels, and in this direction, the film distribution company *Inter Medya* has named and branded this new approach as *New Generation Turkish Series* (2022, p. 40). It would be an under-estimation to think that audiovisual products such as films and series exist in people's lives as a pastime activity. They enable the people, geography, and language, in short,

culture, which they reflect with their visual and auditory components, to meet the audience from different cultural backgrounds.

Considering the Turkish Series broadcast on digital platforms preferred by a wide audience due to their ease of access and content richness, people can meet Turkish series in their native or preferred languages anywhere in the world today thanks to various modes of Audiovisual Translation (AVT) offered by the digital platforms. The practice, processes, and products involved in or resulting from the transfer of multimodal and multimedial content across languages and/or cultures are the focus of audiovisual translation (Pérez-González, 2019). AVT and digitized content are inextricably linked by their very existence. Chaume (2019) argues that not only have digital technologies accelerated the pace of change in film and television production and distribution, but also in audiovisual translation.

The evolution of Turkish AVT has been remarkable, beginning with the efforts of a few elite and now boasting the translation of tens of Turkish audiovisual (AV) products that have captured the hearts and minds of huge audiences worldwide (Okayuz & Kaya, 2021). In this context, in the success of Turkish AV products in recent years, translation is one of the most important tools that enable them to reach the audience as much as the scenario, actors, decor, all cinematographic elements, and even all the technological possibilities of the platform on which it is broadcast. In this context, the worldwide appreciation and demand for Turkish AV products result in a similar demand for translation, the window that opens these products to the world. From this point of view, as Turkish series become more widespread, they point to a journey to another culture in a different language and it can be thought that this may host a similar increase in audiovisual translation research through Turkish series in the near future.

To that end, this study provides an overview of the Turkish series sector on the digital, Netflix, and then presents the limited number of audiovisual translation research conducted in Turkey in the last five years on Turkish AV production on the digital. The series analyzed are those broadcast on Netflix among the global digital platforms active in Turkey, as Netflix is currently the platform that produces the most content on the digital in Turkey. It should be noted that the study does not include TV series that were previously broadcast on television and then found a place in digital platforms, but only TV series produced specifically for digital platforms because the study is designed around the possible effects of what digital platforms offer on translation studies. The study concludes with suggestions for further translation studies on Turkish AV prod-

ucts based on the characteristics of digital platforms and digitally broadcasted series and the existing research.

## 2. Turkish Series Go Digital

The journey of Turkish series to digital started with Netflix, which became accessible in Turkey in 2016. Netflix is a video-on-demand streaming platform originating in the USA, and users can watch movies and series in a wide content library over the internet through a paid subscription. Having initially created a selection of previously released movies and TV series, Netflix then decided to create its own content as it grew. This was driven by the possibility that its content catalog would be limited by the ever-increasing costs of deals with film and television partners. For this reason, Netflix partly funded *Lilyhammer* in 2012, but the first full Netflix original series was *House of Cards*, which started airing in 2013 and made a big impact (Moore, 2016). Then Netflix decided to include non-English shows and various countries started producing Netflix originals in their own languages. Depending on the region, these contents had the opportunity to meet viewers all over the world with subtitles and dubbing options in many languages. Today Netflix has original content from over 40 countries around the world and content is subtitled in 37 languages and dubbed in 34 languages. What's more, it is announced that non-English language viewing in the United States has increased by 71% since 2019 (Moore, 2021). The fact that viewers in the US, which still produces the most popular content in the world and on the Netflix platform, have shown such a high level of interest in content from other languages and cultures proves that the platform is giving a voice to productions produced in less widely spoken languages. Accordingly, in addition to the Turkish series already broadcast in many different countries through terrestrial broadcasting, new generation Turkish series written and directed with an innovative attitude within the scope of Netflix originals contribute greatly to the rise of the Turkish series sector.

Netflix's first Turkish original is *Hakan: Muhafız (The Protector)*, released in December 2018. The series, which is a drama fantasy, is about Hakan, a young man living in Istanbul, whose ordinary life in Istanbul's famous tourist attraction, the Grand Bazaar, changes when he is given the task of saving the city from immortal enemies. The series, which ended in 2020 with its fourth season, met 10 million viewers in 4 weeks. It was announced that the series attracted the most attention in Latin American countries, Brazil, and Mexico, followed by African countries. (Hakan Muhafız, 2019). Then, in 2019, the second Turkish TV series *Atiye (The Gift)* went on air. The series, which is also a drama fantasy, tells the story of Atiye, a painter living in Istanbul, and her relationship with

universal secrets and her own past at Göbeklitepe, an archaeological site in Anatolia. It is noteworthy that both TV series have depicted mystical themes in Turkey's world-renowned locations. The series, which ended with its 3rd season in 2021, stars actress Beren Saat, who is known for the series *Aşk- ı Memnu* (2008 version), which has been broadcast in 33 countries and made a big impact.

The third original series released on Netflix is *Aşk 101* (*Love 101*), which premiered in 2020 with its first season and ended with the second season in 2021. The series is both a period and a teen comedy-drama whose story revolves around a group of rebellious 17-year-olds who devise a plan to keep their favorite teacher in school so they can stay in school. Netflix's fourth Turkish original series, the drama *Bir Başkadır* (*Ethos*) was released as a single season in 2020. The series is about a group of people who have very different characters and live completely different lives, and their lives change when their paths cross. The series portrays the city through a character who goes from a slum neighborhood of Istanbul to a luxury neighborhood full of plazas for a cleaning job. The series portrays the city through a character who goes from a slum neighborhood of Istanbul to a luxury neighborhood full of plazas for a cleaning job. It is also notable for the language and accents used by the characters from different sociocultural strata, which is also important in terms of translation.

In 2021, three different Turkish original series started streaming on Netflix. *Fatma*, the fifth original series is a crime drama that tells the life of Fatma. She works as a cleaner, but her life takes a completely different turn when searching for her husband, who suddenly disappears, and she unexpectedly finds herself committing murders. In the same year, 2021, the sixth Turkish original series, *50m2*, started to be broadcast. The series is a dark comedy that tells the story of a young man's journey to find out who he is, a mysterious hitman with a reputation for dark deeds. After being betrayed by Servet, whom he sees as his father, he finds himself on the run and ends up in a 50-square-meter tailor shop in an unfamiliar neighborhood. *Kulüp* (*The Club*), the seventh Turkish series for Netflix, is set in 1950s Istanbul, where Matilda, who was released from prison with a general amnesty after 17 years in prison, tries to establish a relationship with her daughter who has never met her. The series is a period drama that sheds light on Turkish Jewish life in the 1950s, which can be said to offer rich cultural and historical content in this respect. As can be seen, in 2018, 2019, and 2020, one series was released each year, but as of 2021, an increasing number of Turkish series have started to stream on Netflix.

For the Turkish original series, 2022 has been the most productive year so far; 7 different series started to be broadcast on Netflix. First, at the beginning

of March 2022, the eighth series, *Pera Palasta Gece Yarısı* (*Midnight at Pera Palas*), was released on Netflix, followed by the ninth series, *Uysallar* (*Wild Abandon*), at the end of the same month. It seems that in the same month, two different dramas were aired, the first being a historical drama and the second a comedy-drama. Based on Charles King's novel of the same name, *Pera Palasta Gece Yarısı*, which tells the story of a young journalist's mysterious journey from the present to the past, more specifically, to 1919, the year the Turkish War of Independence began. As in other Turkish originals, one of the iconic locations stands out in this series: Istanbul's world-famous Pera Palace Hotel. In the series *Uysallar*, an architect suffering from a mid-life crisis begins to live a secret punk life while the other members of his family struggle with their own crisis-filled lives. The series, which depicts the life of the upper-middle class in the unexplored streets of Istanbul's unplanned urban renewal and the plazas and residences that continue to rise, again paints a picture of life in Istanbul.

Yakamoz-S245 was released in April 2022 as the tenth series. In the series, Arman, a marine biologist who participates in a research conducted by submarine, fights for life and death with his crew after a catastrophe that turns the Earth upside down. It should be noted that the lead actor of the series, Kıvanç Tatlıtuğ, is also an actor who is known around the world for his previously broadcast Turkish series (i.e., *Aşk-ı Memnu* and *Gülmüş*). The series draws attention as an apocalyptic sci-fi drama thriller among other Netflix Turkish originals. From this perspective, it can be said that the Turkish series sector is experimenting with innovative genres and storylines in addition to the conventional drama genre, and the fact that this is done on a digital platform that enables such experimental genres indicates that these platforms will develop and innovate the sector. In terms of the translation of the series, it would also be an innovative step to translate texts with science fiction elements rather than the usual love story texts.

June 2022, like March, was a month in which two Turkish originals went on air, both starring the same leading actress, *Birce Akalay*. In this respect, the fact that an actor has appeared in two different series broadcast on the digital at the same time shows that digital platforms offer time-independent and efficient working opportunities, which also points to the vitality of the sector. In the drama, the eleventh on Netflix, *Kuş Uçuşu* (*As the Crow Flies*) a young fan slyly makes her way into the newsroom of an experienced anchor, but she soon runs into the sinister side of ambition, envy, and the need to be noticed. The other series, the twelfth, is *Mezarlık* (*The Graveyard*), which is a detective and thriller series. In a pitch-black basement known as "Graveyard," a specialized unit led by female Commissioner Önem searches for answers to unsolved fe-



male murders. In the series, bureaucratic negligence regarding femicides, which cannot be addressed on national channels, is freely expressed, which again shows the freedom that digital offers to the series sector and the possibility of reflecting the truth uncensored.

Released in July 2022, the thirteenth series, *Zeytin Ağacı (Another Self)* tells the story of three close girlfriends as they travel to an Aegean town after one of them is diagnosed with cancer, and the history they discover there through family constellation therapy. The series stars Tuba Büyüküstün, one of the actresses who gained fame with the series *Asi* that were broadcast in Turkey and later sold to 67 countries around the world. Netflix productions featuring actors who have previously won the admiration of audiences from many different cultures, from the Arab world to South America and the Balkans (as previously mentioned for Beren Saat and Kıvanç Tatlıtuğ), will lead to translation practices in various languages for the audience already gained with the actors' fame.

The fourteenth Turkish original series *Andropoz (Men on Pause)*, which met with the audience in October 2022, is in the comedy genre. In the series, Yusuf, who is married with two children, goes through a mid-life crisis in his early 50s and wants to change both his appearance and his lifestyle. As he struggles to buy his dream house by the sea, he finds himself in unexpected situations. The series is one of the four comedy series in Netflix's Turkish originals archive, along with the ones mentioned above. This indicates that although the Turkish series sector has taken innovative steps, Turkish drama, which has become a genre in its own right, has maintained its place.

The fifteenth series released on Netflix in December 2022 is *Sıcak Kafa (Hot Skull)*. Based on a novel of the same name, the series is one of the most diverse genres ever attempted: science fiction set in dystopian Istanbul. The series tells the story of the "jabber" disease, which spreads through communication and turns into a world epidemic. People who are exposed to it start to "jabber" after a while, that is, they become infected. Everyone wears headphones to protect themselves from this disease. This dystopian series, which is unlikely to find a place in television broadcasting, which is shaped by the conventional tastes of the general audience, is inspiring that the Turkish series sector can produce successful works in this genre thanks to digital platforms that embrace creativity and innovation. As it is perhaps the first in the sector, it will also be a pioneer in terms of AVT studies in this genre.

### 3. AVT Research on Digital Turkish Series

As detailed above, from 2018 until the end of 2022, Netflix featured fifteen different Turkish original series. In this collection, it is seen that Turkish actors who have created a fan base in various parts of the world in the TV series they have played before, and genres and topics that are not likely to be broadcast on national channels are given space, although mostly drama dominates. Also, although some of them were planned for a single season, the aforementioned series have lasted or will last for 2 or 3 seasons. From this point of view, it is possible to say that there is a large database for research on Turkish AV products on Netflix. In this regard, it is useful to look at the audiovisual translation research conducted on these series from 2018, when the first Netflix Turkish original was released, to the present day. To that end, a literature review was conducted on which audiovisual mode the existing studies focused on, which translation units were investigated and which findings were obtained.

AVT research on digitally broadcast Turkish series has first focused on the first broadcast series, *Hakan: Muhafız* (*The Protector*). The year following the series' release, two articles (published several days apart) examined the translations of the series in two different languages. The first is a study on the German subtitles of the series by Haldan and Şenpire (2019). The researchers conducted their analysis on episode 1 of season 2. In the study, it was concluded that there were expressions in the source language that were not mentioned in the target language, that the explanations of idioms and expressions were interpreted and given incompletely, the translator added his/her own interpretations in the target language, and suggestions were presented for the relevant findings. The second study on *Hakan: Muhafız* is by Kuşçu-Özbudak (2019) on English subtitles. Compared to the previous study, this study examined cultural elements in English subtitles in the context of domestication and foreignization on all episodes of the first season and examined whether the Timed Text Style Guide offered by Netflix to subtitle translators had an impact on the translation process. The researcher argued that cultural elements were largely domesticated by the translator for international audiences and that the guide needed improvements in terms of specific translation decisions. It is seen that both studies focus on the translation of cultural elements and conclude that the Turkish subtitles of the series aim to provide an audience-friendly translation in both languages.

Another study on digital Turkish series examined three different Netflix Turkish originals' translations within the framework of loss and gain: *Hakan: Muhafız*, *Atiye*, and *Aşk 101*. Researchers examined the Turkish to English translations of the series' trailers and explained gains and losses using Hans Vermeer's Skopos Theory. Results of the study showed that *Aşk 101*'s trailer had

the highest losses and gains, while the trailer of the fourth season of *Hakan: Muhafiz* had the lowest. Researchers concluded that depending on their skopos, translators may cause gains or losses in translation. This study draws attention with the translation units it analyzes. Trailers, which are a short introduction of the series to the audience, are influential in the decision-making of the audience, so the analysis of how this promotional text is translated can be called innovative in terms of AVT research.

Another study about the Turkish original series is on the dubbing of *Bir Başkadır (Ethos)* by Çavuşoğlu (2022). The starting point of the study, which examines the lexical level analysis of cultural elements in the English dubbing of the series through the procedures adopted by the translator, is the wide range of casting profiles in Turkey with various societal, educational, and cultural backgrounds. In the study, the translator was found to have a propensity for omission, particularly when translating references that are highly culturally specific and are typically categorized as religious expressions. Additionally, the songs, Kurdish dialogues, and Arabic prayers are kept in their original form. The researcher concluded that further research is fruitful in the area of accent and dialect transfer during dubbing translation.

#### **4. Conclusion**

As previously pointed out by Okyayuz (2019), audiovisual translation is increasing day by day, with the diversification of platforms where audiovisual translation is offered (digital, terrestrial, etc. broadcasts) and the number of platforms where Turkish translation options are added (e.g., Netflix) thus increasing the number of translations (e.g., subtitles, dubbing, audio description, detailed subtitles). However, as can be seen, from 2018 to 2022, fourteen different productions reached international audiences via Netflix, but only four AVT studies were conducted on these Turkish series. Although we cannot yet speak of a long history of digital series broadcasting, this number can be considered small, but it is sure to increase. In this respect, it is possible to make suggestions for future research on Turkish AV products by touching on the advanced features of Netflix and similar digital platforms compared to television broadcasting.

First of all, perhaps the most important difference between digital platforms and television broadcasting is that they are freer due to their on-demand structure. We can observe this freedom in the use of a wide range of genres and stories. While in Turkish television broadcasting, the genres most popular with the audience are produced one after the other, in the digital, different genres such as sci-fi, dark comedy, and horror are experimented with. Another area of freedom in digital is the uncensored and relatively unbiased presentation of political,

religious and historical productions that are not available on television. With genres and storylines that can be freely experimented with, digital platforms allow translation studies to analyze diverse translation units.

Secondly, digital productions watched on-demand and via subscription offer a time and place-independent viewing. This is leading Turkish series producers to break the mold in television broadcasting. Digital series, which consist of 40-50 minute episodes and hence the storytelling progresses more quickly, pave the way for producers and actors to be more productive. Thus, as mentioned above, an actor can star in two different digital series in the same month, and a series can be broadcast in the digital months after it has been shot. Thus, a large number of series that can be analyzed digitally creates a pool of data that researchers can access at any time. AVT researchers can review any part or all of a series on this platform independent of time and place, without waiting for it to be broadcast, and review translations in a way that covers the story integrity. They can also pause wherever they want to examine the topic they are researching and easily switch between the language options offered by the platform. For example, one can study the difference between subtitles and dubbing of the same dialog, or easily view translations of the same series in different languages.

Two other aspects of the Turkish digital series also provide a basis for AVT research. The first is the frequent use of references to Turkish culture throughout the series. As seen in the analysis above, the series choose world-renowned regions of Turkey as locations and portray sociocultural strata in Turkey. Considering the mutually reinforcing nature of the translation-culture relationship, it is obvious that the Turkish series broadcast digitally will provide data for future studies in this context. In addition, by including characters from different regions and sociocultural strata of Turkey, it is possible to generate research topics on the translation of different accents. The other aspect is that these series feature leading actors who already have fans in various parts of the world with their television series. This means that these actors guarantee an audience for the platform in certain countries. In this context, a rich research area can be created especially for translation studies researchers working on the languages of Balkan countries, Turkic republics, South American countries, and Arab countries.

Last but not least, it is also more likely to conduct audience research on series aired on digital platforms than on television series. It is possible to track how much a series is watched on digital platforms and in which countries it captures the most viewers. Although Netflix currently shares very limited audience data, future research may lead to an improvement in data sharing. In the current situation, the accessibility brought by digitalization can still be utilized.

For example, audience comments can be accessed on the series' Instagram accounts or social media networks such as Twitter, and content analysis can be conducted on these comments. Especially on Twitter, it is just a click away to search for keywords and access comments on the subtitles or dubbing of a particular series or movie.

To sum up, changes are occurring in the sector as television broadcasting in Turkey shifts to new media platforms. These changes, which make themselves felt in many areas from the content of TV series to audience behavior, create a rich database for AVT research. In the case of the Turkish series, with the increasing number and variety of productions on digital video-on-demand platforms, studies on audiovisual translation will gain momentum and academic studies will also have a positive impact on the sector.

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**Chapter 27**

**Organizational Communication**

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## **INTRODUCTION**

Communication forms the basis of every activity, both individually and organizationally. One of the most important effects is the coordination feature. Considering the activities in the functioning of organizations, it is seen that coordination and communication have very important effects (Eroğlu, 2011: 122). In all organizations, communication is an ever-present activity. Because employees can establish a relationship with the communication tool in the organization and be aware of organizational activities. The effective and uninterrupted functioning of management functions in organizations depends on good organizational communication (Akat et al., 2002). A well-functioning organizational communication within the organization helps the employees to be motivated in line with the organizational goals and to increase their organizational commitment. Therefore, organizational communication processes are a vital element for the organization to continue its activities within the organizational structure. At the same time, communication processes in organizations are an issue that should be emphasized because of the effect they have on the psychology and mental health of individuals (Günbayı, 2007: 788).

## **THE CONCEPT OF ORGANIZATIONAL COMMUNICATION**

The concepts of "organization" and communication, which are used in different meanings by individuals working in the business world, can be explained with more than one definition. Organization is defined as a division of labor and coordination system that enables individuals to achieve goals that they cannot achieve alone, by combining their efforts, knowledge and abilities as a group by coming together with others (Koçel, 2005: 172). According to another definition, an organization is defined as a system of consciously coordinated activities or forces of two or more people (Karcıoğlu & Timuroğlu, 2004: 319). In this context, organizations are communities that come together to produce and have common goals such as customer satisfaction and profit. Every organization works with interrelated individuals with different characteristics in order to achieve its goal. At the same time, these individuals with different characteristics should be in harmonious communication with each other in line with the goals of the organization (Düzgün, 2019: 17).

Communication is the process of people acquiring information and reacting with their attitudes and behaviors according to this information (Zencirkıran, 2017: 113). Communication is the transfer of information, feelings and thoughts between people. In other words, communication means the transfer of information from one place to another (Gürdoğan, 2020: 67). It can be said that a communication process that cannot be established or works incorrectly

between the two parties will prevent the flow of information, meaning, emotion and thought exchange. Although communication has an extremely critical value in human life, the importance and value of communication is increasing with the differences in the fields in which it is used. Based on this, the value of communication is much higher in business life, which is at the forefront of these fields, and on this occasion, the concept of organizational communication comes to the fore (Güllüoğlu, 2012: 20).

Organizational communication can be defined as the exchange of messages that people and groups working in the organization carry out in line with the common goals of the organization (Güçlü, 2017: 858-859). Organizational communication has been defined as “a social process that allows a continuous exchange of information and ideas and the establishment of necessary relations between the various departments and elements that make up the organization, as well as between the organization and its environment, in order to ensure the functioning of the organization and to reach the goals of the organization” (Akat et al., 2002:342). According to another definition, organizational communication; It is the sharing of all kinds of meaningful human activities in formal and informal structures that play an important role in ensuring the cooperation between employees and their harmony with the environment, so that they can work efficiently towards achieving organizational goals by joining their forces (Geçikli et al., 2011: 166). Organizational communication is the element that provides the appropriate interaction between individuals and groups. Organizational communication is an important process both in providing communication and interaction between units within the organization and in ensuring the coordination of the organization's relations with its external environment (Tanriverdi et al., 2010: 105).

## **THE IMPORTANCE OF ORGANIZATIONAL COMMUNICATION**

Although communication is of great importance in all areas of life, it has the potential to create extremely critical and ultimately effective results in terms of business life. At the same time, communication, which is binding for business stakeholders, has a valuable organizational dimension. Organizational communication is one of the most important factors that enable organizations to exist and play a role in their continuation. The robustness of organizational communication and the formation of a wide network help to increase the quality of work. In particular, the quality of the communication with the employees makes a valuable contribution to the processes in a more positive way (Güllüoğlu, 2012: 22). The most important importance of organizational communication is the contribution of organizations to the realization of their

founding goals. Organizational communication is needed in order for the organization to function systematically, to function fully, to prevent conflicts and to ensure coordination among employees (Dökmen, 2006: 27).

In general, the importance of organizational communication in terms of business life can be listed as follows (Barlı, 2010: 316; Çelik, 2022: 5-6):

- ✓ Business in the real sense of an institution, organization, etc. It is a unifying building block element in terms of having an identity.
- ✓ It helps to make a healthy orientation in terms of coordination of employees; This coordination is also in question among the employees themselves.
- ✓ It is a form of guiding and encouraging message for the employees to focus on a common goal.
- ✓ It becomes a preferred solution tool for the progress of the process as planned in challenging business processes.
- ✓ It is a valuable element in terms of coordination and partnership among the enterprises as well as among the employees themselves.
- ✓ With a properly designed organizational communication process, it becomes possible to carry out the activities within the enterprise more professionally.
- ✓ Organizational communication is not just a process that employees maintain for work; Organizational communication is also an extremely valuable mechanism in terms of bringing human elements to the fore in the enterprise.

Organizational communication is important for the continuity and integrity of organizations. Organizational communication not only provides the relationship between the employees, but also ensures the harmony of the business with the external environment (Ölçer & Koçer, 2015: 342).

## **OBJECTIVES OF ORGANIZATIONAL COMMUNICATION**

Organizational communication is not a one-way process. Organizational communication also includes reactions and responses through feedback from the actions and actions taken to achieve organizational goals. If the feedback channel is closed, this communication process is not healthy. Organizational communication takes place as a two-way communication process that includes both the manager's influence on the employee and the employee's response to the manager. The objectives of organizational communication can be listed as the following items (Kurudayıoğlu & Deniz, 2001; Güçlü, 2017: 861):

- ✓ Ensuring that managers and employees are aware of the basic practices, problems and goals of the organization,

- ✓ Informing both managers and employees about important developments that will affect the organization and employees,
- ✓ Providing solidarity and encouraging employees,
- ✓ Ensuring that employees participate in management, realizing information requests.
- ✓ Notifying employees and other relevant persons of the organization's financial plan, earnings, projects, activities,
- ✓ To enlighten the employees by introducing their managers and departments through organizational media,
- ✓ Announcing the legislation related to the work area of the organization to the employee,
- ✓ To introduce the organization in the external environment with employees with a high level of organizational knowledge.

## **FUNCTIONS OF ORGANIZATIONAL COMMUNICATION**

Organizational communication refers to the sharing of thoughts, ideas and information among the employees and levels of an organization. Organizational communication functions were examined by Champoux in six groups (Eskiyörük, 2015: 81).

**Knowledge Sharing:** It is stated that the most critical element for the correct management of knowledge in organizations is knowledge sharing. In information sharing, information must be transferred from one source to another source. However, ineffective information sharing creates communication problems in organizations (Ipe, 2004: 399). Communication processes help to share information with people both inside and outside the organization. This information includes the organization's mission, strategy, policies, and job descriptions. The mission definitions of the organization are communicated to the members of the organization, shareholders and people outside the organization through advertising and the press (Aydın, 2019: 24).

**Providing Performance Feedback:** Performance management is a form of systemic management that consists of goal setting, evaluation, feedback and rewarding stages that organizations implement in order to get more effective results from their employees. It informs the employees about their job performance processes. Feedback reduces uncertainty, gives people important information about their performance levels, and plays a resource role in the commitment of employees to the organization (Aydın, 2019: 24). Thanks to performance feedback, employees can more easily understand what is expected of them and their current situation, determine their needs such as training and development more accurately and establish a more qualified communication

with their managers. At the same time, it is thought that feedback is an important source of motivation for employees (Helvacı, 2002: 157).

**Uniting and Coordinating the Parts of the Organization:** One of the functions of communication is the unifying and coordinating function. In the cultural context, it is through communication that individuals who are in a social system connected to each other ensure the continuity of their mutual relations and commitment. While communication enables individuals to gather around the goals of the organization, it also has an important function in terms of preserving their psychological integrity and balance (Akdağ & Taşdemir 2006: 141). The organizational communication process helps to unify and coordinate many parts of the organization. As an example, the communication between the project engineering, manufacturing and marketing departments helps the successful and high quality development of new products (Aydın, 2019: 25).

**Persuading Others:** A large part of communication in organizations aims to change people's thoughts, attitudes and behaviors. Effective management of a crisis in organizations or persuading someone else about an issue is possible with good communication. Thanks to a good communication, it is seen that the communicator influences the person in front of him and persuades him to act in the direction of the thought he believes (Akdağ & Taşdemir 2006: 141).

**Expressing Emotions:** The emotional function of communication centers on the human characteristic of the organization. Individuals need to constantly raise their satisfaction or dissatisfaction with their responsibilities, supervision and working conditions (Sabuncuoğlu & Gümüş, 2012: 48). Expressing emotions in various forms is defined as expressing emotions. Expressing emotions is one of the dimensions of emotional intelligence. For an effective and sustainable organizational communication, employees should be aware of their emotions and express them correctly. At the same time, organizations should create an environment that will enable employees to express their feelings (Kuyumcu & Güven, 2012: 592).

**Innovating:** Organizations can transfer developments, innovations and trends in the world or in the sector to the institution through communication. In this way, the competition of modern organizations in the local and world markets can be more meaningful. Thanks to communication, developments are followed closely and innovations such as creative and new products, services and different marketing techniques emerge (Sabuncuoğlu & Gümüş, 2012: 48).

## **TYPES OF ORGANIZATIONAL COMMUNICATION**

Every organization has its own communication type and operation. Organizational communication occurs in the structure that we describe as the institutional organization, which occurs about the relations within the organization, and can be examined in two main groups as formal and informal (Güllüoğlu, 2012: 27).

### **Formal Communication**

Formal communication in organizations can be examined in three groups as vertical communication, horizontal communication and cross communication (Geçikli, 2002: 436). vertical communication; It is the communication that creates the flow of instructions and information between the top management and the lower management in organizations. It is a form of formal communication established from the top down and the bottom up in a hierarchy. Communication maintained from the lower level of the employees to the upper levels is called upward communication (Roberts & O'Reilly, 1974: 323). Top-down communication starts with the top manager and goes down to the lowest level employee. The main purpose of top-down communication is; informing subordinates, evaluating their performance, informing them about the organization's goals and policies (Ünüvar & Bilge, 2009: 60). Horizontal communication; It is the type of formal communication that takes place between unit managers and employees at the same level in organizations. Vertical communication within the organization may not always work efficiently and effectively. Since the hierarchical order is not observed in the horizontal direction, communication takes place quickly (Demirtaş, 2010: 415). Cross communication; It occurs when the manager of the organization establishes relations with units outside his own unit when necessary. Cross communication means using up, down and horizontal communication. This type of communication is used to save time or speed up information exchange in extraordinary situations (Sabuncuoğlu & Tüz, 2014: 83). Cross communication emerges as a result of functional authority relations (Bektaş & Erdem, 2015: 127).

### **Informal Communication**

In organizations, informal and spontaneous communication is as common as formal communication, and it is also effective in terms of personal, group and organizational life (Eren, 2009: 426). Informal communication is the form of communication between the structures formed by the employees rather than the formal rules and the individuals formed within these structures. It is a natural communication process in which the human and social needs of the employees are met. Informal communication system consists of close relations between its

employees (Eskiyörük, 2015: 97). This communication includes one-way whispers, gossip, and probability groups. One-way whispers are the situation in which information is transferred from one to another (Oğuzhan, 2020: 18). Organizational communication is sometimes dependent on the characteristics of people, sometimes on the inadequacy of formal communication and sometimes on people's concerns, for reasons such as anxiety-producing situations for the future, uncertainty, changes that cannot be understood within the organization, personal feelings, situations where formal channels are insufficient, distrust towards formal channels, conflict within the organization. (Koçel, 2005: 544).

## **ORGANIZATIONAL COMMUNICATION NETWORK MODELS**

Organizational communication networks are a model that presents a suitable structure for understanding the internal and external communication structure of the organization. Communication networks in organizations provide a key role in the harmony of relations between all members of the organization, in the easy and fast transfer of information exchange, in information and data communication between the organization and its external environment (Ada, 2007: 549). Organizational communication network models are described below.

**Central Communication Model (Wheel Model):** The central communication model is a communication model that shows the classical organizational structure and in which the decision-making and decision-making authority is gathered by the top manager and in a single hand. It is a form of communication model where all members of the group exchange information with the individual in the managerial position but do not exchange information among themselves. In this communication model, centralization is very high, the number of communication channels is low, the speed and accuracy of the transmitted information is quite high (Eren, 1998: 288).

**Chain Communication Model:** In the chain model, some members of the group are left out. For this reason, communication may lose its functional quality from time to time and become a model in which interpersonal relations weaken and the productivity of the group is endangered (Akat et al., 2002: 353). It is seen as the model that allows the most centralization after the centralized model. The members at the far end have limited communication, while the individual at the center has the opportunity to receive information from all members. Accuracy and speed are low as the information passes step by step (Ada, 2007: 549).

**Star (Y) Communication Model:** In the Y model, which is generally preferred by managers, the fulfillment of the job in the organization takes place



quickly. The level of accuracy in reaching the message is high. The leader is prominent and the degree of centralization is high. However, the level of motivation and satisfaction is low (Ada, 2007: 549). Although it seems open and democratic in the beginning, it later turns into an autocratic group structure (Elma & Demir, 2000:142).

**Flat Communication Model:** The flat model is a communication method that is generally established between equal and informal groups (Tutar, 2009: 150). Group members have the opportunity to communicate with each other. It has a democratic structure since there is no communication monopoly in the center. Therefore, there is no dominant leader and the level of centralization is low. Motivation is high, information accuracy is low. The flow of the message and the decision-making process progress slowly (Ada, 2007: 549).

**Free Communication Model:** Free communication model is the most democratic communication model compared to other communication networks (Tutar, 2009: 152). The free model, in which all communication channels are always open to everyone and everyone communicates with everyone without any restrictions, is a democratic model. Everyone in the organization has the opportunity to communicate with each other (Can et al., 2006: 357).

## **ORGANIZATIONAL COMMUNICATION BARRIERS**

Although there are many benefits that organizational communication has provided within the institutional structure, the fact that the process is not designed in a sustainable way or that various obstacles arise regarding the continuity of the process causes the organizational communication moves of the institutions to experience obstacles (MEGEP, 2012: 37). In general, organizational communication barriers are explained below.

**Physical Distance:** The physical factors that hinder the communication process are mostly related to the communication channel and environmental conditions. For example, an important physical factor affecting verbal communication is noise. Similarly, technical malfunctions affecting written and verbal communication tools can be mentioned under the title of physical factors that prevent communication (Koçel, 2005: 544).

**Communication Environment:** The barriers arising from the communication environment are mostly related to the communication channel and environmental conditions. Some of the environmental factors that prevent communication; communication environment is too hot or cold, humidity level is high, bad lighting and noise (Can et al., 2006: 360).

**Status Differences:** In organizations with a centralist and overly hierarchical structure, there may be a communication breakdown between the subordinates

and superiors. The flow of communication in such organizations is generally top-down. As a natural consequence of this, it is difficult for the subordinates to reach the superiors. Apart from this, subordinates are not very inclined to bottom-up communication, with the thoughts that their superiors will not respect, will be indifferent, or that no solution can be provided to their problems and complaints. On the other hand, it is also a problem that status and related roles are defined differently by subordinates and superiors and that differences in status according to time and environment are not taken into account (Karaçor & Şahin, 2004:105).

**Gender Differences:** Differences in communication styles can also be an obstacle to healthy communication. Men and women have different communication styles. For example, women prefer to be face to face in communication, while men prefer to be side by side (Can et al., 2006: 360).

**Cultural Differences:** People from different cultures have different values. These differences create barriers to communication in organizations. For example, two people from two different cultures may give completely different reactions to the same message (Can et al., 2006: 360).

**Language Problems:** One of the most important barriers encountered in communication arises from language and terminology difficulties or inadequacies. It is seen that the words in a language sometimes have more than one meaning and they have nothing to do with each other. The fact that the words with different meanings are not known by the recipient or that they attribute a different meaning to them depending on their own experience causes communication problems (Karaçor & Şahin, 2004:105).

**Lack of Feedback:** Feedback has a very important place in organizational communication. A healthy communication cannot take place when feedback is insufficient in communication. The feedback shows where it has been, where it's going, and what efforts should be focused on. Factors such as the sender's ability to encode the message, the channels that enable the message to be transmitted, filters, and the environment are effective on the positive or negative feedback (Yürük Kayapınar, 2017:120).

**Time Pressure:** The communication problem related to the time barrier can be evaluated from two perspectives. The first is not taking enough time to listen to the source. In this case, the receiver cannot fully perceive what the source is trying to convey. The second problem related to the time barrier is that the source is listened by an intermediary person, not directly by the buyer. In this case, the mediator will perceive the message conveyed by the source in his own way and give it a meaning (Karaçor & Şahin, 2004: 106).

**Inadequacy of Official Communication in the Organization:** Every person wants to have information about the environment in which they live. Insufficient flow of information from reliable sources leads to the spread of rumors and false information. The lack of communication that causes restlessness and insecurity constitutes an important communication barrier (Çakır, 2020: 979).

**Honesty and Distrust:** During communication, people should clearly and clearly state their wishes. During communication, people should say what is and should happen without sacrificing honesty, instead of making promises for things they won't do, using expressions such as "we'll handle it, we'll do it, we'll take care of it". The presence of insecurity within the organization causes every message transmitted in terms of communication to be questioned and suspicious (Topçuoğlu, 2021: 227)

**Selectivity in Perception:** Selectivity in perception is the situation in which some message or part of the message is not perceived intentionally or unintentionally. If individuals have certain prejudices, they will not perceive messages from certain sources or they will infer a meaning different from what the sender meant. This also means that individuals will perceive what they want to hear (Koçel, 2005: 544).

**Information Overload:** One of the important problems of managers in modern organizations is that they are over-communicated. Sending more information than necessary to the other party causes information overload. Information overload can cause messages to be ignored or ignored, to make more mistakes and to fail to correct these errors, to delay or avoid them. If managers participate in all potential communication processes, administrative activities will be disrupted (Çakır, 2020: 978).

## **IMPROVING OF ORGANIZATIONAL COMMUNICATION**

The manager has a great role in order for communication to progress in a healthy and effective way in organizations. Some problems may arise in the communication process in organizations or between individuals. Some of the techniques used to remove these obstacles and to make communication more effective are summarized below (Koçel, 2005: 554):

**Results monitoring:** It is about feedback in the basic communication process. Requesting feedback from the receiver about the business the message is about increases the effectiveness of communication.

**Management of the news feed:** It aims to eliminate unnecessary news in order to prevent time loss. Considering that today's manager is at the center of the messages, it reduces the burden of the manager by sending messages related

to non-routine work only by making a selection in bottom-up communication in organizations. In internet and intranet applications, this flow management can be applied more easily with various passwords given to users, and it can be planned to whom the messages will or will not go to.

**Empathy:** One of the things related to the human approach is empathy. Empathy is the process of putting himself in the place of the other person, looking at things from his perspective, and understanding, feeling and conveying that person's feelings and thoughts correctly. In the communication process, a manager should examine the events from the perspective of the receiver before coding the message to be transmitted. Thus, he can foresee the communication barriers he may encounter.

**Again:** The role of repetition in education is known. In communication, the repetition of the message will contribute to the success of the communication. This application can increase the impact of the message on detection. Thus, the receiver can better understand what the message is saying.

**Simplification of the language used:** In order for the message to be perceived correctly, it must be simple and at a level that the receiver can understand. Choosing concepts from words that everyone can understand requires skill. The manager should also have this skill. Effective communication can be achieved with some visual forms that are thought to be more descriptive and prepared next to the words.

**Increasing communication channels:** The effectiveness of communication can be increased by using channels such as bulletin boards, intra-organizational bulletins, meetings, suggestion boxes and grapevine (informal communication-gossip) as well as verbal or written communication in the communication process between the asy-superior.

**Increasing communication technology and use of computers:** The development of computers and computer-based management information systems (MIS) has been effective in speeding up the flow of information within the organization. In this way, the manager, who has the opportunity to get up-to-date information at any time, can both increase the ability to make healthy decisions and make the control function in the organization more effective.

In short, there cannot be a manager who does not know how to use the communication process. Every manager uses the communication process continuously as both sender and receiver. He should also know how to manage this process so that he can use management functions. At the same time, it is important to note that improving organizational communication requires both individual contribution and skills and sufficient organizational skills (Kıraç, 2012: 87).

## CONCLUSION

Today, there is an era in which information and communication technologies are used extensively. In such an age, communication, which is an indispensable part of individual and social life, has a vital importance. In fact, communication enables to be positive in relationships, both in the individual and organizational environment, and to look at the events from the bright side. In this respect, communication is an important phenomenon that will contribute to the formation of a positive organizational culture in terms of organizational success (Küçük, 2022: 1).

The benefits of organizational communication in realizing organizational goals and achieving successful achievement can be listed as follows (Demirel et al., 2011: 35):

- ✓ It provides the management with the opportunity to obtain the information needed for decision making.
- ✓ It facilitates the understanding of the decisions taken by the managers by the employees in accordance with their purpose and the transformation into action.
- ✓ It strengthens the organizational commitment of employees and improves customer relations.
- ✓ It enables employees to develop and reinforce their sense of sharing.
- ✓ It ensures the spread of an understanding that reduces conflict, friction and pressures arising from the business environment.
- ✓ It contributes to the execution of organizational activities in cooperation and provides continuity to a stable environment.
- ✓ It accelerates the change process by creating an environment of trust that helps to reduce resistance to change.
- ✓ Its error-reducing effect allows to reduce costs.
- ✓ By positively affecting the behavior options of the employees, it provides an organizational performance-enhancing effect.
- ✓ Increases organizational profitability and efficiency.
- ✓ It facilitates the effective implementation of strategic plans.

Organizational activities must be fulfilled in order for organizations to achieve their goals and ensure their continuity. The human factor is an indispensable element for organizations in the performance of these activities. Organizations should provide their employees with all the information needed for the job. Therefore, organizational management should create a simple and effective organizational communication that is most suitable for their organizational charts (Tutar, 2009: 188).

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## Chapter 28

# Transformation of the Information and Content Production Process in the Digital Age: Exaggerated Images and the New Ordinary Experts

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## **Introduction**

The most distinctive feature of the age we live in is the social structure based on digital information network. The most spectacular manifestation of the transition to the information society is undoubtedly linked to the growing role of information communication technologies, such as the computer, the mobile telephone and the Internet etc., while, at the same time, the substantial changes apply to the whole structure of society (economic, social, cultural) (Székely & Nagy, 2011:2186). The use of new communication technologies all over the world is an inevitable process in every area of our daily life. Digital information is all around us. More and more information is either born digital or digitally reformatted (Yakel et al., 2011:23). As Himma (2007:259) states, the amount of online content to which people in reasonably affluent nations have access is increasing at an astonishing – even alarming – rate. This digitalization process, which started with the social networks provided by Web 2.0 technology and continued with Web 3.0 and Web 4.0 technology, has increased rapidly. Therefore, the increase in digital-based opportunities offered to the people of the 21st century world as a result of the rapid developments in information and communication technologies has enabled the information production and consumption process to accelerate and intensify as never before in history. As Heylighen (2002:12) states, it is extremely easy to find, produce and disseminate information today when compared to earlier periods, and this practically reduces or eliminates the cost of publication. In this sense, according to Ünal (2018) as a result of new communication technologies, digital-based social environments have increased the possibilities for people to search for and access all kinds of information and content, and also to exchange information in recent years.

At this point, as Bawden and Robinson (2009:180) stated, the context in which these issues arise is the ‘digital transition’; the move towards a situation in which most significant professional and scholarly information – and a good deal of information which is neither professional nor scholarly – is available in digital rather than printed form. In other words, this age marks the new era of social and economic organization, in which the production and transmission of information and content on all kinds of subjects becomes widespread, and change and development become inevitable. Thus, new technologies have brought about a fundamental change in [knowledge-seeking], communicating, socializing, creating and learning practices (Helsper & Eynon, 2010:503). All in all, contemporary generations are living in an utterly new communications environment that has been shaped by ease of information collection and access to knowledge (Vercic & Vercic, 2013:600). However, the extent to which all

these radical developments lead people to seek more qualified information, content and a higher culture remains extremely unclear. In any case, the amount of information and content exposed today is increasing. Information and content are ubiquitous, and its extent is nearly impossible to quantify. The information available now is astonishing and is still continuously growing (Renjith, 2017:73). As a matter of fact, new digital environments shape the relations of active users of these media with information and content production and consumption in all aspects.

Undoubtedly, the most striking issue in this new world order process is the rapid changes and transformations in the production, consumption, viral spread and perception of information and content. How this change and transformation is perceived and interpreted is also of particular importance. In this sense, it should be stated that the value attributed to knowledge is shaped around a universal and ontological problem rather than a technical one. Ultimately, innovations in communication technologies, the emergence of the internet and more specifically, digital social media platforms have led to a new phase in the production of information. With the spread of digital social network technologies and the emergence of the potential of each individual to produce content, media and social network discussions have gained a new dimension. The development of digital social networks is also one of the main dynamics that affect our relationship with information. The agents, who are in a secondary position in the production of information and content, have risen to the primary position with the opportunities created by social media. The information that was spread only one way through newspapers and television in the previous periods has accelerated with the internet and digital technology, and it has become possible to form huge piles of information and content in which everyone is a partner in a short time.

Digitized media provides people with platforms and tools they can use to express all kinds of ideas and impulses. Many social media tools such as blogs, Facebook, Twitter, Pinterest, Instagram encourage personal expression and content creation with video. The process in these channels does not take place unilaterally; it also provides a platform that will allow people to comment and respond to what others have shared. In everyday practice, this happens every time, every day (Chayko, 2018:128). Manuel Castells (2016) defines this new form of communication as mass self-communication. This form of communication is a new form of communication based on interaction with purposeful communication practice and the ability to send messages to many people. In this sense, the internet and digital platforms have unleashed an explosion of creativity. These new forms of expression are unlike anything the

world has seen before. People are increasingly interested in creating information, news and entertainment in online spaces (Palfrey & Gasser, 2017:101). So, people started to create their own content and programs on online platforms. Therefore, digital social networks offer individuals the opportunity to be a producer and a consumer at the same time, thus eliminating the distinction between producer and consumer. Accordingly, individuals can produce content at any time, reach individuals who produce content, and at the same time have an unlimited consumption network. Therefore, the digital possibilities of the new age have enabled everyone to have the opportunity to produce content. This transformation in the form of communication has broken the hegemonic structure of knowledge production by spreading knowledge production from limited circles (such as editorial boards, academia) to a wider social mass. The possibilities offered by the digital world enable more people to participate in informing about different subjects. The democratizing effect of this is also very important.

However, this diversity in digital media is not entirely a good thing. Excessive diversity can lead to too much unreliable information. Excessive diversity can make it difficult to decide who is an expert and who is not. In this sense, it can be difficult to distinguish between valuable and worthless content. Therefore, those who create or produce content through these channels can gain prestige in the society unjustly and easily. Therefore, digital social platforms can enable content producers who do not have expertise in any subject to gain expertise status. As a matter of fact, in this text, the effects of new media technologies in the digital age are tried to be discussed with a critical approach around the themes of the banalization of information production and consumption, the vulgarization of information and the discrediting of real expertise. The basic assumption here is that technological developments, which we consider as progress in society, and accordingly, rapid changes in the production and dissemination of knowledge bring along some side effects that make it increasingly difficult to predict and control subsequent processes.

### **Developments in Communication Technologies and Pro-Consumption in the Digital Age**

In the twenty-first century, which we call the digital information age, the use of digital-based information and communication technologies is at the center of our daily lives. Unlimited advances in information management reveal that information technologies are moving towards being an important source of power that can change the balance of power in the world, both in terms of tools and equipment (Yeşilorman & Koç, 2014:121). In other words, intercultural

communication and information transfer have become quite practical with the spread of digital technologies around the world in a short time and their introduction into the lives of societies. The main feature of the information circulating in digital media is the free circulation of all kinds of information: besides revelation information, myth information, technical information and subjective information, pure academic information is also in circulation (Özcan, 2011:185-186). The reality today is that the internet and digital technologies have reduced the cost of accessing all kinds of information, thereby increasing both the production and dissemination of information tremendously (Metzger, 2007:2079).

It is an inevitable process that technological developments have indirect effects not only on individuals but also on information. Not only the process of acquiring information, but also the process of producing knowledge has changed, and therefore the quality of the information produced has also begun to change. As a result, digital media is a technology that develops a cheap and practical response to the increasing demands of people to produce information, to store/share the produced information and to reach it easily. With the help of this technology, people can access information in many fields easily, cheaply, quickly and safely (Karabulut, 2015:15). Undoubtedly, it can be thought that the effects of these technological transformations (as a process and product) on information will be quite profound. Indeed, the knowledge process will appear to be affected in terms of its two major functions: the search for and transmission of information. An example of the first function accessible to non-experts might be genetics, which takes its theoretical paradigm from cybernetics. For the second, it is already known how the operations of acquiring, classifying, preparing for use and using information for benefit have changed with the reduction, standardization and cheapening of tools and devices (Lytard, 1984).

Today, with the emergence of the potential of each individual to produce content in digital environments, media and social network discussions have gained a new dimension. The development of digital social networks is also one of the main dynamics that affect our relationship with information. Today, the line between the producer and the consumer has become blurred in the process of creating content in digital media. The process, which started with Web 2.0 technology and continued with web 3.0 and 4.0 technology, has elevated individuals from being passive buyers to producing. The ability of individuals to contribute to social networks by producing content is also seen as positive developments in terms of active agency. Alvin Toffler (1980:262) introduced the concept of prosumer in the early 1980s. This concept means the blurring of

the line separating the producer from the consumer (Fuchs, 2017:72). Since the 1980s, the concept of prosumer has been used by many academics to denote how the agency of users oscillates between bipolar categories of producer versus consumer and professional versus consumer. During this time, hybrid concepts such as producer and co-creator were introduced into academic jargon to emphasize the importance of users' increased production prowess (Dijk, 2016:162; see Bruns, 2007). Today, people can present their own perspectives, present their products and share their thoughts with the masses by editing their own content.

In this sense, digital social networks offer individuals the opportunity to be a producer and a consumer at the same time, thus eliminating the distinction between producer and consumer. In digital environments, individuals can produce content at any time and at the same time have unlimited consumption opportunities. Cultural theorist Henry Jenkins (2006:24) states that there has been a significant paradigm shift in the way media content is produced and circulated. Audiences, often standing at the intersection between old and new media, demand the right to participate in culture. This culture allowed ordinary people to express themselves. In the era of the old media, media consumers had little power to shape media content and too many barriers to market participation, whereas the new digital environment is expanding the scope and reach of consumption activities (Jenkins, 2006:215). Content that the individual was only a spectator in the past, has now turned into events where the individual is the producer and manager, thanks to digital technologies. Many amateurs are proud of developing their skills and turning their hobbies into a profession in digital social media (Douglas, 1999)

As a result, information and content production-consumption opportunities come to the fore more and more in our daily lives with the increase in information and communication technologies that are constantly developing. As Bawden and Robinson (2009:181) stated, these technical advances have led to a much more rich and complex information environment. Thus, much more information and content can be produced, consumed and disseminated by ordinary individuals through more diverse media and interfaces. Digital social networks show the feature of being an environment where information is freely circulating. Positive and negative features continue to be attributed to the opportunities provided by digital social networks in terms of both information production and information consumption, since it has a borderless structure without being subject to a ban.



## **Information-Content Production and the Discrediting of Expertise in the Digital Age**

Innovations in communication technologies, the emergence of the internet and more specifically digital social media platforms have led to a new phase in the production, consumption and dissemination of information and content. Technological tools, which are well established in daily life, cause almost unlimited amount of information to become a part of individuals' lives. This free-floating information, which reaches anywhere desired over a worldwide network without passing through any filter, seems to have affected individuals' perceptions of information and their approaches to it. Producing, transferring, storing and accessing information has been a task that requires great effort and time for most of history. In this field, where only a minority of people work, the reliability and value of the limited amount of products that emerged were higher than today. While accessing this information required a certain amount of time and extra effort until a short time ago, the nature of the information produced and consumed today and the method of accessing them seem to have changed greatly.

Unlike the early periods of internet technology, the era of digital social media platforms revealed the potential of each individual to produce content. The development of digital social networks has also been the main dynamic that affects our relationship with information. Ordinary individuals, who were in a secondary position in the production of information in the previous periods, have risen to the primary position with the opportunities created by digital social media platforms. Digitized media provides people with platforms and tools they can use to express all kinds of ideas and impulses. Many social media tools such as blogs, Facebook, Twitter, Pinterest, Instagram encourage personal expression and content creation. In this sense, digital social networks offer individuals the opportunity to be a producer and a consumer at the same time. Therefore, the digital possibilities of the new age have enabled everyone to have the opportunity to produce, consume and disseminate all kinds of information and content.

### ***Fragmentation and Diversification of the Hegemonic Structure of Information and Content Production***

In fact, information has been the monopoly of a certain group of society throughout human history. According to Furedi (2017) this group, on the other hand, has generally been the privileged part of the society, and information has given these social groups an advantage. In fact, these groups used information as a hegemonic tool in this way. However, this situation has changed with the

developments in communication technologies. While the Internet offered users only a passive buyer-consumer position in its early days, later on, users began to create their own content on the Internet and even to combine these different contents with multimedia applications and share them from certain platforms (Anadolu, 2016:127). Social media applications such as Twitter, Youtube, Instagram as sharing tools are popular individual content production and broadcasting areas that allow people to produce and share all kinds of content.

In this sense, the internet has unleashed an explosion of creativity. These new forms of expression are unlike anything the world has seen before. People are increasingly interested in creating information, news and entertainment in online spaces (Palfrey & Gasser, 2017:101). So, people started to create their own content and programs on online platforms. Digital social media platforms have enormous potential as a creative tool. People tend to use these tools to create their own content and build careers. The factor in this creativity explosion is the technology infrastructure that allows people to access and reorganize digital content (Palfrey & Gasser, 2017:110). Of course, considering the encompassing and inclusiveness of technology like a kind of atmosphere in today's societies, a way of thinking independent of the vehicle itself and its qualities is almost impossible. It is increasingly important to understand the social communication that emerges through the possibilities of technology without making a deterministic idealization (Timisi, 2016:17). The nature of digital technologies is changing the way individuals deal with the world. In this sense, digital technology gives everyone the means of self-expression and allows them to speak—and be heard by others, including those in power—in ways that past generations could only dream of. New creators of the digital age no longer need to rely on old gatekeepers like professional agencies, editorial boards and producers. Digital technology allows creators to roam alongside traditional agents using hardware and software from their homes (Palfrey & Gasser, 2017:113).

As a matter of fact, the horizontal organization of information on the Internet via hyperlinks eliminates the hierarchy of information, making it possible to connect everything with everything else on a single plane. For this reason, the disappearance of private links and the fact that everything is equally accessible makes it easier to navigate the information network (Dreyfus, 2016:24) and to produce and transmit content at the same time. In this context, today, people can create their own followers or communities while sharing information and stories about themselves through digital blogs and social networks. By removing the existing borders, digital social media environments can enable people with or without different virtues to express themselves in front of the masses and as a

result acquire a social position. People who have started to shape the online environment and produce content in the direction of their own interests, purposes and tastes with the opportunities provided by digital technology are able to appeal to the masses who listen to themselves by communicating with others over time. Remarkable statements and actions increase the followers of content producers in digital environments and make it possible to expand the network. So, decisions about what to produce and what not to produce are no longer the responsibility of the few content industry professionals (Palfrey & Gasser, 2017:114). The fact that large numbers of people can join and contribute to the online culture layer has brought about a culture that is even more diverse than it was a few decades ago. Diversity -the broad distribution of information from a variety of sources- is important because it enhances democratic processes and thinking. Diversity allows people to access wider perspectives. It draws people into public communication by presenting ideas and forms of expression that may interest, challenge, or even disgust them. In turn, diversity helps to engage people in public communication (Palfrey & Gasser, 2017:114).

This transformation in the form of communication has broken the hegemonic structure of knowledge and content production or creativity by spreading information and content production from limited circles (eg, editorial boards, academia, scientific organizations) to a wider social area. As stated by Palfrey and Gasser (2017) in the future of digital creativity, certain orders are bound to be broken. In a world where content on every subject can be found in an abundance of unseen, unheard, no group will be able to dominate as they used to be. The possibilities offered by digital platforms turn people from being passive consumers of traditional media to active producers and participants who create meaning in their own cultures. In this direction, proponents of the internet-based approach point to the fact that crowds can be extremely wise. The fact that there are so many contributors, even at an amateur level, brings greater input richness and higher overall accuracy. After all, in today's world, more and more people - mostly amateurs - are producing more information and content. This information and content is sometimes of high quality and sometimes not. Digital information and content production is highly dispersed and traditional gatekeepers (e.g. editorial boards, academia, scientific organizations) are taking a less active role as power brokers.

### ***Exaggerated Images and the New Ordinary Experts***

Digital social platforms are creating a marketplace for ideas that can serve society well. If we look at the world from this perspective, ideas and information are like the products that consumers choose from among them in a

market. So the more varieties there are, the better. We are experiencing something extraordinary right now: a real-time trial of the more mind-blowing view that more information is better for society (Palfrey & Gasser, 2017:142). However, this diversity in digital media is not entirely a good thing. Excessive diversity can lead to too much unreliable information. In the age of digital technology, the real world is produced through images and the world is mostly experienced through screens. The prevalence of this situation makes it difficult for the individual to contact the reality of the world and breaks the connection with reality. In other words, digital technologies institutionalize the escape from reality (Robins, 2013:49-53). On the other hand, the rapid growth of the digital world with increasing information and communication produces a copy world that is about to dominate the real world (Balandier, 2019:53). Many daily practices are shaped by encounters in the digital world, and these encounters impose themselves on the real world. This communication structure, which eventually emerged through digital technology, makes it possible to exist in all conditions and diversity without taking risks and responsibility.

Thus, the fact that everything can be fictionalized makes it difficult to distinguish between what is right and what is wrong or what is good and bad, and to distinguish between valuable and worthless (quality and poor quality). When each group or individual produces or finds its own truth (and the best) for itself, the truth is lost in the black holes of cyberspace (Oruç, 2021:102). As Keyes (2004) states, in almost every period of history, people have used unreal information in the public sphere for their own interests. In this period, which we are in the first quarter of the twenty-first century, it is possible to say that there have been significant changes in our perspective on real information, as the possibilities of incorporating too much information into communication very quickly. In fact, in this age where digital social media platforms are dominant, it can be said that there are significant changes in people's definition and understanding of truth. In this regard, Postman (1994:26) mentions that the definitions of truth depend, at least to some extent, on the character of the communication medium that carries the information, and how much the media has permeated our epistemologies. Here, emphasis is placed on the relationship between the sources of truth, knowledge, and access to information.

In fact, the problem of separating good from bad, wrong from right is as old as civilization. But in this age, people live surrounded by so many sources of information and so many services that allow anyone to be a writer, editor or an expert on a subject, that it has become much more difficult and complex than in previous times to distinguish the good from the bad, the valuable from the worthless (Palfrey & Gasser, 2017:139). In this sense, extreme diversity makes it

difficult to decide who is an expert and who is not an expert on any subject. The existence and technical equality of all information in the cyber environment has greatly individualized the choice of which information is more scientific (Oruç, 2021:104). The individualization of the choices on this subject coincides with the pluralist, particularist or fragmented society conception of the post-modern understanding. Because, thanks to the possibilities offered by digital social networks, actors in the academic institutions of the society or real experts are no longer the only authorities on scientific expertise, as in all other subjects. Now, qualifications and titles such as teacher, master, trainer, which can be acquired as a result of an academic and intellectual institutional process, have now turned into rhetoric that can be used by anyone who can reach a certain audience in digital environments. For this, creating an effective and positive image is paramount. Because, in this age, presentation and image seem to be more important than information and content itself.

As a matter of fact, in this age, presentation and image seem to be more important than information and expertise itself, which may lead the masses to be mistaken in the face of these images. Individuals may present themselves as experts even though they are not experts in these media, or they may present their low level of expertise as more. Or, the criteria for expertise can become extremely subjective and relative, which can vary from person to person. For example, on digital social platforms, content owners often lack a face-to-face relationship with their followers. Content producers can be anything thanks to the images they create with the possibilities offered by the digital environment. They can look wise, they can be mysterious, they can look beautiful, they can pretend to be experts. Of course, this is also something that requires skill, but people may not be who they impersonate or present themselves to. As a result of this, the degree of expertise attributed by the society in a misleading way may vary according to the images, presentations, number of followers, number of likes and shares created by content producers in digital media. The number of followers and likes can also become the most important variable or criterion in determining the degree of expertise. Another criterion that ensures the continuity of respect for the skill or level of expertise of the content producer is to constantly produce content, provide information, and evaluate. Actively producing at certain moments of the day is important in order to gain the loyalty of the masses and to make the positive image sustainable. The state of being active parallels the increase in the degree of expertise attributed. The motivations of content producers such as recognition, cultural impact, economic interest and self-expression are of great importance in the content production process.

In this way, hundreds of subjective narratives or content, which have gained reputation thanks to the images created about all kinds of events and subjects in digital environments, can come to the fore. These narratives or contents can be circulated at an extraordinary speed in accordance with the established prejudices and perceptions of individuals. It takes the position of truth, good, reliable and quality that is the most popular (in terms of quantity) among the disseminated narratives or content. Thus, information and content become part of image games. Information and content with the strongest image-based narrative (in terms of quantity and quality) can easily reach the level of correct, good and quality. The fact that having a reputation today is not about being good and right, but about appearing to have these qualities in the media and being perceived as such by the public cannot be ignored. Reputation feeds on perception, not reality. In this case, a vicious circle is formed, and looking good, correct and expert is more important and effective than actually having these qualifications (Oruç, 2021:104). As a matter of fact, the perception that it is necessary to create a strong image in order to obtain the status of expertise is gaining prevalence in societies.

In fact, the fact that it has become easier to reach expert status has created a climate in which individual satisfaction is more important than content in many areas of life. Furedi (2017) defines people living in this climate as *Philistines*. Furedi argues that philistinism has permeated every aspect of daily life, and that the world of education, art and politics has become increasingly simple and vulgar. According to him, education has been restructured on the basis of making students (and parents) happy rather than quality and giving more information. Similarly, in the art world, practices such as presenting classical works to the audience or listeners by simplifying them, organizing events that appeal to the general public for the popularization of museums are becoming widespread and encouraged. Likewise, it can be said that academia is increasingly focusing on project-based market outcomes. This situation seems to have affected the way individuals perceive information and content production, experts and expertise. When considered within the framework of participatory culture, content production refers to the practice of cultural production. From an industry perspective, it is considered as a dynamic that revolves around the marketing and copyright circle and is valued over profit. In this sense, according to Lyotard (1984) information is produced to be sold and consumed to be produced to be sold, to be valued in a new production. In both cases, the goal is exchange. Information ceases to be an end in itself and loses its use-value.

As a result, intense content production is observed in digital environments, which is mostly far from being an end in itself. This intense flow of information and content also causes the noise effect. As a result, there is uncertainty about the value and truth of the content presented, and contradictions arise between information or content providers (Balandier, 2019: 51). In this sense, social media allows individuals to express all their ideas, from the most irrational to the most scientific, on every subject, and can cause good and evil to be mixed. Considering the enormousness of the information network, the individual's search for truth, goodness and quality becomes difficult.

According to Origgi (2018:6), in this case, the only criterion left in the hands of prudent individuals is reputation: For the individuals reputation is the criterion of truth and quality. As a matter of fact, in the new communication order, how to express rather than what to say has become more important and the content itself has become unimportant. Now people look at the images of the people they will consider, not the knowledge and objectivity. In this sense, considering the extremely subjective and relative nature of digital social networks, the difficulty of reaching a good, accurate and quality product is understandable. These digital environments have a tiring and ambiguous effect due to excessive content production and fragmentation.

Due to the confusing nature of these digital environments, the consensus on what is correct, valuable and high quality disappears, and subjectivity and ambiguity increase. Therefore, individuals mostly either believe in the contents and information flow of the people or groups they see close to them, or they are completely under the influence of the created images. Undoubtedly, the fact that the criterion of good and bad consists of image and subjective reputation also leads to misconceptions. Therefore, the chaos created by the image-based content production and new form of communication on digital platforms can enable ordinary individuals who do not have expertise in any subject to gain expertise status. This can also cause individuals to be unable to distinguish between good and bad content or information. In this way, those who create or produce content through these channels may unfairly have a reputation in the society. Titles and statuses that are not actually deserved may be given to these people by certain communities. In this framework, real or well-deserved titles and statuses are becoming more ordinary, banal, worthless or vulgar. As a result, quality content productions can be completely ignored in the face of inferior or pragmatist productions. As Furedi (2017: 78) emphasizes, of course, people continue to contribute to the development of knowledge. But it is clear that in a purely utilitarian world, we have become incapable of determining how and why we value information and content.



## **Conclusion**

The period we live in is the era of an explosion of information and content on almost every subject. The information database of the world is ever expanding. Digital environments or news media is also producing large amount of information every minute (Renjith, 2017:73). Now, information, which is produced and consumed almost daily, even hourly, like a consumption material, can also enter daily lives beyond the control of individuals, thanks to technological developments. In any case, the technological tools that have permeated daily life cause almost unlimited amount of information and content to become a part of the lives of individuals. It seems that it has become more difficult than ever to be sure about the quality of information and content in the digital age, where the production and sharing of information and content is accelerated thanks to the opportunities offered by information technology day by day. As a matter of fact, the changes brought about by the new possibilities offered by the digital age in the status of information and created content are important. In this sense, with the spread of the internet and digital social platforms, many new opportunities have emerged to produce information and content. Undoubtedly, it is true that digital technologies bring with them many opportunities. But besides the opportunities that come with every new technology, there are also some dangers.

Today, we can say that we live in the age of digital information. The most important innovation that the digital world offers, unlike the old world, is that it provides individuals with the opportunity to produce information and content. The possibilities provided by digital social media platforms have turned everyone into a content producer who can produce and disseminate information on a daily basis. These possibilities, which can be seen as positive, also contain a potentially big problem. While the rate of information and content produced through digital opportunities is increasing, information pollution and disinformation are increasing in parallel. In addition, the problem of the quality of information and content that is disseminated uncontrollably is another important issue that arises. In this sense, the era we live in is a period in which the quality and the low quality, the valuable and the worthless, the fake and the truth are mixed with each other in the face of the excess of information and content production. This, in turn, greatly changes the way individuals perceive the information and content produced and consumed compared to the past. Therefore, problems such as poor quality of the produced information and content and the inability to distinguish the right content from the wrong arise.

As a result, the fact that digital technology provides individuals with the opportunity to produce and disseminate content as everyone wants, brings with



it a significant transformation in the value attributed to information and real expertise in societies. In this respect, we live in a historical process where all kinds of right-wrong, good-bad, quality-unqualified information and content have an endless circulation right in accordance with the production and consumption logic of the current capitalist industrial system. In this age, presentation and image seem to be more important than information and expertise itself, which may lead the masses to be mistaken in the face of these images. People can present themselves as experts even though they are not experts through digital platforms. At the same time, the criteria for expertise on digital platforms can become extremely subjective and relative, which may vary from person to person. As a matter of fact, the new possibilities provided by digital technologies (such as the abundance of information, the easy and cheap access to alternative information) bring along the problems of the banalization and vulgarization of information and content production and the discrediting of real expertise.

At this point, Furedi (2017:15) states that knowledge has become an abstract understanding that is transferred and recyclable in its vulgar form rather than something valued. Similarly, Baudrillard (2008:115) emphasizes that we live in a universe where less and less meaning is produced, despite more and more news and information. In this sense, the lack of depth, quality or value seen in the nature of the information and content produced leads to a general cultural degeneration. Therefore, revolutionary advances in information and communication technologies have made the rapid production, consumption and dissemination of information much easier with less meaning and depth at very low costs. Individuals encounter extreme ambiguity and chaos in digital information islands, which consist of fragments of information and content that are often divided into sections as a means of economic or commercial concerns. Therefore, individuals have difficulty in coping with the complexity based on excessive information and content in digital media environments.

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## Chapter 29

# **Public Relations and Advertising Campaigns for Environmental Awareness in Digital Marketing: Examples of Environmentalism/Green Advertising**

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## **1. Introduction**

The interaction between the environment and communication has been the subject of considerable study during the past decade. The influence of environmental issues to this increase is substantial. Oil tanker accidents, the nuclear tragedies at Chernobyl and Fukushima, and the climate crisis have made environmental issues the direct focus of communication studies. In fact, environmental communication has established itself as a subfield within communication studies. There are two types of approaches when examining the interaction between communication and the environment from the standpoint of mass media. The first is the increased interest in environmental issues and the media's contribution to the dissemination of information on this topic. The impact of the digitalized world on this scenario is significant. Through the internet and social media, information is transmitted to huge audiences, and awareness is increased. The second strategy critiques the nature, quantity, and quality of the transmitted information. They critique the media's attitude in this regard and highlight the significance of what and who the information supplied serves, as well as by whom and for what purpose. These objections do have a legitimate point. As awareness of environmental problems develops, 'green laundering' appears as an increasingly prevalent phenomenon. Increased use of people's environmental consciousness in advertising and public relations operations for the purpose of generating revenue/profit. There are automobile companies that harm the environment by consuming fossil fuels, detergent companies that pollute the soil and water with the chemicals they use, and a large number of companies that engage in mining activities that harm the environment while conducting public relations and environmental awareness campaigns (Kilbourne, 1995; Uydacı, 2017). In this study, the relationship between digital culture, the individual, and the environment, the conceptual framework of green advertising and how it is affected by digital, and the environmental aspects of the digitalization of the advertising medium are discussed in the context of examples of environmental / green advertising.

## **2. Environmental Perspective in Digital Culture**

There are other names for the era of digital culture in which we currently reside, including "information society age," "information age," and "digital age." "digital culture" refers to the culture generated by the Internet's integration into daily life. While defining digital culture, all factors, including the contemporary way of life and habits shaped by this way of life, as well as problems and anxieties brought about by digital, are discussed. Digital culture influences every aspect of civilization. While pre-internet communication tools



were unidimensional, the digital communication tools that arose with the internet exhibited a participation structure due to their interactive character; in summary, digital culture contributed to the participatory nature of society. Peretti (2007, p. 194) identifies the ability of the new media to facilitate content creation as the democratic innovation of digital culture. Social networks have facilitated the establishment of numerous online communities, have the ability to mobilize other communities as well as their own viewers with the material they produce and the shares they make, and can impose a variety of sanctions. This is obvious in the environmental movement in particular. Numerous issues, including climate change, deforestation, contamination of water supplies, and extinction of natural species, are addressed by online groups on a worldwide basis, and their sphere of influence extends as more information is shared.

While examples such as the digital environment and culture's contribution to environmental protection and the decrease in paper consumption due to e-mails are provided, there are also criticisms of this phenomenon. Digital surroundings significantly impact the environment, particularly in terms of energy use.

"Facebook, Google, and banks and telecommunications businesses that frequently emphasize their eco-friendliness... Contrary to marketing, none of them have abandoned inexpensive electricity derived from coal. According to the facts, the Internet is not at all environmentally beneficial. Renewable energy... includes solar panels, wind turbines, self-powered houses, and even cities. These are the efficient results of humanity's efforts to stop hurting environment while sustaining its own existence, with the industrial revolution and following unregulated industrialization worsening global warming. How well-intentioned and realistic are the banks and telecommunications firms who strive to include themselves in this package by urging customers to stop receiving paper invoices and convert to e-mail in order to protect the environment? According to research conducted in recent years, contrary to common opinion, the internet where we spend the majority of our mornings, the internet where smart phones and laptops are connected, and the data centers that store the information there are not ecologically friendly at all. Although internet and social media companies use "green energy" as a public relations tool, the realities contradict their ideologies. Companies who solely view the issue as a logistical operation continue to insist on coal-based energy, as renewable energy is more expensive and has a longer payback period. Google boasts that it uses only one ten-thousandth of the world's electricity, while its annual electricity usage is similar to that of the whole country of Turkey. No matter how hard Facebook attempts to conceal the facts, it now acknowledges that about 60 percent of the energy required by data centers comes from coal. Charging a

laptop or smartphone consumes tiny amounts of energy, but when we use mobile applications or stream films, we connect to numerous data centers across the globe for each transaction. The electrical energy used to monitor the product on a global scale is equivalent to that used by a new refrigerator for one year. Considering popular applications like as Cloud, Spotify, and Netflix, our average daily energy consumption is thousands of times greater than we realize" (Sönmez, 2016).

## **2.1. Digital Culture Personal and Environment**

Before revealing the attitudes of digital individuals toward the environment, it is vital to examine the goals for which they use the digital environment. Digital life lacks distinguishing characteristics for persons in digital culture. Because these folks use digital media for all mass media purposes, including communication, news, research, information gathering, and entertainment. In addition to these activities with social media, the digital environment has produced other functions, such as building an online community, generating and distributing content on certain topics, gathering, and organizing.

Similarly to how each individual's attitude toward the environment vary, so too does the manner in which individuals utilize the digital environment. According to Forrester Research Organization's classification, Karahasan (2012, p. 138) identifies six categories addressing how people utilize the Internet. Accordingly, users are categorized into six divisions based on their level of participation in social technologies: makers, critics, collectors, participants, viewers, and inactives:

- **Creators:** This category includes those who have their own website, YouTube channel, or blog. There are also those who create and display environmental content in this manner. The Green Agenda block is an illustration of this.
- **Critics:** Critics and those who remark on shopping websites make up this category. People who remark on websites like Trip Advisor are also included. As remarks and criticisms, the environmentalists in this group list the reasons why things are created, their impact on the environment, and the amount of energy they require.
- **Collectors:** Users who actively use social flagging sites fall into this category.
- **Participants:** These are individuals who are members of a social network and share and consume content on it. In this setting, the evolution and modification of environmentalist beliefs over the Internet is very participatory.

- **Viewers:** These individuals do not interact and rather observe. This category comprises those who read blogs, listen to podcasts, and view videos. They do not produce or comment on content.

This segment is far far from digital media. A content in the digital environment is a mass that demonstrates interest in the issue after it occurs in the traditional media environment, i.e., in mass media such as television and newspapers. People who view fascinating environmental movement-related applications and postings on television and the internet are examples (Rutherford, 2000). "Play for Nature" was a YouTube video created by people from many cities and countries to encourage environmental awareness. This YouTube post garnered a great deal of interest. This project was featured on the news and agendas of a number of television channels. After this point, the clip's rate of views increased. What differentiates this group is that they begin to observe after being aware of this sharing.

## 2.2. Digital Environment and Consumer

In the current digital age, consuming has taken on a new dimension. In digitalized environments with new communication technologies, new advertising and marketing strategies have evolved, and consumption and consumer types have multiplied and diversified. The new platforms that have evolved as a result of digitalization are experimenting with a wide range of consumption-promoting and consumer-inducing techniques. Digital marketing strategy has replaced traditional marketing methods with marketing activities directed directly at the target audience.

Digital consumers are online consumers. Odabaşı (2009) characterizes digital customers as postmodern consumers. Odabaş (2009, p. 104) stated, "The postmodern customer, who cares not only about the physical and functional aspects of the goods, but also the pictures it carries and shows, is without a doubt a new economy, a new concept. occurs during the development of culture." He explains the structure of the digital culture consumer.

The following are the qualities of the digital customer (Ozmen, 2012, p. 18):

- Environmentalists or green consumers, who do not tend to purchase every product and service offered immediately as they did in the past, pay attention to green elements at every stage of the products they will purchase, from packaging to distribution, advertising to the product's content, and they do not purchase products and services that lack these elements.
- Accessing information more quickly and conveniently, and expecting their demands and expectations to be met promptly,

- Comparing prices and other characteristics of products and services: Those with a concern for the environment investigate and compare all aspects of the green status of the service or product they plan to purchase online.
- The concept of brand loyalty has evolved and become more sensitive to price: The green digital consumer seeks to purchase products from companies that invest in the environment and safeguard animals.
- If the number of alternatives is growing and the switching costs of the products and brands they use are low, customers are likely to click away to a competitor.
- The green digital consumer, who "likes" and shares the pages of their favorite businesses and products on social networks, also organizes and shares these types of online communities.
- They are the authors and disseminators of negative ideas about situations they dislike.

Odabaş (2009, pp. 122-124) describes the contemporary digital consumer as a "shopper" in general, "selective" in product preferences, "communicator" with interaction intensities, and "character discoverer" in terms of consumption habits, life dynamism, and making sense of life. It is expressed as a 'pleasure seeker' in terms of adaptation to the world he lives in and as a 'rebel' when it comes to making sense of life, a 'victim' when he is unable to obtain what he desires, a 'activist' according to his presence on digital platforms, and a 'citizen' in terms of how he manifests himself. The characteristics of these populations and the manner in which they adopt an environmentalist perspective are described in depth below.

- **Shopper:** This audience shops not only to satisfy their desires and needs, but also as a form of exploration. Green digital consumers who inquire, "How can I locate and purchase greener, more sustainable products?" are in the exploratory phase.
- As a result of the plethora of alternatives afforded by online shopping, these individuals look for and purchase things that they will truly love and not out of need. Additionally, the green digital consumer employs it for this function. Since green products are typically costly and have a low profit margin, they are not offered in the majority of markets and shopping centers. Green consumers who were physically close to establishments providing such products occasionally purchased less environmentally-friendly items due to the convenience of obtaining them. However, the ability to contact the desired type and brand,

regardless of how physically distant they may be, has given rise to the green digital consumer. Green digital customers have undergone the desired green processes and have the opportunity to purchase green-certified products via digital sales channels.

- A person's eating patterns provide a wealth of information about him. People construct an image for themselves through their purchases and how they display them. Those who show the places they eat, drink, and visit as well as the things they purchase on social media are truly attempting to communicate with their local community and its cultural milieu.
- **Character Detector:** In today's environment, when identity-questioning individuals realize themselves through consumption behaviors, the question "Who am I?" appears to be searching for an answer.

The living environment includes conflicts against conventional identities that are fixed. Consumption fills this void in identity. From the hairdo to the music listened to, every action contributes to this identity. In this approach, environmental consumption can also be analyzed. The individual identifies as an environmentalist and eats in accordance with this identification. This consumption is intended to sustain the image established by his identity. **Pleasure Seeker:** Hedonism highlights the connection between consumption and the pursuit of pleasure. So much so that ingesting it provides the individual with the everyday pleasure he wants. Our society is driven by the market, and the market regulates individual interactions. Our consumption makes us happy. When green consumers safeguard the environment through their purchases, they also feel pleasure in doing so.

As an individual's means of self-expression, diverse symbols show rebellious behavior. This perspective prevails in all facets of life, conversations, and relationships. Numerous indicators can be stated, including the individual's body language, tattoo, and eating and drinking habits.

People are victimized today because they express themselves by their consuming - they enter the consumption spiral and believe they would cease to exist if they do not consume and cannot express themselves through an identity. At the earliest opportunity, people engage in retail activism to alleviate their problems.

**Activist:** The consumer's behavioural patterns indicate who he is. For instance, the 'green consumer' is concerned with all issues, such as not consuming the goods immediately, reusing/preferring second-hand products,

selecting organic products, not harming the environment, and paying attention to consumer ethics, and incorporates these into their lifestyle.

Citizenship entails assuming societal responsibilities and engaging in daily activities. Individuals can demonstrate their political stance through their consumption behavior. The modern individual seeks a 'good' life through consuming. The liberal worldview emphasizes the idea of responsibility and places an emphasis on the social good. On the other hand, a conservative perspective recommends integrating citizenship and consumer image. The consuming individual's activities also reflect his viewpoint. In this context, people want their lifestyle to correspond with their views as much as their purchases. Citizenship is viewed as an endeavor to live a 'good' life with social responsibility in mind.

### **3. Digital Advertising and Culture**

Advertising is the foundation of the digital culture economy. Advertising has a significant role in digital media, as it does in all channels that serve the consumer culture. Advertising, according to Baudrillard (2015, p. 212), has a social function and should be approached from a non-economic perspective, such as gift-giving and gratuity. Advertising that helps to the reproduction of the consumption culture concept urges customers to consume continuously. From attitudes and ideas to tastes and preferences, advertising influences everything.

Digital communication channels have advertising advantages over traditional means. The first of these benefits is that it is inexpensive. The second factor is the accessibility of the target audience. In digital channels, more information about the target audience is obtained. Due to the fact that people disclose information about themselves voluntarily on social media, advertisers purchase information about their members from social media firms and create adverts that target the intended demographic specifically. Despite ethical arguments, it is evident that firms currently market users' personal information. Virtually all enterprises today exist in the digital realm. They reside on many digital platforms, including Facebook pages, Instagram accounts, websites, and YouTube channels. To develop content for each of these platforms, marketing and advertising teams are organized. The formation of content-producing, video-shooting, graphic design, and text-writing units, which are frequently referred to as social media units or digital marketing units. The evolution of communication tools and technology has been greatly influenced by advertising.

"Without the advertising culture, many new media technologies and forms would not exist, including computer games that can use artificial intelligence, network-based multimedia (including software that enables the distribution of music, motion pictures, and 3D media across the web), advanced 3D modeling, animations, CD-ROMs, DVDs, and other storage formats" (Manovich, 2014, p. 159).

Investment in digital sectors has increased as a result of the expansion of digital advertising. Manovich's statements parallel the current state of affairs. Digital culture influences each and every aspect of our existence. In terms of the global economy, this is evidenced by the trend towards digital investments and ads. According to a survey done by the American Academy of Advertising, so-called "green" customers utilize social media and the internet more. In order to capture these consumers, firms have transferred their green advertising spending to digital media (Nyilasy and Gangadharbatla, 2016, p. 32).

#### **4. Digital Culture and Environmental Marketing**

Increasing environmental issues have begun to impact people's daily lives, and the public has acquired an environmental consciousness. Businesses that recognize this sensitivity have begun to engage in environmental initiatives and create environmentally conscious marketing in order to enhance their brand image. In green commercials, promises are made to protect the environment, contribute to sustainability, prevent environmental contamination, and work for a better environment.

"Green commercials are advertisements that highlight the relationship between a product or service and the biological environment, glorify the green lifestyle, or portray the image of corporate environmental responsibility" (Banerjee, Gulas, & Iyer, 1995, p. 22).

Carlson et al. (1993) categorized one of the aspects of the content of green commercials. Accordingly, environmental claims can be categorized into four primary categories (Carlson, Grove, and Kangun, 1993, p. 31):

- **Product-Oriented Claims:** Emphasizes the eco-friendly attributes of the product. Once upon a time, the perishability of Migros bags, particularly in online situations, drew severe criticism. The company created a product-focused campaign by declaring that their bags are biodegradable and printing the information on the bags themselves.
- **Process-Oriented Claims:** Highlights the environmental benefits of an organization's internal technology, production method, and/or waste disposal. The quantity of such advertisements is growing. Especially in online marketing, details of the product's manufacturing process are

featured. Within this framework, commercials such as those for washing machines for which the Grundig brand recycles PET bottles and manufactures laundry tubs are reviewed.

- **Image-Oriented Claims:** The company promotes environmental claims that associate it with a lawsuit or activity that has earned broad public support. With its new packaging that does not harm the environment, Sofia toilet paper draws attention to the fact that it uses industrial wood while producing hygienic paper in its advertising campaign with the slogan "Saves Forests for Our Future"; she intends to pass on this production sensitivity to consumers as well.
- **Details Regarding Environmental Facts:** In such claims, an independent decision made by the corporation regarding environmental issues is presented. This paradigm encompasses advertisements that involve status determination, such as "One species becomes extinct every 60 seconds on Earth."

In the 1995 study conducted by Iyer, Banerjee, and Gulas, three green advertising criteria were included. The first is advertising that establishes a good association between the product and the surroundings. In this category are advertisements for ecologically friendly products. The second condition for advertisements is that they encourage an eco-friendly lifestyle through the products and services they offer. The third form of commercials are those that promise environmental protection responsibility collaboration. This is illustrated by the TEMA Foundation's "Don't Let Turkey Become a Desert" campaign (Oztürk, 2009, p. 273).

It can be seen that green advertising features are sometimes classified in various ways, including as method, content, consumer approach, and target audience. There are green-weighted themes and graphics in green advertising applications, as well as language stressing that the business is environmentally friendly. Specifically, firms that describe themselves as "green" include eco-labels. Typically, their logos are green in hue. Specifically, the usage of green in the logo promotes the impression that the business is environmentally conscious. In marketing, it should be stated that the raw materials used in the production phase are environmentally friendly or cause less harm to the environment than other materials, and that the goods are durable and recyclable. As the driving force of advertising, the imperative of safeguarding the environment and leaving the future generation with a clean planet should be communicated.

Whether the commercial is transmitted through traditional mass media or digital media, its content and language contain green aspects; nonetheless, the



level of greenery impacts the target audience. Wagner and Hansen's (2002) research on this topic is helpful. According to this, "message elements" is the first factor that determines the green ad level. When making a purchase, a green consumer should consider each phase of a product's life cycle. Product lifespan; It covers factors such as the product's raw materials, its production process, the type of energy used during production, the nature of the packaging, transportation, distribution, and disposal techniques, the product's reusability, and its appropriateness for recycling. The second phase consists of "consumer rights." How does the user perceive the product? Is it perceived as hazardous or useful? What are the product's functional characteristics? Are these characteristics advantageous for both the consumer and the environment? How does the consumer view these advantages from a psychological and social perspective? The so-called third phase consists of "impact points." Impact points come in four varieties. These are articulated as intellectual, ethical, emotional, and periodic comprehension. While logical points address rational difficulties pertaining to the promoted items of the organization, moral points inform what is right or wrong. Emotional points use emotions such as fear, love, joy, or pleasure; seasonal advertisements try to unite consumers. The fourth component, referred to as the "motivating force," consists of the basic principles that an environmental advertisement seeks to promote. A well-structured commercial includes one or more of the following motivating factors: animal life, environmental protection, and human health. The sixth component is executive framework. The execution framework consists of the advertisement's structure or layout, graphics, and logos. Elements that aid in communicating the advertisement's objectives. Effective advertisements must appear green.

#### **4.1.Changes in the Language and Content of Green Advertising in Response to the Digital Environment**

In recent years, phrases such as energy efficiency and sustainability have supplanted phrases such as recycling and environmental friendliness, which were formerly prevalent in green advertising. The consumer treats ambiguous environmental claims with skepticism.

“In environmental ads, claims regarding the environmental impact or environmental attribute of the product occur at many levels. Some advertisers employ claims that convey explicit, thorough information about the environmental qualities and benefits of the product, whilst others use claims that are more superficial, succinct, and imprecise. Prominent environmental claims are robust, specific, and verifiable statements supported by objective and factual information concerning the environmental features and advantages of a

product. A claim such as "The amount of new material utilized in our new packaging has been decreased by 75% compared to our prior packaging" is transparent and verifiable, for instance. Ambiguous environmental claims are summary statements that are vague, imprecise, or doubtful regarding the environmental attributes and benefits of a product. For instance, assertions such as "Less packaging material," "Less waste," "More good for the environment," "Eco-friendly," "Eco-friendly," and "Recyclable" become unclear when used alone. (Alniaçık, Yılmaz, & Alniaçık, 2010).

Alniaçık et al. (2010, p. 89) assert that developments in practice, such as the inaccuracy of environmental claims produced to make them appealing in advertising messages and on product packaging, and the use of statements that mislead and/or deceive the consumer, harm the advertising process. Due to the various and extensive interaction networks of modern consumers, it is very simple for them to differentiate between unambiguous and/or ambiguous environmental claims. The consumer who believes he has been duped does not hesitate to choose competitive companies by rejecting the brand and product in its whole. In addition to having a negative impact on product sales, this has a detrimental impact on the reputation and image of companies.

"Advertisers that make ambiguous environmental promises are considered as misleading, deceitful, unethical, and as individuals or organizations who do not truly benefit the environment. "Consumers' sentiments regarding items and product characteristics in commercials including prominent environmental claims are more favorable, and their intention to acquire these products is greater" (Alniaçık et al., 2010).

As can be shown, people have a more favorable attitude toward commercials with substantial and robust backing. In commercials with environmental claims, consumers desire to see green components. In order to trigger the consumer's environmental sensibilities, the advertisement must appear green in order to be considered green. Wagner and Hansen (2002) assert that in order for an advertisement to appear green, at least one of the following features must be present:

- It must feature images of plants.
- It should feature animal photographs.
- There should be natural landscapes incorporated.
- Images of children should be included.
- It should heavily feature the color green.
- The title should make reference to an environmental fact.
- Environment-related language must be used.

- The majority of the content of green commercials consists of references to nature.

Nature is always dominant. There are four distinct depictions of nature in these advertising ads with panoramic vistas of broad countryside and wild environment and somewhat snowy mountains (Oztürk, 2009, pp. 271-272):

- Advertisements suggestive of vacations and recreation in which sun, sea, and sand predominate.
- Ads that feature the countryside, especially close-ups of lakes, flowers, and vegetation.
- Wild animals and birds-themed advertisements
- When developing the content of green commercials, it is evident that nature is the focal focus. The content of the advertisement is determined by nature's presentation. The manner in which nature is depicted indicates whether an ad is brown, green, or green ad level.

"Nature has multiple interpretations. Less frequent are advertisements that portray nature negatively. Typically, such advertising are used to market modern products such as allergy medications and mosquito pesticides. The tropics or the broad countryside where I have nothing, as they are displayed as a commodity, can also be a place of retreat, quiet, and rejuvenation. Wild woodlands are a symbol of purity, pristineness, and distinctiveness. Pets, on the other hand, are creatures that possess attributes that humans value. Nature is most frequently associated with a sense of superiority and the unusual. Nature should exemplify the beauty that everyone should worship and protect" (Oztürk, 2009, p. 272).

This chapter has thus far examined the situation solely through the lens of the strategies of for-profit corporations. However, the majority of environmental awareness advertising are produced by non-governmental organizations such as Greenpeace, WWF, and TEMA. Ocal and Koca (2019, pp. 146-160) make the following judgments regarding the advertising language usage of these two distinct organizational structures:

"It has been noticed that for-profit businesses and non-profit organizations engage in a variety of actions to express their concern for environmental issues. Numerous instances, such as for-profit institutions claiming to employ natural goods in their production processes, emphasizing that they care about human health, and paying close attention to packaging operations, play a significant part in the preferences of the 'green customer' group. Non-profit institutions collaborate with government agencies and brands to engage in nature-friendly activities such as minimizing environmental problems, creating awareness, achieving a more habitable world, and recycling, and they use the media to

promote these activities. While the advertising goals of profit-driven institutions include brand and product promotion and boosting product and brand recognition, the objective of non-profit institutions is to call attention to environmental issues, increase public awareness, reduce environmental issues, and promote recycling. While the advertising presentation styles of brands were created within the framework of product and brand display, appealing to emotions, and creating an image, non-governmental organizations created awareness within the framework of providing information and warning people about environmental issues. While for-profit businesses use naturalness, sincerity, celebrity utilization, slices of life, music, and witnessing as advertising methods, non-profit groups employ sensuality, realism, drama, and fear fame. The purpose of green marketing is to educate individuals, make them more sensitive to social issues, encourage them to use natural products and refrain from harming the environment.

Although green advertising tactics in digital media are implemented differently than in traditional media, the language and content of green commercials in digital media are identical to those of conventional media. It is merely tailored to the digital environment's characteristics and presented accordingly.

Examining environmental commercials reveals that they are created with this emphasis in mind. Animals depicting nature, life in nature, logos and emblems are utilized in commercials to support environmental claims. According to Oztürk (2009, p. 270), the dramaturgical code is commonly utilized in environmental marketing. Thus, the advertiser impacts the target audience by symbolic deeds and communicates the commercial through a magical discourse. In green advertisements, it is assumed that the individual would preserve the environment, and he is assigned a magical and exalted role as a savior. First, people are frightened by depicting the destruction to the environment, and then they are provided ways to overcome this fear through commercials. When a customer purchases the promoted goods, he or she believes he or she is saving the environment as a superhero.

#### Examples of Environmental/Green Digital Advertising Campaigns

Green commercials will be used to illustrate the relationship between green advertising and digital advertising. Digital channels are a pillar of brands' marketing campaigns. There is very little exclusive digital content. In general, digital media is utilized to augment traditional media works. Occasionally, the digital environment serves as the campaign's foundation, and the campaign follows a path from digital to traditional.

#### **4.2. Diesel and Coca-Cola (Re) Collection Promotional Material**

Coca-Cola promotes Diesel (re)collection apparel made from recycled PET bottles in this advertisement. This method is described as follows: Mobile devices are used to scan the emblem on the recycling bins, which may be located anywhere in the world for a limited time, in order to access a special webpage on diesel.com. In this manner, the recycled product is sold directly prior to its global distribution. On the red garbage cans is a logo with a recycling symbol. Mobile phones that scan this logo are sent to Diesel's website. While scanning the logo, a Coca-Cola bottle is thrown into the garbage, and it is stressed that the clothing is made from recycled bottles (<https://www.campaigntr.com/diesel-ve-coca-coladan-cevreci-is-birligi/>).

#### **4.2. The Sea Shepherd Conservation Society Sound of the Sea Publicity**

This advertising, which utilizes Twitter as its medium, depicts the French freediving champion Guillaume Nery. The sounds that Nery captured at sea were inexplicably and unexplainably disseminated on Twitter. Nery, a scuba diver, remarked, "Yesterday, while diving, I heard a peculiar sound. "Are you aware of what happened?" His posted video has received much attention. Sea Shepherd collaborated with world champion Nery to create the 'pain of the ocean' format and shared it with large audiences as part of an awareness campaign (<https://www.marketingturkiye.com.tr/haberler/2019-april-month-attention-global-advertising-campaigns-2/>) (<https://www.marketingturkiye.com.tr/haberler/>).

#### **4.3. Climate Concern Ad by Bosch, National Geographic, and Oneio**

In collaboration with National Geographic and Bosch Home Appliances, "Climate Issue," a documentary about the damage to the environment and climate change, was produced. This documentary is actually a Rich Media Banner project; it depicts the reflections and impacts of climate change in Turkey, which threatens the future of humanity. Through the Onedio mobile application, users were encouraged to conserve energy as part of the experiment by reducing the screen brightness on their smartphones. The campaign generated more than 7 million impressions, resulting in 65 million KW of energy savings.

#### **4.4. Save Your Energy Ad by Enerjisa**

The Enerjisa Saving Mode application is an illustration of digital advertising. Based on the phrase "Save Your Energy," Enerjisa created the world's first energy-saving digital advertisement. The promo describes the Saving Mode program, which highlights interactive energy savings in digital media (desktop

and mobile advertising spaces) and saves money. The company, which reduces energy consumption in mobile and desktop devices by preparing advertising banners with black background-weighted colors, stressed the importance of limiting screen brightness in devices for maximizing savings. The compatibility between the application and the advertising messaging utilized in the application's announcement contributed to its increased effectiveness. The application's trustworthiness has been enhanced by a method that calculates the amount of energy saved by each advertisement. With the Savings Mode application, 5 million users and 25 million views have been reached to date. In total, 750 kWh of energy was saved; through advertisements, a school saved the equivalent of two months' worth of lighting electricity (<http://www.cevreciyiz.com/makale-detay/1205/dunyanin-ilk-enerji-tasarruflubanneri>).

### **5. Greening the Media in Advertising: Paper to Digital New Media**

The locations where advertising are published are referred to as "media." There are numerous forms of media, including television, radio, the Internet, mobile phones, social media, newspapers, magazines, billboards, building walls, bus tops, and restroom doors. Internet, websites, social media, and mobile technologies, which we refer to as digital media, are receiving an increasing amount of advertising revenue. The digital environment is a medium that is expanding. The study compiled by Deloitte includes estimates of advertising expenditures in Turkey. Consequently, compared to the previous year, media investments in digital channels climbed by 19%.

The active role that digital technologies play in human existence has compelled corporations to utilize these settings to reach their target customers. Using paper, particularly for printed advertisements, incurs additional costs for businesses in the form of design, printing, and transportation. While using digital media instead of paper results in cost savings, avoiding paper is viewed as an environmentally conscious practice. Given that the energy required by digital screens is likewise an environmental concern, the greenness of digital media portrayed as green media is called into doubt.

Using digital screens instead of paper has advantages, particularly for outdoor advertisements. As a result of their instantaneous updating, spectacular appearance, and adaptability, digital screens are considered more environmentally friendly than paper. According to the reasoning of those who assert that digital screens are more eco-friendly, a printing error leads all posters to be discarded and a significant amount of paper to be wasted. The fact that a large number of businesses do not recycle their paper is detrimental to the

environment. The usage of digital signs ensures that incorrect content can be changed without affecting the environment and in a timely manner. In opposition to the claim that paper is recyclable and hence more environmentally benign, emphasis is made on the increased carbon footprint incurred on the journey from paper production to recycling. Also, it is true that digital signage is not entirely ecologically friendly. It would be incorrect to assert that they are environmentalists due to their energy consumption and to highlight them as a green tool. On the other hand, it is considered a green advertising medium due to the fact that LED screens consume less electricity and are durable.

## **Conclusion**

Digital advertising is becoming more effective on a daily basis compared to how effective it was the day before. The amount of money invested in advertising delivered by means of digital platforms continues to rise. There has been a significant rise in environmental awareness, and businesses that are ecologically aware themselves and want their advertising to reflect this are producing more advertisements with an environmental focus. It has recently come to light that the digital sectors, which are currently undergoing a tendency toward growth, have just emerged as the new medium for advertisements that are kind to the environment. Environmental awareness is widely covered in the media, and the environmental movement has gained traction in recent years, notably as a result of digital activism. As a result, commercials aimed at raising environmental consciousness are increasingly appearing in digital media. This is because topics related to environmental consciousness are constantly covered in many forms of media. In today's highly technological culture, the way in which we conceptualize the natural world occupies an important place. Businesses have taken notice of some online platforms that have been established in order to provide assistance to organizations that have been formed in the real world in order to combat issues pertaining to the natural environment by organizing themselves through social media. These organizations were formed in order to combat issues that were brought to light because of human interference with the natural environment. Environmental advertising campaigns put a strong emphasis on the most serious environmental issues, including the current climate catastrophe, severe drought, poisoning of water resources, the fate of endangered animals, and the expansion of forest fires. The agenda of society was treated as if it were advertising concerns, thus these themes were highlighted in ads. This is because the agenda was treated as if it were advertising issues. Because digital culture has permeated every facet of our lives, from shopping to communication, from entertainment to education,

digital media has emerged as an important and rapidly expanding channel for the dissemination of advertisements. This is due to the fact that digital culture has permeated every facet of our lives. It is anticipated that this pattern will carry on for the foreseeable future. These channels, which are always available to us thanks to computers, smart televisions, and mobile technology, will progressively offer commercials addressing topics related to the agenda, expectations, and sensitivities of the society.



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## **Chapter 30**

# **Long-Term Variations of Total Annual Precipitation and Drought in Adana Sub-Region, Southern Turkey**

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## 1. Introduction

Precipitation variability is also important for describing the interaction between human and nature. Differences in annual precipitation and seasonal variability from one year to the next characterize ecosystems and their capacity to sustain their associated supply, regulation and support services over the years and over the long term (MEA, 2005). The ecosystems of the Mediterranean biome are generally characterized as cool, warm and rainy in winter and dry in summer (Conacher and Conacher, 1998). This means that precipitation is in the colder half of the year and summers are typically dry, with winter temperatures mild rather than cold. These regions also typically receive more than 300 mm of precipitation per year, which distinguishes them from arid regions (Grove et al., 1977). The Mediterranean basin is one of the most sensitive regions to climate change and one of the regions dramatically affected by excessive water demand (Sabater and Barceló, 2010). There are examples of droughts in the Mediterranean basin due to the decrease in precipitation and the increase in maximum temperatures. The drought of 2003 occurred due to the increase in temperature in the settlements near the Mediterranean coast of Southern France and the decrease in summer precipitation. Drought has had a negative impact on agriculture, hydropower, homes, as well as shrinkage and swelling of clay soil in this year and this was attributed to low precipitation levels in the winter and spring, and the extremely hot summer months (Poumadere et al., 2005). Vrochidou et al. (2003) states that depending on climate models, there was a decrease in precipitation and an increase in temperature in Greece from 2001 to 2100, resulting in a strong decrease in stream flow, soil moisture and groundwater reserve.

Significant decreases were observed in the amount of precipitation in subtropical and some tropical regions, including the Mediterranean basin and the western and southern regions of Turkey, where the Mediterranean climate prevails (Türkeş, 2020a). In a significant part of the Mediterranean basin, including Turkey, the long-term decreasing trend in precipitation conditions and accompanying drought events, especially since the beginning of the 1970s, have been effective (Türkeş, 2014a, b). In terms of long-term (1953-2002) temporal variability, it was revealed by Türkeş et al. (2009) that there is a significant decreasing trend in winter precipitation totals in Turkey and that these trends are strongest in the Mediterranean and Mediterranean Transitional precipitation regime regions. Tatlı et al. (2004) stated in their study that the precipitation regimes in the coastal regions of Turkey (Mediterranean, Aegean, Marmara and Western Black Sea) are largely under the influence of large-scale pressure systems and high atmospheric circulation. The decreasing trend in precipitation

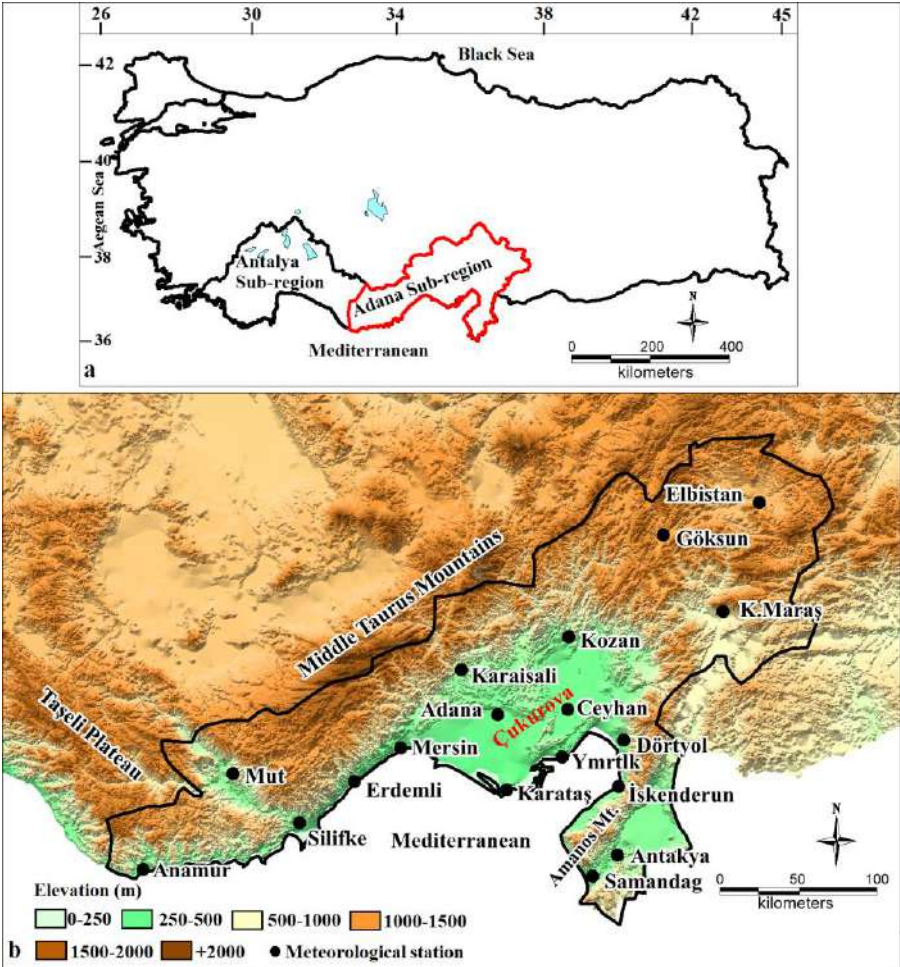
is observed not only in the Mediterranean basin, where Turkey is located, but also in countries in the world that are under the influence of the Mediterranean climate. Deitch et al. (2017) found decreasing trends in annual precipitation in areas located in many Mediterranean climate zones (southern California, Spain, Australia, Chile, and Northern Italy), and a decreasing trend in summer precipitation in the Mediterranean basin and Chile in most of North America. Bahadır (2011) determined the trend analyzes according to the ARIMA model by using the temperature and precipitation data covering the 1970-2009 period of the stations located in the coast and inland parts of the Mediterranean Region in Turkey. In this study, a decreasing trend was determined in the precipitation of all stations. In some studies focusing only on the Eastern Mediterranean coast, it was stated that there was a general decrease in annual precipitation, and this decrease was due to decreases in spring and winter precipitation (Gönençgil and İçel, 2010, 2011). According to the studies on the atmospheric causes of the variations in precipitation in Turkey and Greece in the eastern Mediterranean basin, it has been determined that the North Atlantic Oscillation corresponds to strong positive index phases (Türkeş and Erhat, 2003, 2005; Kalimeris et al., 2012; Güçlü, 2014). Türkeş (2020b) classified the southern and western parts of Turkey as regions affected by moderate-high drought probability and drought risk. The predictions of various model experiments on future climate change scenarios agree that drought is increasing in severity and frequency in the Mediterranean basin (Trambley et al., 2020).

In this study, precipitation variability was investigated by using the annual and monthly precipitation totals of the eighteen stations in the Adana Region of the Mediterranean Region, which is one of the seven geographical regions of Turkey. In addition, the current and past climate types of the stations were revealed by using the Erinc's aridity index. The aim of the study is to reveal the change in precipitation in Adana Section and the arid and humid environmental conditions resulting from this change.

## **2. Geographic setting and general climatology**

The study area is the Adana sub-region, which corresponds to the eastern half of the Mediterranean Region, located in the south of Turkey. The sub-region includes the major and main geomorphological units such as Taşeli plateau, Middle Taurus Mountains, Çukurova (English means plain), Göksu delta plain including Silifke, Amik plain which is located in east of Nur (Amanos) Mountains and K.Maraş-Hatay graben (Fig. 1). The sub-region is located between 38° 33' 17"-35° 48' 17" north latitudes and 34° 09' 33"-34° 03' 53" east longitudes. The name of the sub-region was given in reference to the

city of Adana which is the largest city and trade center (Arınç, 2019). The sub-region has an area 52,770 km<sup>2</sup>, its coastal length from west to east approximately 675 km long. The sub-region is surrounding by the Central Anatolia Region to north, East Anatolian Region to the northeast, Southeast Anatolian Region to the east, Antalya sub-region to the west and Mediterranean to the south. The sub-region contains Çukurova which is known as the productive agricultural areas. Climate change, lack of precipitation and drought are first felt in agriculture and gradually spread to other water-dependent sectors (Kapluhan, 2013). Therefore, precipitation analyzes and results are important for this sub-region.

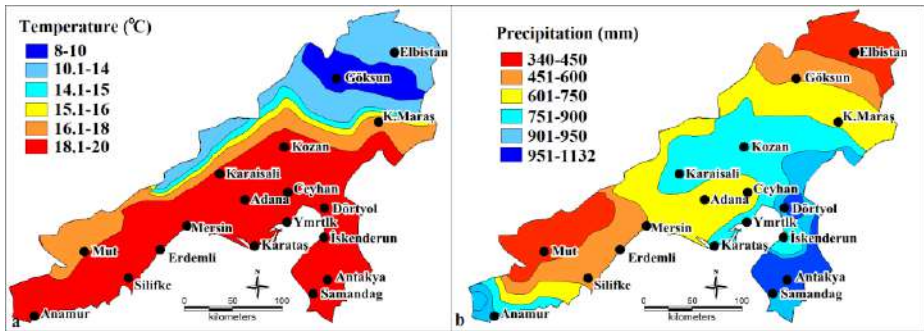


**Fig. 1.** a) Location of the Adana sub-region in map of Turkey, b) major geomorphological units and location of the Adana sub-region along with the geographical distribution of the meteorological stations used in the study



The Adana sub-region has been characterized with the Mediterranean macroclimate due to its location over the eastern Mediterranean basin. Pressure conditions in the Mediterranean region have a decisive effect on the climatic conditions of both the region and Turkey. Regions in the Mediterranean basin receive precipitation depending on the movement of air masses. In the northern hemisphere, the direction of displacement is northward in summer and winter. The high pressure area formed over the Azores Islands off the coast of Morocco moves northward in summer (Çiçek and Ataol, 2009). Thus, high pressure conditions occur in the Mediterranean. During this period, the northerly winds created by the Asor anticyclone are drawn into the African-Arabian low pressure area. Since these winds blow from north to south, they warm up and do not produce precipitation. However, after October, humid conditions gradually emerge as a result of the changes in the thermal and dynamic properties of the air over land and sea. The frequency and activity of wandering depressions, the westerly winds, the Mediterranean front associated with the polar jet stream, and the polar front locations control precipitation conditions (Türkeş, 1998). The high pressure area formed on the Caspian Sea in winter shifts to the south and forms a front on the Taurus Mountains. Thus, a low pressure area is formed over the Mediterranean. During the winter, the struggle of two different pressure areas becomes stronger and precipitation occurs due to the fronts. Cloud cover is lower than the climatic winter average in the western Mediterranean and slightly higher in the central and eastern basins. Therefore, during the winter, the total precipitation of this regime contributes up to 50% of the total winter precipitation (maximum contributions over the Alps and Turkey) (Rojas et al., 2013).

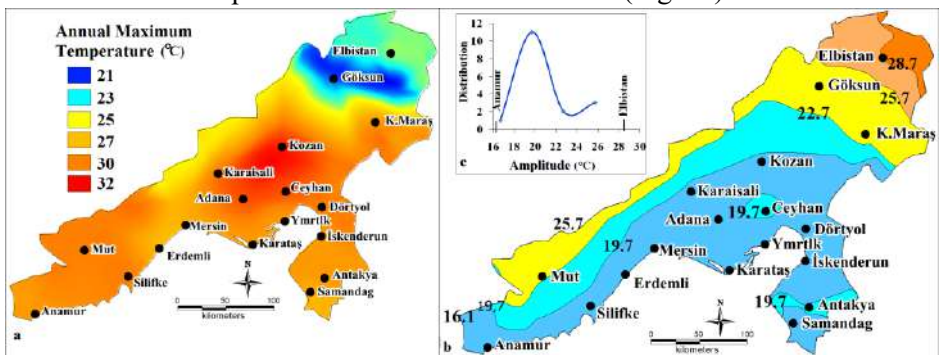
Figure 2 shows the spatial variation of the annual average temperature and precipitation values of the stations in the sub-region. Annual average temperatures range from 9°C to 20.3°C. Temperatures between 18°C and 20°C are seen in the coastal area and in the immediate surroundings behind the coast. From the inner parts of the sub-region to the north, the temperature decreases and reaches 9°C. The highest temperature was determined in Iskenderun (20.3°C) and the lowest in Göksun (9°C) (Fig. 2a). Total annual precipitation varies between 392 mm and 1132 mm. The rainiest part is Antakya and its immediate surroundings. The total annual precipitation of Samandağ, Dörtöyl and Antakya in this part is, 914 mm, 952 mm and 1132 mm, respectively. Another station with annual precipitation exceeding 900 mm is Anamur (937 mm). The amount of precipitation decreases from the coast towards the interior. Especially towards Central Anatolia, the precipitation value is less than 400 mm. The total annual precipitation of Mut in this part is 392 mm (Fig. 2b).



**Fig. 2.** a) Spatial distributions of annual mean temperatures and b) annual mean precipitation amounts.

Figure 3 shows the spatial variation of the annual average maximum temperature and amplitude values of the stations in the sub-region. Annual average maximum temperatures range from 22°C (Gökşun) to 32°C (Kozan). The highest maximum temperatures are observed at Kozan (32°C), Adana (31°C), Ceyhan (31°C), Silifke (30°C), Mut (30°C) and Dörtöyl (30°C). Maximum temperatures decrease towards the north and below 25°C (Fig. 3a).

Amplitude values in the lower region range from 16.7°C to 28.8°C. The difference between these two extreme values is less than 19°C. The lowest amplitude values (16°C -19°C) are observed in the coastal zone and its close vicinity where absolute humidity is high. The highest amplitude values (between 23°C and 29°C) are observed in areas far from the sea, with low absolute humidity and inlands with high elevations. This area corresponds to Elbistan (28.8°C), Gökşun (24.6°C) and K.Maraş (23.7°C) (Fig. 3b). 77% of the 18 stations have amplitudes between 18°C and 21°C (Fig. 3c).



**Fig. 3.** Spatial distributions of a) annual mean maximum temperatures and b) annual amplitudes of air temperature, c) the standard normal distribution of annual temperature amplitude in the sub-region.

### 3. Data and Methods

This study is based on temperature data set consisting of monthly mean, maximum temperatures (°C) and precipitation data set consisting of annual precipitation totals (mm) recorded at 18 meteorological stations of the Turkish State Meteorological Service between 1962 and 2021 (for 60 years). In this study, 18 stations were selected considering the equal observation times. The locations of meteorology stations are shown in Table 1.

**Table 1.** Introductor information of 18 meteorological stations in the Adana sub-region

Station	Elevation (m) above sea level	Latitude North	Longitude East	Period
Adana	27	37°00'	35°19'	2021
Ceyhan	30	37°01'	35°48'	
Karataş	22	36°34'	35°23'	
Kozan	120	37°52'	34°04'	
Yumurtalık	20	36°46'	35°47'	
Karaisali	250	37°15'	35°03'	
Mersin	3	36°48'	34°38'	
Anamur	5	36°05'	32°50'	
Erdemli	10	36°36'	34°18'	
Silifke	19	36°22'	33°55'	
Mut	314	36°38'	33°26'	1962
Dörtöyol	34	36°51'	36°13'	
Antakya	100	36°15'	36°08'	
İskenderun	2	36°35'	36°10'	
Samandağ	4	36°05'	35°58'	
K.Maraş	572	37°35'	36°55'	
Göksun	1344	38°01'	36°29'	
Elbistan	1137	38°12'	37°12'	

#### 3.1. Erinc Aridity Index ( $I_m$ )

The Erinc index depends on the ratio between the amount of precipitation a place receives and the amount of water it loses. Erinc index values were evaluated as annually by using the annual total precipitation data (Erinc, 1965). The formula prepared by considering these parameters is below,

$$I_m = \frac{P}{T_{om}}$$

Where,  $I_m$  indicates precipitation efficiency,  $P$  indicates annual precipitation (mm), and  $T_{om}$  is annual average maximum temperature ( $^{\circ}C$ ). Erinç (1965) compared the index results with the distribution areas of vegetation formations and classified them into the following classes in terms of precipitation efficiency. The long-year (1962-2021) total annual precipitation and annual average maximum temperature series of the stations are divided into two 30-year-long periods. Thus, it will be determined whether the climatic conditions prevailing in the first 30 years (1962-1991) of the stations have changed in the second 30 years (1992-2021).

**Table 2.** Erinç climate classification and its corresponding to vegetation types

<b>Im</b>	<b>Climate type</b>	<b>Vegetation type</b>
<8	Severe arid	Desert
8-15	Arid	Desert- like steppe
15-23	Semi-arid	Steppe
23-40	Semi-humid	Dry forest
40-55	Humid	Humis forest
>55	Perhumid	Perhumid forest

### 3.2. Coefficient of variation (CV)

In order to determine the precipitation variability of 18 stations and to determine the areal distribution of this variability, the variability coefficient of each station was calculated. The coefficient of variation (CV) was calculated according to the formula below,

$$CV = (\sigma_s / P_s) \times 100$$

Where, CV is the coefficient of variation (in percent),  $P$  indicates the long-term average precipitation value at a station and  $\sigma_s$  is the standard deviation of the long-term average precipitation for the same station. The results were mapped separately for the winter, spring, summer and autumn seasons to identify annual and seasonal differences. Considering that the coefficient of variation limit that separates the arid and semi-arid areas and the humid areas is 25%, the CV value growing away from 25% indicates that the area is prone to drought (Türkeş, 2010; Türkeş, 1990). Meteorological drought occurs when the annual precipitation of that region is less than 25% of the normal precipitation (Venkateswarlu, 1992). Summer conditions are typical of this condition.

### 3.2. Annual anomaly

For the 1962-2021 period, the precipitation anomaly was calculated to determine the increase and decrease rates in annual precipitation. Annual precipitation anomaly was calculated as a percentage according to the formula below.

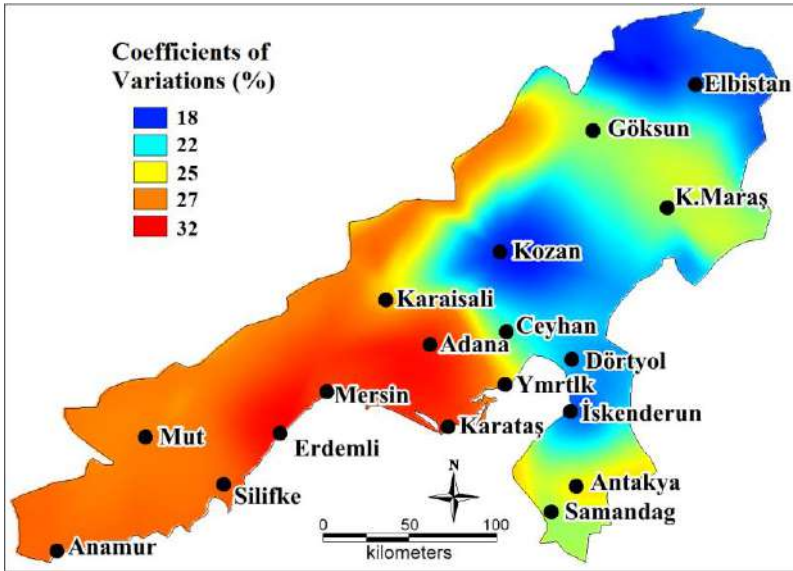
$$A = \left( \frac{P - P_{mean}}{\sigma} \right) \times 100$$

Where, A is precipitation anomaly, P is total precipitation amount (mm) for a station,  $P_{mean}$  and  $\sigma$  are long-term average and standard deviation of annual precipitation, respectively.

## 4. Results and Discussion

### 4.1. Annual and seasonal precipitation variability (CV)

The spatial distribution of the variability in the annual precipitation totals of the Adana sub-region is shown in Figure 4. The highest CV value is observed at Erdemli with CV of 32%. The Erdemli station is followed by Adana with CV of 31%. This value is 30% at Mersin and Karataş stations located on the coast. CV values decrease from the coast towards the inner parts of the land and reach their lowest value at the Kozan station with CV of 19%. This is not valid for the Iskenderun station due to its low CV value (20%). The CV values in Göksun, K.Maraş and Elbistan, which are located in the higher part in the northeast of the lower section, are 24% and 20%, respectively. CV values vary from 21% to 28% at other stations. The spatial distribution of variation in annual precipitation totals of the sub-region reflects the known geographical distribution of annual variation over Turkey (Türkeş, 2005). The reason for the high variability in annual precipitation in the sub-region is the number of depressions coming from the Mediterranean Sea and their routes vary greatly from year to year, depending on atmospheric oscillations (Ölgen, 2010).



**Fig. 4.** Spatial distributions of inter-annual variability in annual precipitation totals for the period 1962-2021

The spatial distribution of the variability in the seasonal precipitation totals of the Adana sub-region is shown in Figure 5. As shown, it is observed that there are differences in the distribution of variability according to the seasons in the sub-region. As a matter of fact, while the coefficient of variability is lower in winter and spring, which are the rainy seasons, it is higher in summer when precipitation decreases.

The most striking situation in the distribution of winter precipitation variability is seen in the coastal and inland parts (Fig. 5a). It is observed that the winter variability distribution shows a great similarity with the annual variability distribution. However, since the annual precipitation is higher than the winter precipitation, the annual coefficient of variation is lower. The highest CV values in winter are observed along the zone between Erdemli (49%) and Karaisali (47%), while the lowest values are observed in the zone from Samandag (38%) to Elbistan (36%). Another lowest value is at Anamur (37%) and its environs. In winter, the insertion of mobile depression in the Mediterranean region due to thermal high pressure in this region leads to unstable weather conditions (Koçman, 1993; Türkeş and Sarış, 2007). The significant decreasing trend observed in the annual and especially winter precipitations of the Eastern Mediterranean basin in general is associated with the decrease in the frequency of frontal mid-latitude and Mediterranean low

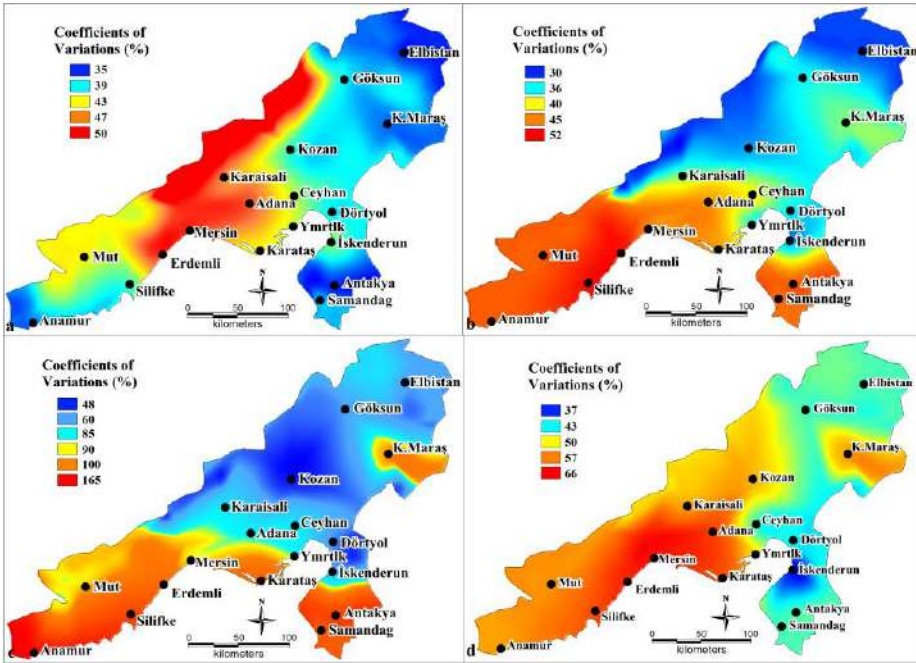
pressures prevailing in this region (especially in winter) and increases in high pressure conditions (Türkeş, 2020a).

When the spring precipitation variability map is examined, a decrease is observed in the sub-region from west to east (Fig. 5b). The stations with the highest CV values are the narrow coastal zone between Karataş (44%) and Silifke (52%). In the north of this zone, stations with CV values of 47% (Mut), 44% (Adana) and 40% (Ceyhan) are surrounded. The stations with the lowest CV values are located in the zone from Elbistan to the Iskenderun Bay. The CV values in this zone range from 32% to 38%.

The summer CV values are shown in Figure 5c. The coefficient of precipitation variability in summer is quite far from the 25% limit value at almost all stations (between 50% and 63%). The lowest CV values are observed at the stations (Kozan, Dört Yol, and Göksun) in the northeast of the sub-region and in the north of the Adana-Ceyhan line. However, K. Maraş is a distinct station from the others because of its CV value of 99% in the northeast part. The highest CV values are observed along the coast zone, except for İskenderun and Yumurtalık. According to Bresson et al. (2012), the high mountains surrounding the Mediterranean support the uplift of low-level unstable air and the initiation of condensation processes. Thus, heavy precipitation events result from complex interactions between the atmosphere, sea and continental surfaces. The frequency of the weather types that characterize the summer season in the Mediterranean basin increases because the mP and cP air masses and front systems are displaced northward over the basin from May (Erlat, 2003). In summer, the Mediterranean basin and Turkey are under the influence of tropical air masses due to the northward displacement of the Azores anticyclone and its spread over Europe. Thus, the front and precipitation formation conditions on the Mediterranean basin are eliminated (Çiçek and Ataol, 2009).

The autumn CV values are shown in Figure 5d. It is observed that the precipitation variability coefficients in autumn are slightly lower than in summer, however, it is notably above the 25% limit. The reason for this is that autumn precipitation is more and more stable than summer precipitation. The highest variability values are again observed in the coastal zone between Yumurtalık and Anamur. In this zone, CV values vary from 60% (Karataş) to 66% (Mersin). The lowest CV values are observed at east coast zone and northeast part of the sub-region, İskenderun (37%), Dört Yol (43%), Göksun, Elbistan and Samandağ with CV of 45%. 61% of the stations in the sub-region have the autumn CV values between 45% and 56%.



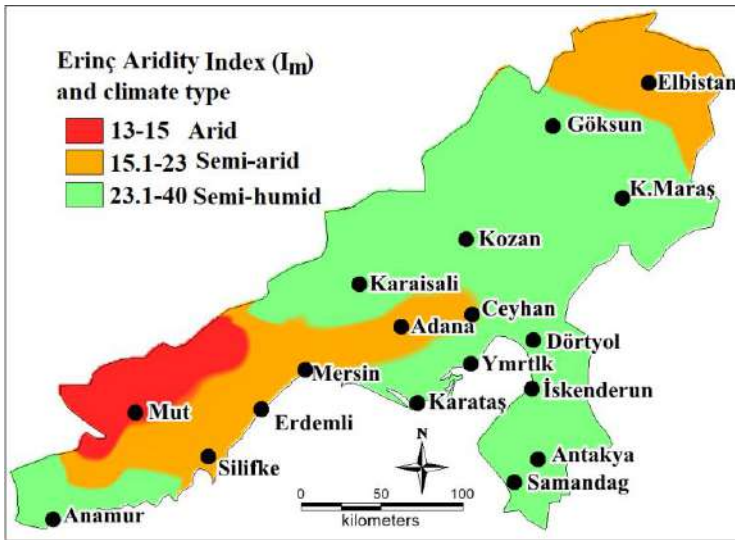


**Fig. 5.** Spatial distributions of inter-annual variability in a) winter, b) spring, c) summer and d) autumn precipitation totals over Adana Sub-Region for the period 1962-2021.

#### 4.2. Analysis of climate type ( $I_m$ )

The climate types of the stations in the sub-region over the 60-year period (1962-2021) are shown in Figure 6. According to the Erinç Index ( $I_m$ ), semi-arid and semi-humid climate types are dominant in the sub-region. Arid condition is only observed at Mut ( $I_m$ : 13.1). Semi-arid condition is observed at six stations, Adana, Ceyhan, Mersin, Erdemli, Silifke and Elbistan. Semi-humid condition is observed at eleven stations, Yumurtalık, Karataş, Kozan, Karaisalı, Anamur, Antakya, İskenderun, Samandağ, Dörtöyl, K.Maraş and Gökşun.  $I_m$  values vary between 16.1 (Elbistan) and 22.5 (Ceyhan) at stations with a semi-arid climate.  $I_m$  values vary between 24.9 (K.Maraş) and 38.5 (Antakya) at stations with a semi-humid climate.



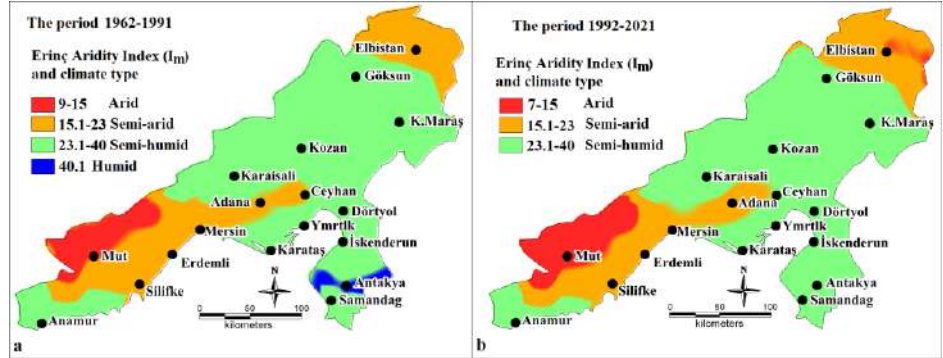


**Fig.6.** Spatial distributions of the climate types in the sub-region according to the values of Erinç Aridity Index, which were computed by using the climate data of 18 meteorology stations for period 1962-2021.

The climate types of the stations in the sub-region over the first 30-year period (1962-1991) are shown in Figure 7. Arid and humid conditions are only observed at Mut ( $I_m$ : 14.1) and Antakya ( $I_m$ : 40.1), respectively. Semi-arid and semi-humid conditions are observed at the same stations as in the 1962-2021 period. However, it is observed that the  $I_m$  values are different.  $I_m$  values vary between 16.9 (Elbistan) and 22.1 (Ceyhan and Adana) at stations with a semi-arid climate.  $I_m$  values vary between 25.4 (K.Maraş) and 34.0 (Anamur) at stations with a semi-humid climate (Fig. 7a). Bacanlı and Akşan (2019) revealed the arid conditions of the Mediterranean Region in the 1970-2018 period using Standardized Precipitation Evapotranspiration Index (SPEI) analysis. In this study, Mersin has the highest percentage in the normal drought class with a 1-month frequency value (68.17%), Antakya with a frequency of at least 6 months (51.38%).

The climate types of the stations in the sub-region over the second 30-year period (1992-2021) are shown in Figure 7b. While  $I_m$  value of Antakya is 40.1 in the first period, it decreases to 36.9 in the second period. In Antakya, which has humid climatic conditions in the first half of the period, semi-humid climatic conditions are formed in the second half of the period. This indicates that precipitation decreases and maximum temperatures increase in Antakya in the second period. Thus, conditions that increase evaporation prevailed. Arid condition is also only observed at Mut ( $I_m$ : 12.1).  $I_m$  value of Mut has decreased

compared to the previous period. This is a sign that desert conditions may occur in the future. Semi-arid condition is observed at six stations, similar to first period.  $I_m$  values vary between 15.4 (Elbistan) and 22.9 (Ceyhan and Adana) at stations with a semi-arid climate. In the second period, the  $I_m$  value of Ceyhan increased and semi-humid climatic conditions may prevail in the following years. In the second period, a decrease is detected in the  $I_m$  values of all stations compared to the previous period, except for Ceyhan and Karataş.  $I_m$  values vary between 24.2 (Göksun) and 36.2 (Antakya) at stations with a semi-humid climate. In the study of Bahadır (2011) it is stated that the decrease trend in the precipitation of coastal stations is strong and the amount of decrease is estimated as 48.4 mm, especially at Antakya (Table 3). Karabulut and Doğan (2018) obtained similar findings in their study, which determined the drought conditions of Erdemli and its surroundings for the period 1970-2017.



**Fig. 7.** Spatial distributions of the climate types in the sub-region according to the values of Erineç Aridity Index a) for period 1962-1991 and b) 1992-2021.

**Table 3.** I<sub>m</sub> index results for 1962-2021, 1962-1991 and 1992-2021

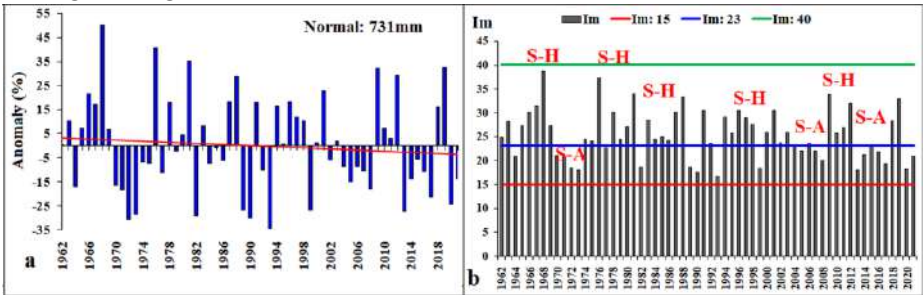
Station	Periods					
	1962-2021 I <sub>m</sub>	Climate type	1962-1991 I <sub>m</sub>	Climate type	1992-2021 I <sub>m</sub>	Climate type
Adana	21.3	Semi-arid	22.1	Semi-arid	20.6	Semi-arid
Ceyhan	22.5	Semi-arid	22.1	Semi-arid	22.9	Semi-arid
Yumurtalık	27.2	Semi-humid	27.7	Semi-humid	26.8	Semi-humid
Karataş	27.0	Semi-humid	26.9	Semi-humid	27.1	Semi-humid
Kozan	26.1	Semi-humid	27.0	Semi-humid	25.3	Semi-humid
Karaisalı	29.8	Semi-humid	30.9	Semi-humid	28.6	Semi-humid
Mersin	21.5	Semi-arid	21.5	Semi-arid	21.5	Semi-arid
Anamur	32.6	Semi-humid	34.0	Semi-humid	31.2	Semi-humid
Erdemli	20.5	Semi-arid	21.3	Semi-arid	19.6	Semi-arid
Silifke	19.1	Semi-arid	19.8	Semi-arid	18.4	Semi-arid
Mut	13.1	Arid	14.1	Arid	12.1	Arid
Antakya	38.5	Semi-humid	<b>40.1</b>	<b>Humid</b>	<b>36.9</b>	<b>Semi-humid</b>
İskenderun	25.9	Semi-humid	26.1	Semi-humid	25.7	Semi-humid
Samandağ	32.3	Semi-humid	32.6	Semi-humid	32.1	Semi-humid
Dörtyol	32.2	Semi-humid	33.0	Semi-humid	31.4	Semi-humid
K.Maraş	24.9	Semi-humid	25.4	Semi-humid	24.4	Semi-humid
Göksun	26.3	Semi-humid	28.5	Semi-humid	24.2	Semi-humid
Elbistan	16.1	Semi-arid	16.9	Semi-arid	15.4	Semi-arid

#### 4.3. Annual precipitation anomalies and inter-annual variation in climate of the sub-region

The annual precipitation average of the first 30 and the last 30 years are 743 mm and 720 mm, respectively. The total areal precipitation (720 mm) of the last 30 years (1992-2021) was 3% below the normal (743 mm) of the first 30 years (1962-1991) and the normal (731 mm) of 60 years (1962-2021) in the sub-region. The rates of increase and decrease in the precipitation amount in Adana sub-region according to the annual average precipitation are shown in Figure 8a. For the annual anomalies, the rainiest years were between 1962 and 1970, except for 1964 and increase rates range between 0.3% (1962) and 50.1% (1968). The annual precipitation decreased between 6.5% (1974) and 30% (1972) during period 1970-1975. Short-term increases and decreases are observed from 1976 to 2001. The lowest anomaly values, in other words, the significant decrease in precipitation is observed in this period. The negative anomaly values are 29.1% and 34.3% below normal in the years 1982 and 1993, respectively. The number of years with below-normal precipitation rates is increasing from 2001 to 2021. The strong negative and positive anomalies are

observed in 2013 (27.3% decrease) and 2019 (32.6% increase) for the period 2001-2021, respectively. Annual anomaly values show that short duration semi-arid conditions (of 2-3 years) are dominant at the mid of the period while long duration semi-arid conditions (of 5-6 years) are dominant from 2000.

These decreases and increases in annual precipitation averages are also reflected in the climate. Inter-annual variations of  $I_m$  values show that the driest and wettest years were observed between 1962 and 1970 for annual  $I_m$  series (Fig. 8b). Semi-humid conditions generally dominated from 1962 to 1970. In the 1970-1975, semi-arid conditions are observed due to the decrease in precipitation. From 1976 to 2001, semi-humid and semi-arid conditions followed each other for a short time. The number of years with semi-arid conditions has increased from 2000. Semi-arid conditions are dominant between 2013 and 2021, except 2018 and 2019. The decrease in precipitation observed in the Adana sub-region was also detected in the Aegean Region, which is located in the same climatic region. According to Mersin et al. (2022), a decreasing trend was detected in precipitation with increasing temperatures in the Aegean Region.



**Fig. 8.** The total areal precipitation for the years was compared with normal (731 mm) of the period 1962-2021 and annual areal precipitation deviation in the sub-region and inter-annual variations of annual precipitation anomaly series (a) and inter-annual variations of Erinc Aridity index ( $I_m$ ) (b). Abbreviations, S-H: semi-humid and S-A: semi-arid.

## 5. Conclusions

Based on the evaluation of the results from the analyses used in this study, the results are summarized below.

Annual precipitation variability in Adana sub-region increases steadily from northeast to southwest. In other words, it is observed that the 25% coefficient of variation is exceeded in the coastal zone except for Iskenderun and its surrounding. Orographic precipitation and local convective precipitation at Iskenderun result in low precipitation variability. The coefficient of variability is lower in winter, which is generally the rainy period, whereas it is higher in summer when precipitation decreases.

The highest variability value in summer and spring seasons was determined in Anamur, Erdemli, Silifke, Antakya and Samandağ. The highest variability value in summer and spring seasons was determined in Anamur, Erdemli, Silifke, Antakya and Samandağ. In other words, these are the stations where the limit value (25%) is exceeded for arid regions. According to the Erinc Aridity index, while humid climatic conditions were dominant in Antakya in the 1962-1991 period, semi-humid climatic conditions were dominant in the 1992-2021 period. The index values determined in the first half of the period for 16 stations decreased in the second half of the period except for Ceyhan and Karataş. In the Adana sub-region, the driest and the wettest years in the period of 1962-2021 was 1993 with 34.3% below normal and 1968 with 50.1% above normal, respectively. The decrease in precipitation has dramatically evident from 2000. The driest year of the last ten years is 2013 with a decrease of 27.3% in precipitation. This indicates that arid conditions will occur at all stations in the future except for Ceyhan and Karataş.

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## **Chapter 31**

# **Critical Roles Of Social Work During a Pandemic: Lessons from the Front Lines**

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## **Introduction**

The practice of social work is a helping profession that uses methods and ideas of social and behavioural human systems to address social issues. Millions of people have been infected, and the Corona Virus Disease (COVID-19) epidemic has killed almost two million people worldwide. To prepare the social work profession for future pandemic outbreaks, we must investigate the role played by social workers during a pandemic epidemic. The social work profession greatly impacts educating the most disadvantaged, offering psychological assistance, and promoting social inclusion. The hallmark of the social work profession is the design and execution of interventions that will benefit the lives of the vulnerable population and society (Okafor, 2021). However, COVID-19 has affected healthcare systems, including the social workers who provide services. These effects might have many consequences, such as stress, burnout, and other issues (Miller & Reddin Cassar, 2021). As a result, in this chapter, we attempt to learn from the experiences of the social worker who worked on the front lines of the pandemic. Although these were not simple teachings, they served more as benchmarks for advancing the social work profession in times of calamity and pandemics. This necessitates consideration of current medical practice, instruction, and technological usage. It is important to concentrate on studies about the post-pandemic profession, particularly in the medical field, which was previously a risky area for social workers.

## **Social work in the medical field changes and difficulties**

The pandemic crisis has brought to light important ethical concerns for social workers. This is clear from the added effort, creativity, and adaptability in many of their accounts. These have not been about "following the ethics," but rather using and trusting their professional judgments and doing "ethics work"—which includes the frequently undetectable but crucial emotional and cognitive effort that contributes to ethical practice—and taking time to reflect on the implications for future practice. It may seem odd to advocate for "slow ethics" during a crisis when quick policy and practice responses are required to deal with unexpected service gaps, an unanticipated shift to remote work, and high levels of need. Slowness, though, refers to more than just time passing slowly. It also involves being careful and alert, adopting a broad political perspective, using reasoning and logic, quick intuition, or just following rules. As well-rehearsed or intuitive responses and old or new rules may not be appropriate in changing circumstances, "slow" is important in everyday practice and even more so in times of crisis and ongoing pandemic conditions. As a

result of unexpected circumstances, recalibrating right and wrong, risks, roles, and responsibilities has required more ethical effort than usual (Banks & Rutter, 2022). The intervention is no longer based solely on the existing expertise of social workers in patient and family-centred care, crisis intervention, emergency response and bereavement counselling (Craig et al., 2022). However, the circumstances related to the epidemic forced social workers to deal with clients' needs that are becoming more and more complex due to the coronavirus pandemic. Due to the pandemic's need for social distancing, social workers have seen profound changes in their field with the quick adoption of virtual technologies (Ashcroft et al., 2022). At the same time, The communication difficulties brought on by personal protective equipment, the adjustments and difficulties resulting from virtual sessions with patients, the stress associated with gatekeeping roles with the constrained patient visiting hours, and the requirement for flexibility as a result of changes in work assignments were all mentioned by social workers (Booth and Venville, 2020).

A long-held belief in the practice of social work that the best care can only be provided through direct contact with the patient was challenged when the videophone was used to communicate with oncology patients, who were more likely to contract Covid 19 than others due to a weakened immune system. The social worker found it challenging to fully assess body language and the inadequateness of feedback in this type of communication. The social worker had to come up with the best ways to support patients and their families because the pandemic had made it difficult for families to communicate with their members during their treatment (Di Ciero, 2021). Enhancing social workers' contributions to frontline primary care will help draw attention to unmet population needs and broaden the pandemic recovery perspective. However, this will necessitate both short-term and long-term actions, and advocacy is required in the form of change to policies, such as workplace safety measures, additional hazard pay, and recognition that mental health and social care are essential to societal well-being and that the workforce providing these services is "essential". Long-term initiatives include increased reinvestment in educational pipelines to increase the number of public health social workers available to respond to this crisis and future ones. Broad-based policies that strengthen the health and social safety net are necessary to implement Public Health. However, without acknowledging and promoting the vital role social workers play in society's reaction to and recovery from COVID-19, this work would not be possible. Raising the profile of social work's long-standing contribution to health and public health will aid in addressing community needs for social care (Pollack et al., 2020; Cederbaum et al, 2022).

## **Frontline social work during COVID 19**

Frontline health and social care workers during the COVID-19 pandemic faced difficulties, including a lack of pandemic preparedness, a lack of personal protective equipment, anxiety and fear among professionals, problems enforcing social distance, difficulties fulfilling social shielding responsibilities, anxiety and fear among residents and service users, delays in testing, evolving PPE guidance, and a lack of staff. To safeguard frontline staff members and the people they care for, the health and social care sector must be well prepared for pandemics (Nyashanu et al., 2020). Social work institutions launched appropriate methods of operation while being totally unprepared for a crisis like the epidemic. Frontline social workers were burdened by the initial wave of the epidemic, which tested their well-being at home and at work. The workload and staff turnover, as well as additional hurdles including physical protection from the virus and distant engagement with clients of the "pandemic" social work, are some of the issues faced by social workers who work in hospitals during COVID-19 (Harrikari et al., 2021). Given that protective measures have been a significant issue in public health and associated services, one of the key organizational responses of social workers on the front lines concentrated on them. It is vital to note that conflicting policies and a lack of supplies to prevent infection happened at the same time as false information. Such a fact served as a significant barrier (exclusionary) for social workers. A significant worry (the exclusionary component) among social workers at the start of the epidemic was highlighted by the absence of personal protective equipment. Social workers got assistance from volunteers and civil society groups to overcome this obstacle (exclusionary component), which was a factor in turning challenges into opportunities. It is also shown that the frequent alteration of procedures has a detrimental impact on the services offered, in this instance, impacting the wellbeing of older persons in regards to visits from family and interactions with peers. It's crucial to draw attention to the fact that virtual technologies are often used to guarantee team communication while discussing coordination among social professionals. By using technology to its fullest potential, this enabled obstacles to communication to be overcome (Redondo-Sama et al., 2020).

## **Attitudes of the healthcare team towards the COVID-19 vaccine**

With the increasing need for the vaccine, the public's fears are increasing about its effectiveness and ability to prevent infection with the virus. Despite the approval of many types of vaccines, they did not provide sufficient data to address the infection of the virus in light of the emerging variables of the virus (Singh et al., 2021). Studies of public attitudes in many societies indicate

(Alhaffar et al., 2021; Murphy et al., 2021; Machida et al., 2021; Karlsson et al., 2021; Sallam, 2021) towards the COVID-19 vaccine indicates that there are concerns among a part of the population related to the side effects that the vaccine can leave on the population. These studies emphasize the need to reassure the population about the safety of the vaccine and that their safety is the same as the safety of others. The need to conduct further studies on the hesitation in taking the COVID-19 vaccine to support vaccination efforts. These growing concerns will negatively affect voluntary vaccination rates, preventing transmission of infection (Largent et al., 2020). At this stage, it is important to identify workers' attitudes in the primary classes to combat the epidemic, specifically health care workers, to address the obstacles that prevent their consent to the Covid-19 vaccine. The results of a study conducted on 4,080 health care workers, including social workers, showed that 36% of the participants (49% of whom were direct medical caregivers) were willing to receive the vaccine, 56% were hesitant, and 8% were outright refusing to receive the vaccine. The study results showed that vaccine acceptance among health care workers increases with increasing age, education, and income level. The safety and efficacy of the vaccine were the most important factors influencing the acceptance of the COVID-19 vaccine. Public attitudes toward vaccination were positive, while specific concerns about the COVID-19 vaccine were common (Shekhar et al., 2021). Factors related to the safety, efficacy, and negative effects of the vaccine have an important role in the concerns of health care workers, in addition to the fact that the different roles of workers have an impact on the acceptance of vaccination, as is the case in the tendency of doctors and research scientists to accept receiving vaccination more than others from the health care team (Shaw et al., 2021). There is an urgent need to address the vaccination concerns of the healthcare team through the development of specialized and effective approaches (Verger et al., 2021). This is of great importance in the success of vaccination campaigns because healthcare workers are considered reliable sources of correct information. Their reluctance to take the vaccine affects the public's attitudes towards taking the Covid 19 vaccine (Agyekum et al., 2021). They are also classified among people with a high and medium risk of infection with the virus. Social workers are classified as under medium risk for infection with the Coronavirus due to professional contact with many people (Logunov et al., 2021). Therefore, as part of the health care team, the social worker has a crucial role in supporting the communities affected by Covid 19. Furthermore, social workers have had a prominent role in the primary front lines to prevent the spread of the virus, implement social distancing measures and enhance social solidarity measures in

all their forms (IFSW, 2020). In this regard, the National Association of Social Workers provides continuous support by providing resources on the seriousness of the disease and the importance of the vaccine by developing the latest information about the vaccine, how to obtain it, and its importance in protecting the population in an attempt to help social workers overcome their fears about the vaccine (NASW, 2021) as the social worker has a crucial role at present by contributing to reassuring the population of vaccinations and the need to take them to maintain their safety and the safety of the people around them. From this point of view, it was necessary to know the trends of social workers towards the Covid 19 vaccine to contribute to devising the most effective methods to address their concerns.

### **Conclusion**

Social workers from several nations, including Canada, France, Spain, the United States, and Slovenia, have noted that social work is a profession grounded in values and science and that quick fixes must be established cooperatively and rigorously evaluated before being put into use. Nevertheless, there were several instances of intelligent and original practice on the part of people. One of the qualities of social work should be the ability to adapt to change. Therefore, it's important to draw lessons from the epidemic, seek fresh approaches, and consider what professional social work should be. The existing procedural rules—often established by national or local governments—were inadequate, unclear, and disconnected from actual circumstances. This is where social work, with its practitioners' ability to know people's needs firsthand, might provide ideas for policy formulation (Banks et al., 2020). In practice, social workers might also discover a link between future orientation and a possible fear of catching COVID-19. The findings of the future orientation of social workers make it necessary to undertake research and design policies that concentrate on the importance of dealing with significant medical problems. Evidence suggests that during the COVID-19 epidemic, the medical staff was affected by mental health disorders and the spread of dread. The medical care team must thus understand the association between the fear of contracting COVID-19 and future orientation, and this may need more focused research in this field (Snoubar & Zengin, 2022). Furthermore, it is essential to focus on the effects of fear on the medical team's health, job performance, and mental health. Therefore, strategies for dealing with such anxiety need to be developed, and health policies that address the impact of future-oriented thinking on social workers must be implemented. Understanding the way in which fear of contracting the virus and future orientation are intertwined is an important step



towards helping medical staff cope with anxiety. To reduce the risk of stress and burnout amongst medical care staff, it is essential to ensure they have access to resources that will help them understand the implications of future-oriented thinking on their work and well-being. These resources should include physical and mental health support, access to professional guidance, and regular opportunities for self-care. In addition, hospitals and other medical organizations need to have clear policies that recognise their work's emotional toll and provide adequate support. Organizations should also recognize the importance of social support and encourage team-building activities. Such measures are important to protect medical care staff from the potentially devastating effects of stress and burnout (WHO, 2005; Søvold et al., 2021). It becomes clear from looking at what transpired that social work intervention during a pandemic must be considered. The need to learn more about social work in hospital settings, which are riskier than ever, may also exist. Additionally, research has to be done on sustainably integrating technology into social workers' interventions in hospital settings.

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## Chapter 32

# Bibliometric Analysis of Studies on Extensible Business Reporting Language (XBRL)

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## **1. Introduction**

Extensible Business Reporting Language (XBRL) is the open international standard for digital business reporting. XBRL provides a common language to report terms that can be authoritatively defined. Those terms can then be used to uniquely represent the contents of financial statements and business reports. By this way reporting information can move between organizations very fast, properly and digitally (XBRL International, 2022).

It is vital to present the financial reports of the enterprises in a timely, fast, effective and reliable manner. With the developments in technology, the way financial reports are presented has also changed. Financial statement transfer has started to be widely used in electronic environment and over the internet. With globalization, businesses have gained an international dimension and the interest groups of financial reports have also changed. Businesses had to submit their reports to different people and organizations and in different languages. Financial reports prepared by businesses can be in different formats depending on the systems of those who request these reports. In this case, those who request the financial report must rearrange these reports in order to be able to analyze them. Because these financial reports are not in the same format with their own financial reports, they cannot make comparisons. At the same time, it does not allow for easy data extraction and analysis. This causes significant waste of time and high costs.

In order to put the financial reports which are in different formats to in a single format, the standards called International Financial Reporting Standards (IFRS) have been created in the world. Businesses prepare their financial reports by using international accounting reporting standards. However, many accounting software are used in the world. This software use many different types of databases, run on many different operating systems, and even have been prepared in many different programming languages. Even if it is based on the same standard, new arrangements must be made before reporting so that the reports produced by two different accounting software can be compared with each other.

All this causes the time increased until these accounting data are processed and reported in the desired standards. As a result, it causes the audits related to the reporting to be carried out later, and the decision makers about this business to make a tardy decision. Today time is very important for all businesses. So all businesses want to decrease the time. And to solve this problem extensible business reporting language was born. It allows the communication of accounting data prepared in these different data formats in a single common language



on the internet, so that reporting can be made in a short time according to different standards and needs.

The aim of this study is to examine the scientific publications including XBRL during the period of 2002-2022 (February). The analysis based on the bibliometric evaluation of all publications indexed in the Web of Science (WoS) database including XBRL phrase in the title, abstract or key words. With this aim, we tried to answer these questions: How are publications in relevant to XBRL can be classified according to document type? How is the distribution of the studies related to XBRL by years? Which are the most productive journals, countries and institutions related to XBRL literature? Who are the highly productive authors in relevant to XBRL in WoS? What are the most highly cited publications in relevant to XBRL?

Results indicated that; the vast majority of XBRL studies are published as an “article” (57.01 %) and “proceedings paper” (32.82 %). Respectively, USA (45.11 %), England (17.47 %) and Netherlands (9.02 %) are the top three leading countries that contribute to the XBRL literature. Journal Of Information Systems is a prominent domain of XBRL research (8.25 %). Findings also demonstrated that Troshani, Indrit is the most productive scholar in the field of XBRL whereas Hodge, FD; Kennedy, JJ; Maines, LA with the “Does search-facilitating technology improve the transparency of financial reporting?” is the most cited (f=239) article in the WoS. Finally, the significant increase in the number of publications in the field of XBRL since 2008 results in the fact that the subject has gained momentum among academics in recent years.

## **2. Literature Review and Theoretical Framework**

In this part, related literature is examined and theoretical framework of XBRL is given.

Fedorowicz (2003) discussed XBRL's development process, the underlying Extensible Markup Language (XML) framework and examples of its use on the Web. It introduces XBRL's educational impacts, and discusses its incorporation into an Advanced Accounting Information Systems course. Recommendations for incorporating XBRL across the accounting curriculum based on an informal Internet survey conclude the article.

Karasioglu and Eryigit (2005) discussed the features of XBRL and the benefits it will provide to interest groups and compared the current internet-based financial reporting and the use of XBRL.

Uyar and Çelik (2006) complement to explain the web-based formatting and reporting languages that can be used in the presentation of financial statements on the internet.

According to Bai, Sakau, and Takeda (2014), the regression results provide evidence consistent with the idea that the adoption of XBRL has improved the information environment in the Japanese market. This can be observed from the highly significant and negative relationships between the adoption of XBRL and the volatility of event returns, absolute cumulative abnormal returns, changes in the standard deviation of returns, and abnormal bid-ask spread after controlling for firm-specific features. Their findings show that XBRL disclosures have the potential to reduce information asymmetry through improved accessibility and transparency. These findings are robust for a sentiment analysis that excludes financial firms.

Karapınar and Yılmaz (2012) mentioned analysing the technical structure of XBRL, comparing it with traditional financial reporting systems and examining the contribution of it to traditional reporting system solution.

Sun (2017) investigated the interaction mechanism of the information disclosing tools and the value effectiveness which brought by XBRL and found out that the application of XBRL on the accounting information flow processing will enhance the XBRL technology and improve the usefulness of value chain accounting information.

Hoitash and Hoitash (2018) investigated a new measure of accounting reporting complexity (ARC) based on the number of accounting elements (XBRL tags) disclosed in 10-K filings. Preparing and disclosing more accounting items is complicated because it requires greater knowledge of the relevant accounting standards. This aspect of complexity can increase the likelihood of error and misapplication of GAAP, ultimately leading to less credible financial reports. And found that ARC is associated with greater likelihood of misstatement and disclosure of material weaknesses, longer audit delays, and higher audit fees. Compared to commonly used measures of operational and linguistic complexity, the associations between ARC and these outcomes are more consistent, have greater explanatory power, and have greater economic significance. And ARC captures accounting complexity broadly, while allowing it to be disaggregated into account-specific complexity measures.

Francesca, Andrea and Michela (2019) extended the knowledge of XBRL to synthesize what twenty years of accounting and business literature on XBRL suggests about the effective improvement from its implementation in financial reporting.

Faboyede, Obiamaka, Akande, Oladipo (2020) discussed the concept and need for XBRL, as well as its potential uses and challenges, and identified an ongoing transformation in the way business is conducted and regulated worldwide. The onslaught of the information revolution has profound consequences

for corporate reporting information preparers and users. Therefore, they recommend that the higher the degree of cooperation between all participants in the financial information supply chain, including government regulators and public sector accountants, the greater the benefits this information format provides for all participants, educators, academics, companies, regulators, investors. it does. as well as government agencies.

İşbil, Köroğlu, and Zaif (2021) discussed the necessity of integrating XBRL into the accounting curriculum in Turkey and made some practical suggestions on how XBRL could be integrated into the accounting curriculum. In this context, the sample includes the accounting departments of universities that offer 4-year undergraduate degrees in the 2019-2020 academic year in Turkey. Therefore, the data set of the research consists of the accounting curriculum of 13 universities (state universities: 8 and foundation universities: 5). The curricula and course contents of the relevant universities and departments were accessed and analyzed on their websites. The findings reveal that the courses in the curriculum do not contain information about XBRL. Therefore, the study proposes how to integrate XBRL in core subjects into the current curriculum.

Shkulipa (2021) analyzed accounting publications of the largest publisher by accounting journals, to evaluate the coverage of accounting directions, and indicate the current popularity of IFRS, XBRL, and blockchain technology. And concluded that the most frequent accounting topics published in 2018 and 2019 are management accounting (12%), audit and control (11%), capital (11%), and financial statements (8,4%); and the least frequent are IFRS including XBRL (5%) and blockchain technology (2%).

Ping (2021) discussed new strategies of contemporary management accounting development such as artificial intelligence, management accounting, data mining, XBRL technology. According to this study, data mining can provide some technical support for the implementation of strategic management accounting. Because the most important thing in management accounting informatics is to provide the management of large companies to process, calculate and transmit the business information of the enterprise through the corresponding computing platform using computer technology, and provide the relevant data to the management of large companies. To better analyze and make decisions and perfect the future development strategy of the enterprise, so it is more important to scan the relevant technology in the management accounting information process.

## **2.1. What is XBRL?**

XBRL is the open international standard for digital business reporting. It is a nonprofit consortium and managed by a global XBRL International. XBRL is used around the world, in more than 50 countries because it is more useful, more effective and more proper digital versions than paper-based reports. XBRL provides a common language to report terms that can be authoritatively defined. Those terms can then be used to uniquely represent the contents of financial statements and business reports. By this way reporting information can move between organizations very fast, properly and digitally (XBRL International, 2022).

XBRL first started in 1998 with the discovery of how to use XML in the financial reporting process of an accounting firm in the USA. After the specification of XML by the World Wide Web Consortium, the financial reporting version of XML was developed. Also in 1998, the American Institute of Certified Public Accountants (AICPA) made a regulation regarding the use of XML in the financial reporting process. In 1999, they tested the financial statements of 10 companies through XBRL with a computer company. In 2000, technology companies, especially Microsoft, started XBRL applications. In 2001, the International Accounting Standards Board (IASB) and the U.S.A. Securities and Exchange Commission-SEC offered recommendations on this issue. In 2002, The Australian Prudential Regulatory Agency launched the XBRL application (Uyar & Çelik, 2006, s. 98).

When we look at the articles and books prepared on this subject, we see different definitions expressed with other words. XBRL is an electronic language developed for standardizing the preparation, reporting, publishing, auditing and sharing of financial information (Uday & Groomerb, 2004).

XBRL is undergoing a rapid transition from the vision phase to becoming a practical global standard for financial and business reporting. XBRL is intended to allow the efficient compilation, distribution, and usage of financial statements. It is an open standard that provides a way to model business information and to articulate its semantic meaning. Internationally, the XBRL data standard is a platform for addressing the problem of data integrity, timeliness and reusability (Bai, Sakaue, & Takeda, 2014, s. 50).

XBRL is a global standard for electronic communication of business and financial data. It has been a widely accepted standard and implemented worldwide, including the US, China, Australia, India, Japan, South Africa, Germany, and Latin American countries. As a global and not-for-profit consortium, XBRL International (XII) manages the worldwide collaborative effort to create this standardized digital format for exchanging accounting, tax, and other business

reporting information. XBRL has the potential to reduce barriers to interoperability among different information systems for information exchanges. Thus, although the organizations have different business systems, they may still achieve financial information sharing via XBRL (Rahwani, 2019, s. 134)

## **2.2. What does XBRL do?**

It can be called for XBRL “bar codes for reporting” makes reporting more proper and efficient. By using XBRL people know that the published reports contain information all in and can be consumed and analyzed accurately. And it enables to test reports against a set of business and logical rules, in order to capture and avoid mistakes at their source. And it also makes easy for people to understand reports if it is written different languages, alternative currencies or in their preferred style. Information in reports prepared using the XBRL standard is interchangeable between different information systems in entirely different organizations. This allows for the exchange of business information across a reporting chain. People that want to report information, share information, publish performance information and allow straight through information processing all rely on XBRL (XBRL International, 2022).

It provides the presentation of financial information, the preparation of financial statements and the simultaneous and easy access to all information about the business. Because each item is formatted individually, preparers of financial statements can easily replace items in financial statements to meet the needs of different people. It can automatically convert a financial statement into different versions requested with XBRL. For example, those browsing the Web in an XBRL environment will automatically be able to see the analysis of daily sales or receivables with growth in revenue. With another example, depreciation expenses of all companies operating in the same sector in a given year can be compared in detail (Uyar & Çelik, 2006, s. 98).

XBRL is not a new accounting standard and can be applied flexibly to existing accounting standards and new changes in standards. XBRL was developed for the electronic transfer of trade reports and trade-related data. Balance sheet, income statement, cash flow statement etc. is to establish an XML-based standard for the creation, transfer and analysis of reports. In short, XBRL presents the financial reports created with the information provided to the users over the internet by using all the capabilities of the XML program (Karasioğlu & Eryiğit, 2005, s. 135).

### **2.3. The Features of XBRL**

The standard has been developed over more than ten years and supports almost every kind of conceivable reporting. XBRL is used in many different ways, for many different purposes, including by regulators, companies, governments, data providers, analysts and investors, accountants. And it allows the test business rules. It doesn't matter if the business rules are logical or mathematical. Anyone can restrict or allow the creation of business rules when reporting. It allows concept definitions to be prepared in as many languages as necessary. Translations of definitions can also be added by third parties. This means that it's possible to display a range of reports in a different language to the one that they were prepared in, without any additional work. The XBRL community makes extensive use of this capability as it can automatically open up reports to different communities. It is supported by a very wide range of software from vendors large and small, allowing a very wide range of stakeholders to work with the standard (XBRL International, 2022).

The use of XBRL prevents multiple entries of financial information, reduces the risk of incorrect data entry, and eliminates the need for manual information switching for different formats. In this way, the costs of preparing and distributing financial information to be delivered to investors and analysts are reduced. Since it is an XML-based language, financial report producers can label the data they need or add to the classification system they use to increase the application width. It is a standalone program. It can be used on any computer with any operating system. XBRL allows to automate reporting processes, can be adapted to new reporting systems and standards, and provides flexibility in reporting formats. Since it is easier to report according to different accounting standards with XBRL, different accounting standards can be brought closer to each other (Karasioğlu & Eryiğit, 2005, s. 139).

XBRL allows the creation of reusable, authoritative definitions which is called taxonomies. And the taxonomies capture the meaning that contains of the reporting terms used in a business report and the relationships between all the terms. Taxonomies are developed by regulators, accounting standards setters, government agencies and other groups that need to clearly define information that needs to be reported upon. XBRL doesn't limit what kind of information is defined: it's a language that can be used and extended as needed.

XBRL provides labeling of data based on current accounting standards. But XBRL is not an accounting standard or an application that changes these standards. XBRL facilitates the preparation, reuse, preparation and analysis of financial data. But it does not change what is reported, nor does it make any changes to existing information. XBRL provides access to information from anywhere

by removing time and place limitations. XBRL is not only an American-based study, but also a study with international effects and foundations. XBRL provides automation to prevent errors that may occur with more than one data entry. But it does not have a structure that can solve all accounting problems. XBRL is flexible enough to be applied to individual preferences. XBRL is not a proprietary technology. It is a public programming language that can be used without a license (Yardımcıoğlu & Özer, 2011, s. 84).

In today's world, where the need for changing and developing information is increasing, it is not flexible, economical, and accurate to process information manually. Many organizations now realize that spending more money and human effort on collecting and processing data does not add to the performance and value of the organization, or even reduces its value. Because the manual data transfer process causes an error. If a common computer language that all software can understand is used and there is no need for manual data entry, the risk of errors and costs are also eliminated (Yılmaz, 2012, s. 66).

## **2.4. Technical Structure of XBRL**

While XBRL was first called Extensible Financial Reporting Language (XFRML), it was later agreed to become a broad language and It's called the XBRL. Thus, it has been ensured that it is a language that allows reporting not only financial information but also non-financial data. One of the most important goals of XBRL is to ensure that financial report writers and financial report users use a common language. For this purpose, taxonomies, which have a common meaning for everyone and have dictionary characteristics, have been developed. The taxonomies are based on specifications developed by the W3 (WWW) consortium. Financial reports prepared in accordance with taxonomies are also called instance documents. Therefore, the technical structure of XBRL consists of specifications, taxonomies and sample documents (Karabınar & Yılmaz, 2012, s. 7).

### **2.4.1. Specifications**

The specifications define the operating system of XBRL and the rules to which documents created in accordance with XBRL will be governed. The specifications for accounting records are called the general ledger specification (XBRL General Ledger-XBRL GL-), and the specifications for the creation, publication and comparison of financial reports are called financial reporting specifications (XBRL Financial Reporting -XBRL FR-) (Karabınar & Yılmaz, 2012, s. 7).

Technically, a specification is a document that describes how financial terms are defined in the XBRL language. XBRL specifications; It makes the creation, comparison and transfer of business reporting information standardized and easier. XBRL, like XML, uses tags to mark up documents. Labels; The structure of the document is used to provide instructions for electronic transfer and presentation formats. Without tags, the document will have no structure, the program will not understand the data or know what to do. If a company does not have specifications that work in harmony with each other, the data to be used for the creation of financial reports should be prepared again and again (Karasioğlu & Eryiğit, 2005, s. 136).

#### **2.4.2. Taxonomies**

The term taxonomy means the classification of living things and the rules and principles used in this classification, derived from the Greek words "Taxis (regulation)" and "nomos (law)". Taxonomies define concepts. Taxonomy is rather a dictionary that expresses concepts in a certain format and defines the metadata to be reported. An XBRL taxonomy is a system for describing and classifying the content of financial statements and other business reporting documents. Taxonomies explain the meaning of each concept that will be included in business reports, what their characteristics and qualities are. Thus, the equivalent of each concept to be included in the sample documents will be included in the taxonomies (Karabınar & Yılmaz, 2012, s. 7).

Taxonomies consist of Financial Reporting Taxonomies (FR) and Ledger Taxonomies (GL). They describe how each business reporting information will be described in a standardized format. The XBRL classification system defines and classifies the content of accounting reports in a standardized manner. The XBRL classification system is an XML schema that defines new elements that can be referenced in an XBRL document. The meaning of financial information is described in the classification system, and the values entered in the XBRL document are indicated by labels. These tags make it possible to use the data in any form with the application from any computer. Financial data stored in the form of an XBRL document can be read and transferred to a workable computer, platform and application. The purpose of the classification system is to provide a system for commercial and industrial companies to create coherent documents covering financial reporting purposes (Karasioğlu & Eryiğit, 2005, s. 137).



### **3. Financial Statements in XBRL**

Rapid developments in information technology, especially the internet and related technologies, also affect traditional financial reporting. As a result of the increase in the use of the Internet, most businesses present their financial information and financial reports, as well as their marketing and sales information, via the Internet. The presentation of financial reports on web pages has increased considerably towards the end of the 1990s. These reports can be summary reports prepared in different formats (such as acrobat reader and html), or they can be reports with a detailed financial analysis (Yardımcıoğlu & Özer, 2011, s. 80).

The users of financial statements are listed as investors, creditors, employees, government, unions and thus the whole society. Businesses convey the financial statements to users in various ways that they have created because of their activities. Today, financial statements are presented as written text and electronically in HTML, Excel, Word, pdf etc. formats. Users upload these financial statements to their own systems and use them for various purposes. However, the fact that the data on the computer is in different formats makes data transfer difficult and causes users to reload the data. This situation can lead to loss of time to a great extent, as well as cause errors caused by the human element. As a result, the accuracy, reliability and transparency of the financial statements are compromised. This situation reveals the necessity of a standard computer language in the transfer of data. In order to compare financial information prepared in different formats, this information needs to be rewritten or copied. This situation both increases the possibility of making mistakes and causes increased costs and loss of time. However, since XBRL data is prepared to be converted into files in different formats. There is no need to re-enter these data. This enables financial information users to easily access financial information of businesses and compare them with other companies. XBRL is a business language that allows access in the shortest time and at the least cost, besides being accurate and reliable (Karabınar & Yılmaz, 2012, s. 14).

When an enterprise that wants to use a loan presents its financial statements to the credit institution in pdf format, the credit institution will reload the data into its own system for analysis of these tables and only then can it be subjected to analysis. In addition, the credit institution will spend most of the time in the process of meeting the loan demand by collecting data and uploading the data to its system and will spare less time for analysis and evaluation. The same problems are valid for other financial statement users such as tax administration, Central Bank and investors. This situation reveals the necessity of a standard computer language in the transfer of data (Yılmaz, 2012, s. 66).

Financial data is obtained from many sources and used for more than one purpose. Inside and outside the company; Since data is collected from different areas and used in different areas, it requires continuous data exchange between different systems. In order to obtain the data, research, selection, arrangement and reformatting processes are carried out. These processes are manual, time consuming and difficult. Since the communication between different sources is standardized with the use of XBRL, it becomes easier to use the data for different purposes, and companies can make different reports with a single data entry. Financial data users, on the other hand, reach the data they want without examining all the documents or changing the format of the documents. As a result, efficiency increases in data acquisition processes (Karasioğlu & Eryiğit, 2005, s. 147).

XBRL has been developed to meet the need for a standard computer language that will be valid all over the world in the presentation of financial reports over the Internet, which can be perceived and interpreted by computers, thus allowing automatic data exchange between individuals and institutions without the need for data entry (Karabınar & Yılmaz, 2012, s. 6).

## **4. Method**

### **4.1. Sample and Data Collection**

This study used the Web of Science (WoS) database to reach highly qualitative publications in the field of XBRL. During the period of 2002-2022 (February), the publications including “Extensible Business Reporting Language (XBRL)” term in titles, abstracts and keywords of published works indexed in Science Citation Index Expanded (SCI-EXPANDED), Social Sciences Citation Index (SSCI), Arts & Humanities Citation Index (A&HCI), Conference Proceedings Citation Index-Science (CPCI-S), Conference Proceedings Citation Index-Social Science & Humanities (CPCI-SSH), Emerging Sources Citation Index (ESCI) was downloaded in appropriate with the bibliometric data. Totally, 531 publications were concluded. After elimination of duplicates (10) and other data cleaning procedures, 521 publications were analysed.

### **4.2. Analyses**

By the help of bibliometric analysis, researchers examine statistically the country, author(s), and cooperation among authors, citations, institutions, and published years of selected publications and set forth the general structure of a certain discipline using obtained statistical findings (Özbağ, Esen, & Esen, 2019).

Accordingly, the present study addresses the following key research questions:

- How are publications in relevant to XBRL can be classified according to document type?
- How is the distribution of the studies related to XBRL by years?
- Which are the most productive journals, countries and institutions related to XBRL literature?
- Who are the highly productive authors in relevant to XBRL in Web of Science (WoS)?
- What are the most highly cited publications in relevant to XBRL?

**5. Findings**

**5.1. Document Types of XBRLStudies**

521 publications were classified according to document types using the publication categorization of the Web of Science platform (Table 1). Accordingly, 57.01% of the publications are published as "articles" and 32.82% as " Proceedings Paper". In other words, the vast majority of XBRL studies (89.83%) are published in the field as "articles" and "proceedings".

**Table 1. Document Types of XBRLStudies**

Rank	Document Type	f	%
1	Article	297	57,01
2	Proceedings Paper	171	32,82
3	Book Chapter	15	2,88
5	Editorial Material	12	2,30
6	Review	11	2,11
7	Others	15	2,88
Total		521	100

**5.2. Annual Production of XBRLStudies (2002-2022 February)**

Table 2 shows the annual production of XBRL studies over the period of 2002-2022 (February). Since 2008, a significant increase in the number of publications in the field of XBRL draws attention. The publication of 479 out of 521 publications after 2008 results in the conclusion that XBRL research has gained momentum among academics in recent years.

**Table 2. Annual Production of XBRL Studies (2002-2022 February)**

Rank	Publication Year	f	%	Rank	Publication Year	f	%
1	Early Articles	7	1,34	12	2012	30	5,76
2	2002	4	0,77	13	2013	37	7,10
3	2003	1	0,19	14	2014	37	7,10
4	2004	3	0,58	15	2015	43	8,25
5	2005	6	1,15	16	2016	33	6,33
6	2006	9	1,73	17	2017	42	8,06
7	2007	12	2,30	18	2018	43	8,25
8	2008	26	4,99	19	2019	36	6,91
9	2009	28	5,37	20	2020	26	4,99
10	2010	34	6,53	21	2021	32	6,14
11	2011	32	6,14				
<b>Total</b>						<b>521</b>	<b>100</b>

### 5.3. Sources of XBRL Studies

According to Table 3, 521 publications in the data set for XBRL literature are available from 329 different sources. While “Journal Of Information Systems” has the most XBRL articles with 43 articles, it is in the second place with “Journal Of Emerging Technologies In Accounting” and 18 publications. “International Journal of Accounting Information Systems” is in the third place with 16 publications.

**Table 3. Sources of XBRL Studies**

Rank	Source Name (Title)	f	%
1	Journal Of Information Systems	43	8,25
2	Journal Of Emerging Technologies In Accounting	18	3,45
3	International Journal Of Accounting Information Systems	16	3,07
4	International Journal Of Accounting And Information Management	12	2,30
5	International Journal Of Disclosure And Governance	12	2,30
6	Accounting Horizons	7	1,34
7	Issues In Accounting Education	7	1,34
8	Journal Of Accounting And Public Policy	6	1,15
9	Decision Support Systems	5	0,96
10	Accounting And Finance	4	0,77
11	Accounting Perspectives	4	0,77
12	Accounting Review	4	0,77

13	Journal Of Business Research	4	0,77
14	Mobile Applications And Knowledge Advancements In E-Business	4	0,77
15	Accounting Research Journal	3	0,58
16	Cluster Computing-The Journal Of Networks Software Tools And Applications	3	0,58
17	Information Systems	3	0,58
18	International Journal Of E-Business Research	3	0,58
19	International Journal Of Managerial And Financial Accounting	3	0,58
20	International Journal Of Managerial Finance	3	0,58
...	...	...	...
329	Wseas: Advances On Applied Computer And Applied Computational Science	1	0,19
Total		521	100

### 5.4. The Most Productive Scholars in XBRLStudies

Table 4 lists the most prolific 3 scientists in the XBRL field. Accordingly, Troshani, Indrit has a high number of publications (f=12), Liu, Chunhui is the second (f=10) and Bonson, Enrique (f=6) is the third prolific author in the dataset.

**Table 4.** The Most Productive Scholars in XBRL Studies

Rank	Author Name	f
1	Troshani, Indrit	12
2	Liu, Chunhui	10
3	Bonson, Enrique	6

**Figure1:**Name Cloud of The Most Productive Scholars in XBRLStudies



**Source:** created by the author using wordart application.  
(<https://wordart.com/create> , 05.02.2022)

### 5.5. Top 20 Highly Productive and Highly Cited Journals ofXBRLStudies

Table 5 presents the most cited authors and journals related to the XBRL field. Hodge, FD; Kennedy, JJ; Maines, LA's "Does search-facilitating technology improve the transparency of financial reporting?" was the most cited article with 239 citations, while Grabski, Severin V.; Leech, Stewart A.; Schmidt by Pamela J. "A Review of ERP Research: A FutureAgenda for Accounting Information Systems" second with 176 citations; Debreceeny, Roger; Farewell, Stephanie; Piecocki, Maciej; Felden, Carsten; Graening, Andre "Does it add up? "Early evidence on the data quality of XBRL filings to the SEC" came in third with 106 citations.

**Table 5. Top 20 Highly Productive and Highly Cited Journals of XBRL Studies**

Rank	Author Names	Article Title	Journal Name	Times Cited, All Databases
1	Hodge, FD; Kennedy, JJ; Maines, LA	Does search-facilitating technology improve the transparency of financial reporting?	Accounting Review	239
2	Grabski, Severin V.; Leech, Stewart A.; Schmidt, Pamela J.	A Review of ERP Research: A FutureAgenda for Accounting Information Systems	Journal Of Information Systems	176
3	Debreceeny, Roger; Farewell, Stephanie; Piechocki, Maciej; Felden, Carsten; Graening, Andre	Does it add up? Early evidence on the data quality of XBRL filings to the SEC	Journal Of Accounting And Public Policy	106
4	Yoon, Hyungwook; Zo, Hangjung; Ciganek, Andrew P.	Does XBRL adoption reduce information asymmetry?	Journal Of Business Research	99
5	Kim, Joung W.; Lim, Jee-Hac; No, Won Gyun	The Effect of First Wave Mandatory XBRL Reporting across the Financial Information Environment	Journal Of Information Systems	95
6	Pinsker, Robert; Li, Shaomin	Costs and benefits of XBRL adoption: Early	Communications Of The Acm	80

		evidence		
7	Blankespoor, Elizabeth; Miller, Brian P.; White, Hal D.	Initial evidence on the market impact of the XBRL mandate	Review Of Accounting Studies	68
8	Plumlee, R. David; Plumlee, Marlene A.	Assurance on XBRL for Financial Reporting	Accounting Horizons	66
9	Debreceeny, Roger S.; Farewell, Stephanie M.; Piechocki, Maciej; Felden, Carsten; Graening, Andre; d'Eri, Alessandro	Flex or Break? Extensions in XBRL Disclosures to the SEC	Accounting Horizons	60
10	Boritz, J. Efrim; No, Won Gyun	The SEC's XBRL Voluntary Filing Program on EDGAR: A Case for Quality Assurance	Current Issues In Auditing	57
11	Troshani, Indrit; Doolin, Bill	Innovation diffusion: a stakeholder and social network view	European Journal Of Innovation Management	55
12	Vasarhelyi, Miklos A.; Chan, David Y.; Krahel, J. P.	Consequences of XBRL Standardization on Financial Statement Data	Journal Of Information Systems	54
	Bozanic, Zahn; Hoopes, Jeffrey L.; Thornock, Jacob R.; Williams, Braden M.	IRS Attention	Journal Of Accounting Research	54
13	Liu, Chunhui; Wang, Tawei; Yao, Lee J.	XBRL's impact on analyst forecast behavior: An empirical study	Journal Of Accounting And Public Policy	53
14	Elliott, RK	Twenty-first century assurance	Auditing-A Journal Of Practice & Theory	52
15	Janvrin, Diane J.; No, Won Gyun	XBRL Implementation: A Field Investigation to Identify Research Opportunities	Journal Of Information Systems	51

	Henderson, Dave; Sheetz, Steven D.; Trinkle, Brad S.	The determinants of inter-organizational and internal in-house adop- tion of XBRL: A struc- tural equation model	International Journal Of Accounting Information Systems	51
	Hoitash, Rani; Hoitash, Udi	Measuring Accounting Reporting Complexity with XBRL	Accounting Review	51
16	Boritz, J. Efrim; No, Won Gyun	Assurance on XBRL- Related Documents: The Case of United Technol- ogies Corporation	Journal Of Information Systems	48
	O'Riain, Sean; Curry, Edward; Harth, Andreas	XBRL and open data for global financial ecosys- tems: A linked data approach	International Journal Of Accounting Information Systems	48
17	Perdana, Arif; Robb, Alastair; Rohde, Fiona	An Integrative Review and Synthesis of XBRL Research in Academic Journals	Journal Of Information Systems	42
18	Efendi, Jap; Park, Jin Dong; Smith, L. Murphy	Do XBRL filings en- hance informational efficiency? Early evi- dence from post-earnings announcement drift	Journal Of Business Re- search	41
	Dong, Yi; Li, Oliver Zhen; Lin, Yupeng; Ni, Chenkai	Does Information- Processing Cost Affect Firm-Specific Infor- mation Acquisition? Evidence from XBRL Adoption	Journal Of Financial And Quantitative Analysis	41
19	Du, Hui; Vasar- helyi, Miklos A.; Zheng, Xiaochuan	XBRL Mandate: Thou- sands of Filing Errors and So What?	Journal Of Information Systems	40
20	Bartley, Jon; Chen, Al Y. S.; Taylor, Eileen Z.	A Comparison of XBRL Filings to Corporate 10- Ks-Evidence from the Voluntary Filing Pro- gram	Accounting Horizons	39

## 5.6. XBRL Studies Literature in Various Countries and Highly Productive Organizations (Top 20)

Considering the geographical distribution of scientific articles, USA is at the top of the list with 235 publications among 17 countries. The other two countries contributing to the XBRL literature are the UK with 91 publications and



the Netherlands with 47 publications, respectively. Also, considering the institutions contributing to the XBRL literature (Table 6), Amer Accounting Assoc. at the top of the list (f=85), followed by Emerald Group Publishing Ltd. (f=39) and IEEE (f=33) (Table 7).

**Table 6. XBRL Studies Literature in Various Countries**

Rank	Country	f	%	Rank	Country	f	%
1	Usa	235	45,11	18	Greece	2	0,38
2	England	91	17,47	19	India	2	0,38
3	Netherlands	47	9,02	20	Slovakia	2	0,38
4	Germany	29	5,57	21	Sweden	2	0,38
5	Switzerland	23	4,41	22	Argentina	1	0,19
6	France	12	2,30	23	Canada	1	0,19
7	Romania	10	1,92	24	Chile	1	0,19
8	Czech Republic	9	1,73	25	Croatia	1	0,19
9	Australia	7	1,34	26	Hungary	1	0,19
10	Poland	7	1,34	27	Italy	1	0,19
11	Singapore	6	1,15	28	Nigeria	1	0,19
12	South Korea	5	0,96	29	Portugal	1	0,19
13	Spain	5	0,96	30	Russia	1	0,19
14	Malaysia	4	0,77	31	Serbia	1	0,19
15	Peoples R China	4	0,77	32	Taiwan	1	0,19
16	Japan	3	0,58	33	Thailand	1	0,19
17	Lithuania	3	0,58	34	Ukraine	1	0,19
<b>Total</b>						<b>521</b>	<b>100</b>

**Table 7. Top 20 Highly Productive Organizations of XBRL Studies**

Rank	Organizations	f
1	Amer Accounting Assoc.	85
2	Emerald Group Publishing Ltd.	39
3	IEEE	33
4	Elsevier Science Bv	23
5	Wiley	21
6	Springer-Verlag Berlin	18
7	Igi Global	16
8	Elsevier	15
9	Springer	14
10	Atlantis Press	12

11	Palgrave Macmillan Ltd	12
12	Springer International Publishing Ag	12
13	Elsevier Science Inc.	11
14	Routledge Journals, Taylor & Francis Ltd.	11
15	Ieee Computer Soc	9
16	Destech Publications, Inc.	6
17	Elsevier Sci Ltd.	6
18	Ios Press	6
19	Pergamon-Elsevier Science Ltd.	6
20	Editura Ase	4

formation users have to re-enter data in order to analyze and analyze different types of financial statements. This situation causes erroneous data entries, deterioration of data integrity, loss of time and cost increases. Looking at the financial reports of the world's leading companies in recent years, most of them use XBRL as the format. This situation shows that it will be very useful to use the XBRL format to standardize the financial reports prepared in different formats by the companies using different accounting standards in the world.

This study provides a bibliometric overview of XBRL literature published through 2002-2022 (February) and indexed in the Web of Science database. Results indicated that; the vast majority of XBRL studies are published as an “article” (%57.01) and “proceedings paper” (32.82 %). Respectively, USA (45.11 %), England (17.47 %) and Netherlands (9.02 %) are the top three leading countries that contribute to the XBRL literature. Journal Of Information Systems is a prominent domain of XBRL research (8.25 %). Findings also demonstrated that Troshani, Indrit is the most productive scholar in the field of XBRL whereas Hodge, FD; Kennedy, JJ; Maines, LA with the “Does search-facilitating technology improve the transparency of financial reporting?” the most cited (f=239) article in the WoS. Finally, the significant increase in the number of publications in the field of XBRL since 2008 results in the fact that the subject has gained momentum among academics in recent years.

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## Chapter 33

# Trumpism: The Populist Surfing on Conservative Wave

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*"The future does not belong to Globalists the future belongs to patriots the future belongs to sovereign and independent nations"*

Donald Trump, Speech in United Nations, September 2019

## **Introduction**

45<sup>th</sup> President of the United States of America, Donald Trump, has shaken the course of political history. Despite the defeat of Trump in the 2020 presidential election, the surf he started is not over. He received more than 70 million votes, causing the highest voting rate in American history with the concern of voting for him or against him. Trumpism, on the other hand, stands in the middle as a political movement accepted by the American people. In his first term, carried successful economic management which is extremely important for Americans. Even though he could not manage to win the election for the second term Trumpism will be a bold reality for a couple of elections. For millions of white Americans who traditionally defined themselves as Republican and separated from liberal-Democratic voters, Trump had the opportunity to "come back on the scene" after the 8-year Obama period. Trump's independent, sovereign, and sometimes reckless political discourses and actions on this favor directed towards him created a political momentum that transformed him over time. The polarization became evident in the United States of America and spread to the world. The general belief is that with the end of Trump's four-year presidency, this nightmare does not end Trump has been showing us the trailer of a bad nightmare ahead for the future, and the new Trump would be even worse. In this research, Trump's arguments and the demands of his supporters will be evaluated. This research also analyzes the effects of Trumpism on World Politics. This work analyzes Trumpism; that is, what this new American populism means, such as anti-elitism, the supremacy of popular will, and ideological confusion.

## **Populism**

Populism is about to become the global pandemic disease of the 21st century's politics. Just as in the 1930s when dictatorial regimes rose with the support of the people, liberal democracy facing a danger today authoritarian populist currents, which are not a dictatorship in the classical sense, are developing against the basic values of democracy such as pluralism, freedom, and separation of powers. I will use Jan-Werner Müller's seven theses<sup>1</sup> on Populism that he concluded in his book "What Is Populism?". According to Müller, seven theses are:

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<sup>1</sup> Jan-Werner Müller, *"What Is Populism?"*, (Philadelphia: University of Pennsylvania Press, 2016), p. 61-62



1. Populism can be seen at all times. The feature of populism in modern times is that democracy embraces the principle of representation but claims that the populists are the spokespersons of the citizens.
2. Populism tries to demonstrate the political movements other than itself as illegal. Due to the anti-pluralistic aspect populism is anti-elitist. Pluralism is not adopted by populism as a democratic principle.
3. Populists show their solutions and political agenda as the only way to create the goodness of society. Populists are less likely to adopt the popular will with independent discussions because they are the real people in their understanding. (Müller emphasizes in his book that when they lost the election, French Le Pen and Hungarian Orbán commented that their nations lost the elections.)
4. Populists strongly defend the elections and the decision of the citizens, but they do not embrace the formation of the people's will with free and open discussions. The 'will of the nation' as populists emphasize is only their will.
5. Populism does not govern a state but rather occupies it because they are the sole representative of the nation and the only clique that can govern in the name of the people of the country. In this case, populists generate pressure upon civil society. The style politics of populist politicians are exclusivist.
6. Populism is a danger for both liberalism and democracy because of the aspects mentioned above. All the features make populism a threat and enemy to constitutional institutions sooner or later. At the beginning of the nineteenth century how German and Italian populism transformed the state can be a good example of this.
7. Populism is not an ideology or movement that draws a state through citizens or a positive criticism of the democracy or state. It is a current that supporters of democracy should be thinking of how this current gain great support of the masses.

These seven aspects describe the Populist approaches in a wide evaluation. In this case, these theses will be our reference point for Populist behaviors. Also, I will refer to Cas Mudde's and Cristóbal Rovira Kaltwasser's definition of a populist leader: "A final approach considers populism predominantly as a folkloric style of politics, which leaders and parties employ to mobilize the masses. This approach is particularly popular within (political) communication studies as well as in the media. In this understanding, populism alludes to amateurish and unprofessional political behavior that aims to maximize media attention and popular support. By disrespecting the dress code and language

manners, populist actors can present themselves not only as different and novel but also as courageous leaders who stand with “the people” in opposition to ‘the elite’.<sup>2</sup>In my opinion, these explanations will also help us to understand the link between populist leaders and their followers’ minds.

### **Rising of Conservative Wave in the USA**

For Roger Scruton modern conservatism started as protection of tradition against demands for popular sovereignty; before joining forces with classical liberals in the fight against socialism, it became a call to the doctrine of materialist progress on behalf of religion and high culture. In the latest stage of self-identification, Modern Conservatism became a champion of Western civilization against his enemies, and especially against these two enemies: political correctness and militant Islamism promoted by Wahhabi-Salafi sects.<sup>3</sup> Here I would like to focus on political correctness and its effects. In 2016, Arie Kapteyn and Robert Cahaly predicted that Donald Trump was closer to Oval Office than Hilary Clinton.<sup>4</sup>

Cahaly discusses that people have two Twitter accounts. One is the account where they tweet photos of their pets and children. The other is the account they fight with everyone, this “troll account” is their real identity in the ballot box.<sup>5</sup>The most interesting issue in the 2016 election was those who would vote for Trump were ashamed to say this in the polls. They had worries that they would be judged and belittled because they preferred Trump. They were not responding correctly to the survey questions due to the broadcasts of the mainstream media and the world media in America that insulted Trump. There were many secret Trump voters in the homeland of freedom of speech. Far from this issue and case, Roger Scruton has discussed something in parallel. He discussed the ostracization, marginalization, and demonization of conservatives with the usage of forbidden isms by the left establishment driven society<sup>6</sup>. I would like to put myself in an American conservative’s place. When I talk about the crime rate among Hispanics and do not want them in my country I will get labeled as racist, when I talk about the duties that have been shared with

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<sup>2</sup>Cas Mudde and Cristóbal Rovira Kaltwasser, *Populism: A Very Short Introduction*, (New York: Oxford University Press, 2017), p. 4.

<sup>3</sup> Roger Scruton, *Conservatism: An Invitation to the Great Tradition*, (New York: St. Martin’s Press 2018), Chapter VI.

<sup>4</sup> Katelyn Fossett and Steven Shepard, “Trade Secrets From the Predictors Who Called a Trump Victory”, *Politico*, November 16 2016, <https://www.politico.com/magazine/story/2016/11/donald-trump-2016-polls-upset-214461>

<sup>5</sup> Katelyn Fossett and Steven Shepard, “Trade Secrets From the Predictors Who Called a Trump Victory”, *Politico*, November 16 2016, <https://www.politico.com/magazine/story/2016/11/donald-trump-2016-polls-upset-214461>

<sup>6</sup> Scruton, *Conservatism*, Chapter VI.

man and woman in a family I will get labeled as sexist, when I complain about two men's kissing each other in front of my children I will get labeled as homophobic, when I complain about my children's teacher is a transgender I will get labeled as transphobic. While mainstream media washing my brain with how 'Islamic State bombed somewhere in the World, I will get labeled as Islamophobic because I booed a Saudi dress man in my street. I am not me anymore. I am something that the judges labeled me. I am an undereducated worker somewhere in the middle of the map. I mostly do not find an opportunity to read a newspaper. I cannot express my values about these issues. I am angry or shy or upset. I would like to punch their faces. But this is not lawful. So, I would give my power of attorney to someone who hurts more than my punches. This is a deep wave it occurred every moment. However, these tiny waves increased and caused a tsunami, a conservative tsunami. In the next chapter, I will evaluate the surfer, who rudely ride the waves.

### **Trumpism: A Rude Surf**

"Populists are often criticized for being great simplifiers when the world is highly complex. For those who take Trump to be the paradigmatic populist of our day, it's easy to conclude that populists are constantly lying and ushering in a "post-truth" era, in which falsehoods exclusively produced by the daily White House reality TV show are turning out to be deadly."<sup>7</sup> The populist leaders are generally known to be against elites and especially experts. This is one of the features of the populist leaders due to demonstrate themselves as a member of great masses rather than corrupted elites and establishment.<sup>8</sup> Populists also imply amateurish and unprofessional political behavior<sup>9</sup> as mentioned in Mudde and Kaltwasser's description. This style deserved to be called 'a rude surf'. Donald Trump said as a Presidential Candidate: "I'd like to punch him in the face"<sup>10</sup> in his campaign about a Mexican immigrant. No matter what the conversion is a president does not punch because the state apparatus does that for us. A state is such an organization that the citizens give their rights to use violence to the state under a lawful order. However, populists ignore the laws and codes and then give their speeches as unstatesmanlike. Trump, as an investor, businessman,

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<sup>7</sup> Jan-Werner Müller, "Why do rightwing populist leaders oppose experts?", *The Guardian*, March 26, 2020, <https://www.theguardian.com/commentisfree/2020/mar/26/rightwing-populist-leaders-oppose-experts-not-elites>

<sup>8</sup> Mudde and Kaltwasser, *Populism*, 68.

<sup>9</sup> Mudde and Kaltwasser, *Populism*, 4.

<sup>10</sup> Jeremy Diamond, "Donald Trump on protester", *CNN Politics*, February 23, 2016, <https://edition.cnn.com/2016/02/23/politics/donald-trump-nevada-rally-punch/index.html>

and politician knew 'how to win'<sup>11</sup>. He became the voice of the silent masses and the one for forlorn. He behaves like a small city's mayor, rather than 'a' president.

### **Trumpism and Its Effects to Rest of the World**

The attribution of victory to social causes can be likened to the influence of rulers on society according to Ibn Khaldun, and the society's glorifying the ruler and attributing a natural superiority to him. The people are on the religion of the ruler means this, too. Imitation and assimilation are essentially spiritual blindness or inferiority felt in the face of the victorious side. And this attribution of superiority or perfection is one with the feeling of inferiority felt by the people before the ruler, the child before the father, or the student before the teacher.<sup>12</sup> With the effect of this feeling, the defeated side does not see any harm in changing and transforming their thoughts, orientations, and beliefs, and even feels a willing desire to do so. Toynbee's explanations about Herodian<sup>13</sup> could be a good example, too. Herodian is an emulator and imitator. The United States of America is the superior state to the rest of the others in the last centuries. Then the rest of the World has followed the USA. The political changes and transformations were also followed by the rest of the World. Trumpism is such a current that the European politicians followed. However, what if the American Society tries to be like the superior one? The trade war that the West seems to lose could be the reason for the conservative wave. The constant changes and transformations, the multicultural diversity, and democratic managements come under questions while the less-democratic, culturally, and ethnically more uniform China seems the winner of the trade war. In this context, Trumpism can be described as a reflection of the Americans just like Germans did with Nazism and Italians did with Fascism.

### **Conclusion**

The confusion about which the United States that Americans want to live in the major problem on the other hand the spirit of Trumpism. The Conservatives 'good old days' song became popular. The modern zeitgeist is confronting with an inner problem. It is not one of an outsiders' one this

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<sup>11</sup> Edward Luce, Donald Trump: 'I know how to win', *Financial Times*, November 6, 2015, <https://www.ft.com/content/74fba53e-83dc-11e5-8e80-1574112844fd>

<sup>12</sup> Ibn Khaldun, *Muqaddimah: An Introduction to History*, (Princeton: Princeton University Press, 2005), Chapter 2, Title 22, p. 115

<sup>13</sup> Zarakol, Ayse. "Conclusion: Zealots or Herodians?" In *After Defeat: How the East Learned to Live with the West*, 240-55. Cambridge Studies in International Relations. Cambridge: Cambridge University Press, 2010. doi:10.1017/CBO9780511921421.009.

time. To understand the transformation in American society most likely is to understand what is happening in Europe, too, as discussed above. What is the United States of America? And what is the meaning of being American? These questions are the most fundamental in the current discussions. But who will answer these questions? Additionally, is it an extreme nationalist and populist in domestic politics, introverted in the economy, isolationist in foreign policy, and a Republican-conservative America based on the superiority of white people in sociological terms; or is it in a Democrat-Liberal America that advocates almost the opposite? Which political way in front of Americans can 'Make America Great Again'?

## **Chapter 34**

# **Income and Trade as Determinants of the Military Expenditures: Bounds Test Approach for the Case of Indonesia**

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## **1. INTRODUCTION**

Military spending has been one of the most widely focused investments in most economies globally. According to the (SIPRI Database, 2021) military expenditure outreach 2.1 trillion U.S dollars which tops the 2020 record by 0.7%. As numerous economies prioritize defense budgeting for protective measures towards their people and resources, it can be only tackled by the government hence no individual or enterprise is reliable to be given the legal burden to upkeep a nation's military expenditures. Depending on an economy's economic position, expenditures on defense can range from less than a percentage to a quarter of the Gross Domestic Product (Hewitt, 1991). Indonesia however, being the largest country in Southeast Asia became one of the highest 40 military spending nations worldwide in 2020. Their defense expenditure from 2019 expand by 5.4% in 2020 to 9.4-billion-dollar (Silva, 2021). With the growing trading volume which enhances better income and lifts growth, Indonesia has recently been observed to possess the most powerful military in Southeast Asia which has not been the case in the early 90s due to its slow pace of development.

A country's income and trade opportunities show an immense role in how well-structured its defense and defense expenditures are. Surprisingly, there has been limited research conducted on how trade and income serve as a determinant of military expenditure. The study will therefore answer questions as to how those macroeconomic variables have affected the defense spending plans in Indonesia. Employing an annual time series dataset, this relationship is examined by using military expenditure as an explanatory indicator and trade volume, serving as independent variables.

The rest of the study is laid out as follows: Existing kinds of literature regarding military expenditure are reviewed in section 2; Section 3 demonstrates the data, method and econometric dynamics with results and findings observed in this paper; and the final section provides conclusions and policy implications.

## **2. LITERATURE REVIEW**

Following works that have evaluated several key effects and determinates of defense spending, relevant studies with a dissimilar line of approach such as; Dunne & Nikolaidou (2001), Sezgin & Yildirim (2002), Tambudzai (2006), Narayan & Narayan (2008), Albalade, Bel & Elias (2012), Elveren (2012), Seitz, Tarasov & Zakharenko (2015), Wolde-Rufael (2016), Cappella Zielinski, Fordham, & Schilde (2017) Raza, Shahbaz, & Paramati (2017), Solarin (2018), Faraji Dizaji (2019), Rahman & Siddiqui (2019), Dimitraki & Win (2021), have outline significant revelation regarding this area.



The research is devoted to investigating income and trade as determinants of military expenditure in Indonesia. The evaluation of several studies is shown in detail in Table 1.

*Table 1. Literature Review for the case of different nations*

Study	Period	Data Frequency	Methods	Main Findings
Dunne & Nikolaidou (2001)	1960-1996	Annual	Keynesian simultaneous equation	Both the immediate and indirect impact of military expenditure on economic growth is notably detrimental. Thus, the report draws the conclusion that defense expenditure is bad for the Greek nation
Sezgin & Yildirim (2002)	1951-1998	Annual	ARDL model	NATO and Greece military spending and several security factors influence the Turkish defense expenditure
Tambudza i (2006)	1980-2003	Annual	OLS estimations	Zimbabwe's defense expenditure has been impacted by both domestic and external influences.
Narayan & Narayan (2008)	1970-2005	Annual	Cointegration and Vector Error Correction model	In light of military spending in Fiji, internal and foreign debt have both been significantly impacted by income, with the latter possessing a significant negative effect.
Albalade, Bel & Elias (2012)	1988-2006	Annual	Pooled OLS regression	The one factor that seems to reduce military expenditure is the relationship between presidential systems and majority-rule government.

Elveren (2012)	1963- 2007	Annual	Granger causality	A cointegration between military expenditure and income of income both in the long and short term in Turkiye.
Seitz, Tarasov & Zakharenko (2015)	1993- 2001	Annual	Novel structural estimation	The immediate welfare attain from trading has a parallel capacity on the impact of global military expenditure cuts, following the cutback on the cost of trade between two adversarial nations.
Wolde-Rufael (2016)	1965- 2011	Annual	-ARDL Bounds Test -Toda-Yamamoto Granger-non causality Lag-augmented causality	Defense spending in South Korea holds a substantial positive effect on income inequality they possess a single direction linking them.
Cappella Zielinski, Fordham, & Schilde (2017)	1949- 2015	Annual	Robustness Test	No proof was found on global threats confining a link with military spending during the short term but a small scale of authentication was found in the long run. Defense expenditure is also better off redeeming from a low economic crisis than availing from economic development.
Raza, Shahbaz, & Paramati (2017)	1972- 2012	Annual	ARDL Test Granger causality Toda-Yamamoto VDC	In Pakistan, a greater military spending is associated with a greater income inequality.

Solarin (2018)	1989-2012	Annual	ARDL Approach Dynamic panel system GMM	Globalization demonstrated a negative effect on military spending. However, it narrows defense spending as well as defense burden.
Faraji Dizaji (2019)	1960-2011	Annual	-VAR (Vector autoregressive) modeling -Variance decomposition analysis VDC	After the first shocks on trade openness in Iran, the recent shocks on openness affects military expenditure far beyond it does to non-military budget.
Rahman & Siddiqui (2019)	1998-2017	Annual	System GMM technique	The huge military expenditure budget negatively impacts the economy as it may hinder government spending in other areas but approving for GDP if aggregated with arms export.
Dimitraki & Win (2021)	1970-2015	Annual	ARDL method Gregory-Hansen cointegration	A constructive correlation both in the long and short run between economic development and military spending.

### 3. MODEL, DATA SET,METHODOLOGY and EMPRICAL FINDINGS

#### 3.1. Model

The below model used to investigate the relationship between military expenditures, income and tradewhich is given in Eq.(1).

$$M_t = f(Y_t, TV_t) \tag{1}$$

where, $M$ is military expenditure,  $Y$  is income, $TV$  is trade volume, and  $t$  is the time period.

The model which is given inEq. (1)is transformed into logarithmic form which is presented below in Eq.(2)

$$m_t = \alpha_{0a} + \alpha_{1a}y_t + \alpha_{2a}tv_t + \epsilon_{0t} \tag{2}$$

where  $m$ ,  $y$ , and  $tv$  are the natural logarithms of military expenditures, income and trade volume, respectively.

### **3.2. Data Set**

In this study, time series data in annual format from 1974 to 2020 is used to investigate the impacts of the income and trade on military expenditures. All the data in this research was retrieved from the World Bank (WDI). The indicators contained in this paper are namely; military expenditures per capita as the explanatory variable, Gross Domestic Product per capita which is used as a proxy for income, and trade volume per capita. All the variables are measured in US Dollars with constant prices where 2015 is the base year.

### **3.3. Methodology and Empirical Findings**

To determine the appropriate econometric methods that fit best with the data set and the model a series of tests performed and explained in detail in the following sub-chapters.

#### **3.3.1. Unit Root Tests**

To investigate the stationarity properties of the series, Augmented Dickey-Fuller (ADF) which is introduced by Dickey and Fuller (1979), Phillips Perron (PP) which is introduced by Perron (1989), and Zivot-Andrews (ZA) which is introduced by Zivot and Andrews (1992) unit root tests are used. The result of the test is given below in Table 2.

**Table 2. Unit Root Tests Results**

Variable	ADF <sup>a</sup>		PP <sup>b</sup>		ZA <sup>c</sup>	
	C	C&T	C	C&T	C	C&T
<i>m</i>	-1.61 (0)	-1.49	-1.74	-1.64 (1)	-3.62 (0)	-5.40** (0) [1998]
$\Delta m$	-6.28*	-6.34*	-6.27*	-6.38*	-7.05* (0)	n/a
<i>y</i>	-1.01 (1)	-2.80	-0.91	-2.27 (1)	-7.65* (0)	-5.32** (0) [1998]
$\Delta y$	-4.80*	-4.78*	-4.76*	-4.75*	n/a	n/a
<i>tv</i>	-2.22 (2)	-2.05	-1.72	-1.72 (2)	-3.45 (0)	-5.09** (0) [1997]
$\Delta tv$	-6.06*	-6.48*	-8.45*	-10.04	-4.71 (4)***	n/a

<sup>a</sup>Maximum lag length for ADF unit root test is 4 lags and optimal lag length is determined by using Akaike Information Criterion (AIC) [Akaike(1973), Akaike(1998)]. The values in parentheses are the chosen lag lengths.

<sup>b</sup> Bartlett kernel [Bartlett (1948) and Bartlett (1950)] is used as the spectral estimation method and Newey-West Bandwidth [Newey and West (1986)] is used as the bandwidth for PP unit root test. The values in parentheses are the chosen lag lengths.

<sup>c</sup> Maximum lag length for ZA unit root test is 4 lags. The values in parentheses are the chosen lag lengths and the years in brackets are the break years..

\*, \*\*, \*\*\* represent statistical significance at 1%, 5%, and 10% levels, respectively.

ADF and PP unit root test findings suggested that all the variables are first difference stationary, either the trend variable included or not. However, ZA unit root test indicated that all the variables are level stationary if the trend variable included and all the variables with the exception of *y* which is found to be level stationary are first difference stationary if the trend variable is excluded.

Since the unit root test findings are different for different tests, the findings of the ZA unit root test without trend will be used due to the fact that it allows for a structural break.

### 3.3.2. Determination of the Appropriate Econometric Methodology

Since the findings of the ZA unit root test without trend revealed that the independent variable, which is military expenditures per capita is first-difference stationary, and the data set is a combination of I(0) and I(1) variables and none of the variables are second-difference or higher-difference stationary, ARDL approach to co-integration method which is developed by Pesaran and Pesaran (1997) and developed by Pesaran and Smith (1998), Pesaran and Shin (1999), and Pesaran and others (2001) is determined as the best fitting econometric technique to investigate the relationship among military expenditure, income and trade due to the superiority of the ARDL method over the Engel-Granger (1987), Granger(1988) cointegration approaches and VAR

model which is developed by Sims (1980)to avoid the spurious regression problem stated by Granger and Newbold(1974).

### 3.3.3. Determination of the ARDL Model with Appropriate Lag Length

In the first step of the ARDL procedure,Unrestricted Error Correction Model (UECM) for Eq.(2)which also includedthe dummy variable that represent the structural break is formed and shown with Eq.(3).

$$\Delta m_t = \alpha_{0b} + \sum_{i=1}^{c_1} \alpha_{1b} \Delta m_{t-i} + \sum_{i=0}^{c_2} \alpha_{2b} \Delta y_{t-i} + \sum_{i=0}^{c_3} \alpha_{3b} \Delta tv_{t-i} + \alpha_{4b} d2012 + \alpha_{4b} T + \beta_{1b} m_{t-1} + \beta_{2b} y_{t-1} + \beta_{3b} tv_{t-1} + \epsilon_{1t} \tag{3}$$

where,  $\Delta$  is difference operator,  $c$  's represent maximum lag lengths,  $d2012$  is the dummy variable which is derived from ZA test with structural break only in constant model, and  $T$  is trend variable.

The appropriate model with optimum lag length is determined as the ARDL (3,0,2) model by usingAIC criteria.

### 3.3.4. Bounds Test

The findings of the boundstest for the ARDL (3,0,2) model are presented in Table 3.

**Table 3.** *Bounds Test Results*

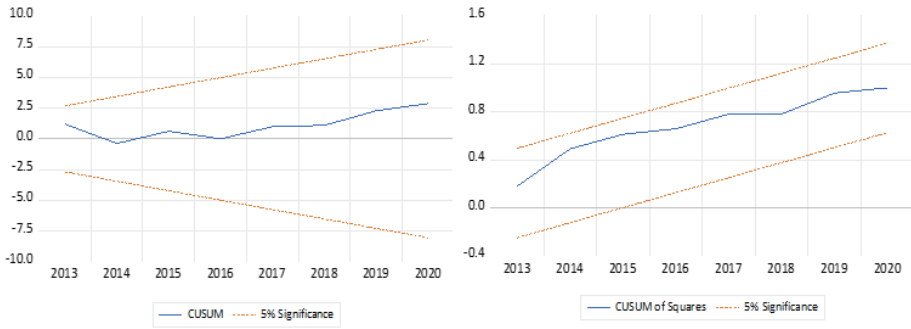
Test	Calculated Test Statistic	Lower-bound Value (1%)	Upper-bound Value (1%)
<i>F</i>	16.34*	7.31	8.72
<i>t</i>	-5.87*	-3.96	-4.53

*\*represents statistical significance 1% level*

According to thefindings inTable 3, both calculated *F* and *t* statisticsare greater than the upper-bound value. Therefore, the null hypothesis of no co-integration is rejected and it is concluded that military expenditure, income and trade volume are co-integrated where income and trade volume are found to be the long-run forcing variables of military expenditures at 1% level of significance.

### 3.3.5. Findings of the ARDL Model

Parameter stability findings and coefficient estimations for both short and long run, important statistics, diagnostic test results and are shown in Figure 1 and Table 4, for the ARDL (3,0,2) model.



**Figure 1.** CUSUM and CUSUM Square Test Results for Parameter Stability

**Table 4.** Parameter Estimations of the ARDL (3,0,2) Model

Long Run			
Variable	Coefficient	t-statistics	p-value
$y$	2.64*	4.50	0.00
$tv$	-0.64*	-2.69	0.0101
Diagnostic Tests <sup>a</sup>			
Test	Test Statistic	Test	Test Statistic
$\chi^2_N$	2.00 (0.36)	$\chi^2_{HS}$	0.20 (0.65)
$\chi^2_{SC}$	0.21 (0.64)	$\chi^2_{MM}$	0.33 (0.74)
Short Run ECM Model			
Variable	Coefficient	t-statistics	p-value
$C$	-5.92*	-7.16	0.00
$T$	-0.04*	-7.03	0.00
$\Delta m_{t-1}$	0.22***	1.81	0.07
$\Delta m_{t-2}$	0.26**	2.22	0.03
$\Delta tv_t$	-0.48*	-3.56	0.00
$\Delta tv_{t-1}$	-0.26***	-1.92	0.06
$d2012$	0.20*	3.55	0.00

$\gamma_1$	-0.56*	-7.20	0.00
<b>Important Statistics for the Short Run ECM Model</b>			
$\overline{R^2}$	0.59	<b>F</b>	10.02 (0.00)
<b>RSS</b>	0.33	<b>DW</b>	1.89

\*, \*\* and \*\*\* represents statistical significance at 1%, 5% and 10% levels, respectively.

$\chi^2_N$  is Jarque-Bera test for normality;  $\chi^2_{SC}$  is Breusch-Godfrey LM test for serial correlation,  $\chi^2_{HS}$  is ARCHtest for heteroskedasticity, and  $\chi^2_{MM}$  is Ramsey RESETtest for model misspecification.

As seen from Figure 1 and Table 4, ARDL (3,0,2) model successfully passed all diagnostic tests and all the coefficients both in the short run and long run are statistically significant.

Findings which are represented in Table 4 suggested that in the long run, 1% percentage change in per capita GDP will cause a 2.64% change in military expenditures within the same direction, while 1% percentage change in per capita trade volume will be causing a 0.64% change in military expenditures within the opposite direction. Moreover, since the coefficient of the one period lagged error correction term is found to be  $\gamma_1 = -0.56$ , which suggested that 56% of the disequilibrium adjusts back to the long run equilibrium.

#### 4. CONCLUSION and POLICY IMPLICATIONS

This paper evaluates the impacts of the income and trade on military expenditures in Indonesia by using ARDL approach to co-integration procedure. Bounds test results revealed that there exists a statistically significant co-integration relation among military expenditures, income and trade where income and trade are found to be long run determinants of the military expenditures for the period of 1974-2020 in Indonesia. According to the findings, income has a positive and statistically significant impact on military expenditures in the long run. On the other hand, trade has a statistically significant and negative effect on military expenditure both in the short run and long run.

According to above mentioned findings, policy makers who are designing the defense policies of Indonesia need to take into account that while boosting the economic growth will help to gather more funds for defense expenditures, declines in income will make it difficult to reach sufficient amount of funds to finance the military expenditures in the long run. Indonesian defense policy makers also need to bear in mind that international trade policies of the country are closely related with the defense policy so that an increase in per capita trade volume will cause a decrease in the defense spending both in the short run and long run.



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**Chapter 35**

**Organizational Commitment**

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## **INTRODUCTION**

On the basis of the success of organizations are employees with high motivation and performance. Achieving organizational effectiveness and efficiency can only be possible if employees' commitment to the organization is high. Organizational commitment is the situation in which employees use all their skills and knowledge for the organization. In order for the individual to continue his work in the organization he works in, the level of commitment with different dimensions must be formed and he must see himself as a part of the workplace. In addition to the knowledge and experience of the employees, when they do not have enough enthusiasm and organizational commitment, negativities may arise regarding their duties and responsibilities. To the extent that employees feel connected to the organization, they can be successful by increasing their job satisfaction. All organizations want to increase the organizational commitment of their employees. Because organizational commitment increases the contribution of employees to the organization, job satisfaction and performance. If organizations want to be successful and have a competitive advantage, they must strengthen the organizational commitment of their employees. In this context, organizational commitment has strategic importance in ensuring organizational success.

## **THE CONCEPT OF ORGANIZATIONAL COMMITMENT**

Organizational commitment was first examined by Whyte in 1956, and then it was researched by Becker in 1960, Kanter in 1968, Mowday et al. in 1982, Allen and Meyer in 1990, and many other researchers (Çavuşoğlu, 2022: 27). Organizational commitment, as a concept that is frequently used within the scope of organizational behavior, is explained as a psychological phenomenon that increases the quality of the relations of organizational employees with their organizations (Aksoy, 2017: 22).

The continuity of organizations is related to the way employees direct their knowledge and skills to their jobs. The commitment of employees to their organizations is of great importance for the survival of the organization. Attitudes of employees towards their organization and colleagues constitute the concept of organizational commitment (Hoş & Oksay, 2015: 24). The concept of commitment is defined as being connected to a certain subject, organization, person or subject, establishing intimacy with love and respect, and loyalty (Manion, 2004: 167). Organizational commitment, on the other hand, is a situation that defines the relationship between the organization and employees and contributes to the decision of employees to stay in the organization (Meyer

& Allen, 1991: 710). There are many definitions of the concept of organizational commitment in the literature.

Organizational commitment refers to the degree of attachment as an attitude that employees develop towards their organizations and their jobs. With organizational commitment, it is predicted that the employee will fulfill his responsibilities and behave in accordance with the level of commitment (Önal, 2021: 37). Davis & Newstrom (1989) defined it as “the degree of identity unity with the employee's organization and his willingness to continue to be an active member of the organization” (Özdevecioğlu & Aktaş, 2007: 4). Organizational commitment is defined as the strength of an individual's identification with a particular organization and the participation of employees in a particular organization (Mowday et al., 1979: 225). Organizational commitment is the attitude of the employees, which consists of the combination of feelings, thoughts and value judgments about their organization, and as a result, expresses a general tendency (Bolat & Bolat, 2008: 76). O'Reilly and Chatman (1986) defined it as "the adoption of the characteristics of the organization or the perspective of the organization by the employee, in a sense, assimilation" (Yavuz & Tokmak, 2009: 20). It is seen as the whole of internalized normative pressures formed (Wiener, 1982: 421).

Organizational commitment is the desire of employees to use their knowledge, skills and experience in achieving organizational goals and objectives, and the employee's unwillingness to leave the organization even if there is a better opportunity (Üstün & Efe Yaman, 2020: 261). Organizational Commitment is the identification of an individual with an organization and the relative strength of identity unity (İnce & Gül, 2005: 3). The concept of organizational commitment, more generally, is that the employee establishes a close relationship with the organization and adopts and voluntarily adheres to organizational goals. In order to be a permanent member of the organization, it is to identify with the organization by showing high physical and physical performance (Yüce & Kavak, 2017: 82).

In line with all the definitions made, the concept of organizational commitment; It is possible to summarize it as employees adopting the goals and objectives of the organization and making efforts to achieve these goals, seeing the interests of the organization above their own interests and wishing to be a permanent member of the organization (Gül, 2002: 38). Organizational commitment is the individual's loyalty to the social system, his desire to be included in the social system, and his tendency to social relations within the system. Organizational commitment is based on the inclusion of the individual in an organization and the strengthening of relations between the organization

and the individual. Engagement must include at least three key factors. The first is a strong belief and acceptance of the goals and values of the organization, the second is voluntary effort for the benefit of the organization, and the third is to show continuity as a member of the organization (Demirel, 2008: 183).

The concept of organizational commitment is very important for organizations. As a matter of fact, the motivation and productivity of employees with high organizational commitment also increase. When the factors that employees will develop commitment to in organizational environments occur, individuals' full participation in business processes increases their interest and contribution to the work they do (Akyol, 2022: 582). In general, organizational commitment is an emotional attitude that enables employees to continue working and contribute to their organizations by adopting organizational goals. Employees who have this commitment feel themselves to belong to their institutions and make an effort to maintain this bond (Doğan, 2013: 66). Organizational commitment is the attitude based on the loyalty of the employees towards their institutions and results from the employees' identification of their goals, objectives and values with those of the organization. While the loyalty to the organization and sense of duty increase, the sense of belonging, security and usefulness also increase, show higher performance, and decrease in absenteeism and job turnover rate. In addition, organizational commitment supports innovation and increases productivity (Göksel & Aydın, 2012: 251).

### **THE IMPORTANCE OF ORGANIZATIONAL COMMITMENT**

Organizations face many complex problems that they have to balance in order to compete successfully in the entire world economy. They must continually improve their performance by reducing costs, improving processes and products, and increasing quality and efficiency. In this context, organizational commitment gains more importance for businesses (İnce & Gül, 2005: 13). The survival and success of businesses can be ensured by employees with a high level of commitment. It is not enough for employees to have the skills to do their jobs and to use their knowledge alone. A successful business is formed when the employees establish a strong bond with the organizational culture, act selflessly by adopting the organizational goals and are proud of working in the business. The higher the organizational commitment levels of the employees, the higher their loyalty behaviors and motivations can be. For this reason, organizational commitment is an extremely important concept for organizations (Bolat & Bolat, 2008: 76).



One of the most important reasons why the concept of organizational commitment is important for the organization is the positive effect it creates on individuals to display positive behaviors on behalf of the organization. It is also important that individuals who have a high level of commitment to the organization do not exhibit negative organizational behaviors (Ersoy & Bayraktaroğlu, 2010: 1). It is necessary to develop the sense of belonging of the employees in terms of establishing good relations in the organization, cooperation culture, organizational citizenship behaviors, productivity and performance. In this context, it is important to recruit qualified employees with a high level of organizational commitment to the organization.

Organizational commitment is an extremely important issue for organizations as it both increases the job satisfaction of the individual and reduces the situations that will cause negative consequences such as absenteeism, late arrival and dismissal (Ünlü, 2017: 152). The importance of organizational commitment emerges in determining the attitudes and behaviors of individuals in accordance with the psychological contract towards the business they work for. A low level of commitment is undesirable by the top management and causes high costs. Reducing the staff turnover rate is important for every business. High morale and motivation of employees ensures stability and increases organizational efficiency (İbicioğlu, 2000: 14).

Organizational commitment is important for keeping employees in the organization for a long time and increasing the sustainable competitiveness of the organization (Koçel, 2015: 534). The fact that people are happy in the workplace they are a member of and have a long-term intention to work not only increases productivity, but also has a positive effect on the quality of the goods produced or the service provided. Therefore, the motivation of the employees against the goals of the organization is through their organizational commitment (Billi & Tekin, 2019: 2170). The high organizational commitment of the employee enables him to reveal all his talents and knowledge. Today, the main purpose of managers is to increase the number of employees with high organizational commitment and to gain an advantage in order to achieve organizational goals. Employees with high or low organizational commitment are an important factor affecting organizational success (Önal, 2021: 40).

Employees with high organizational commitment also make a high contribution to the organization. Employee loyalty reduces the costs of organizations, increases profit rates and strengthens their image. It has been revealed that employee loyalty increases the employee's trust in the organization, and trust increases productivity. Weak commitment is reflected as a cost to organizations. Employees' adoption of the organization and their

compatibility with the organization facilitates the functioning of the organization and the implementation of the decisions taken by the management. At the same time, the social harmony of the employees within the organization is ensured. Thus, the commitment of the employees to the organization increases (Öztürk, 2013: 13).

## **DIMENSIONS OF ORGANIZATIONAL COMMITMENT**

Organizational commitment can be expressed as a psychological structure related to the characteristics of the relations of the members with the organization and the decision of the members to continue (Akyol, 2022: 581). Organizational commitment consists of three dimensions: affective, continuance and normative commitment (Meyer& Allen, 1997: 62).

### **Emotional Commitment**

Affective commitment is defined as a positive sense of identity related to or included in the organization (Çetin, 2004: 95). Emotional commitment refers to the employee's commitment to the goals and objectives of the organization he is in, and to displaying extraordinary power in his activities in achieving these goals. For this reason, emotional commitment is a type of commitment that is very important for organizations (Özdemir & Demirci, 2021: 2054). Emotional commitment refers to the emotional relationship of the employee with the organization, emotional commitment and integration with the organization (Doğan, 2007: 44). Since members with strong emotional commitment are willing to stay in the organization, their intention to stay in the organization is high (Akyol, 2022: 582).

Emotional commitment occurs when the individual loves and respects the organization. The most important factor in the emergence of this commitment is that the employee should define himself with his organization and feel that the organization is indispensable for him (Eren, 2017: 556). When the employee feels that their own values and the values of the organization coincide, he becomes emotionally attached to the organization (Wiener, 1982: 423). Emotional commitment is also defined as the degree to which an individual is psychologically attached to an organization that works through feelings such as loyalty, love, happiness, compassion and so on (Jaros et al., 1993: 951; Vurdem, 2022: 35). The emotional attachment of the employee represents the internalization of organizational goals and voluntary attachment as a result of shared common values (Taşkın & Dilek, 2010: 38).

### **Continuing Commitment**

The second dimension of organizational commitment, continuance commitment, means that the employee is aware of the costs that may arise if he leaves the organization. It is said that emotions have little effect in this dimension of commitment (Çolakoğlu et al., 2009: 79). In continuance commitment, it is the knowledge that the cost to the individual will be high as a result of the employee's leaving the job, and the individual continues to be a member of the organization because he/she needs it (Yeşil & Özel, 2019: 18). Conditions such as continuance commitment, investments made in the organization, effort spent, and time spent in the organization are among the factors that keep the employee in the organization. Therefore, as the amount of time, effort and investment that the employee will spend in the organization increases, there will be an increasing effect on the employee's commitment to the business (Özdemir & Demirci, 2021: 2054).

The elements that make up the continuance commitment are the costs that the employees will face if they give up the rewards and gains they have achieved over the years by making sacrifices. When employees do not want to bear this cost, they continue to work even though they want to leave the organization. Continuance commitment also means that the employee is obliged to work in the organization when he cannot change his job. This situation arises with the low number of different job opportunities (Üren & Çorbacioğlu, 2012: 38). Continuance commitment has two basic histories of lack of job alternatives and negative side returns. Here, negative side-returns are anything that increases abandonment costs, such as the organization's investments in time, money, and effort. If the employees believe that there are few suitable job alternatives for them, their commitment to their current organization will be much higher (Örücü & Kışlalıoğlu, 2014: 47).

### **Normative Commitment**

A third type of organizational commitment is normative commitment. Normative commitment is defined as commitment on the basis of duties towards the organization, emphasizing the individual's commitment to the organization and management (Çakar & Ceylan, 2005: 56). Normative commitment, employees feel obliged to stay in the organization believing that they have obligations and responsibilities towards the organization (Meyer & Allen, 1991: 72). Therefore, employees in normative commitment accept themselves as a responsibility to be connected to their organizations and fulfill this moral responsibility. Ethics is at the forefront of this commitment. Commitment is an ethical imperative as employees are paid for their labor. In

this commitment dimension, the opportunities provided to the employees at the organizational level, the investments and expenditures increase the normative commitment (Doğan & Kılıç, 2007: 47).

Normative commitment often entails an employee's obligation to their organization. If the employee has a high sense of normative commitment, it is a necessity for him to continue with the organization (Örücü & Kışlalıoğlu, 2014: 48). In other words, compulsory commitment is the commitment that arises from the employee's feeling of debt to the organization he is a member of. The trainings he receives from the organization he works for or the good relations he establishes means that the employee feels indebted to the organization he is a member of and continues to work because he is grateful to the organization (Altundere Doğan & Yaman, 2022: 9). Normative commitment helps the employee not to feel commitment for their personal interests, but to show certain behavioral actions because they believe that what they do is right and moral (Gürsel & Sü Eröz, 2017: 112).

## **FACTORS AFFECTING ORGANIZATIONAL COMMITMENT**

### **Personal Factors**

**Gender:** The relationship between gender, one of the effective factors of organizational commitment, and organizational commitment has not been clarified. In other words, while some researchers argue that men's organizational commitment is higher, some argue that women's organizational commitment is higher (Yeşil et al., 2015: 332). Finding different results for the organizational commitment levels of female and male employees generally varies according to the business line and profession. While women's struggle to overcome gender inequality increases their organizational commitment levels, there are also studies that found that men's organizational commitment is higher due to their family responsibilities. On the other hand, the results obtained do not overlap with each other. However, it was concluded that the gender variable is not an important factor in terms of organizational commitment in general (İnce & Gül, 2005: 61-62).

**Age:** The age variable has a feature that directly affects organizational commitment. Depending on the age of individuals, their experience in working life and the increase in their investments in their organizations increase organizational commitment (Yalçın & İplik, 2005: 400). The age of the employees and the decrease in alternative job opportunities are related, in a sense, with the knowledge and experience gained individually and the position in which they work. The fact that older employees are more loyal to their

organizations than younger ones can be explained by the effort they have given to their businesses and the gains they have made over the years. However, there are many studies in the literature with different results (Çöl & Gül, 2005: 294). Therefore, the relationship between age and organizational commitment has not yet been clarified. According to the findings obtained as a result of some researches, as individuals get older, their commitment to the organization also increases. There are studies suggesting the opposite of this. As a result of their research, Meyer & Allen concluded that the commitment of young employees is higher (Arslan & Esatoğlu, 2017: 320).

**Personality Traits:** Personality traits reveal differences in individuals' attitudes. The relationship between extraversion and affective commitment stems from the strength of the individual's social relationships. The harmony of the employees and the prominence of their sense of responsibility are also a defining personality feature. These employees feel responsible for their organizations and their organizational commitment levels are high. The personality structure that is open to experience, on the other hand, is important in the adoption of goals, as it affects imagination and foresight (Özkan & Boz, 2018: 260).

**Marital Status:** The variable of marital status is also among the factors affecting organizational commitment. Organizational commitment levels of married employees were determined to be higher than single individuals due to their family duties and responsibilities, especially if they have children. The fact that single individuals can take risks and are more comfortable in changing jobs than married individuals reduces their organizational commitment levels. It is seen that married employees are more stable in terms of job security and continuous working in the same workplace in business life (Taşlıyan & Ülkü Pekkan, 2017: 34).

**Education Level:** The education level of the employees also affects their commitment to the organization. There is an inverse relationship between education level and organizational commitment. It is seen that the level of organizational commitment decreases when the education level of the employees increases. Because, as the education level of the employee increases, both alternative job opportunities and expectations from the organization increase, and in cases where these expectations are not met, commitment weakens (Şahin & Kavas, 2016: 125). Employees with low education levels are more committed to the organization than individuals with high education levels.

Employees with higher education can easily leave their organizations in the light of the knowledge they have when they contradict the rules and policies of the organization, while employees with less education cannot leave their organization due to the difficulties they will experience in finding a job if they leave the organization (Bal, 2020: 29).

**Seniority:** The relationship between the variable of seniority and organizational commitment is generally directly proportional. Depending on the increase in the seniority variable, the level of organizational commitment also increases. Accordingly, individuals working in the same organization for a long time affect organizational commitment depending on their promotion and promotion. While those who work in the same job position for a long time have high levels of continuance commitment, their emotional commitment levels can decrease. Accordingly, as the years of work of individuals increase, their organizational commitment levels increase depending on the investments they make in their organizations (Balay, 2000: 58). In addition, depending on the increase in seniority and wages of employees, the level of organizational commitment may be positively affected (Küçüközkan, 2005: 19). According to Cohen (1993), as the time spent by the employees in the organization increases, their earnings also increase. The person is more attached to the organization in order not to lose these gains. Therefore, the increase in working time increases the commitment to the organization (Yeşil et al., 2015: 332).

### **Organizational Factors**

**Management:** Organizational commitment is extremely sensitive to the policies and actions implemented by the institution. The implemented strategies and policies are directly linked to the approach of management. Strategies and objectives are focused on employees in organizations that value their employees, allow them to participate in the administration, respect the ideas of their employees and realize them. In organizations with such management approaches, employees feel peaceful and happy. Therefore, the commitment of employees to the institution is strengthened (Demirel, 2009: 120).

**Organizational Justice:** It is the evaluation of managers' decisions through the process of employee perception. Organizational justice is divided into procedural and distributive justice. Procedural fairness is the assessment of the impact of variables and data on management decision-making on whether the decision is fair to employees. Distributive justice is the question of whether the resources allocated to employees by the organization are equitable. The fair

evaluation of the employees' efforts, the distribution of material and moral rewards, the equitable promotion and promotion opportunities on the basis of merit make employees feel valued and increase their level of commitment to their organizations (Bedük, 2014: 67).

**Scope of Work:** Organizational commitment is affected by the characteristics of the job and working conditions. . The degree of difficulty of the job, whether it is routine, its suitability for the individual's skills and interests, interaction with other people and possibilities are the features that have an impact on the formation of organizational commitment (Surat & Polat, 2020: 326). Accordingly, the scope and nature of the job are considered among the institutional factors that affect organizational commitment. Senior positions are especially important for employee commitment to the organization. Job enrichment is about giving employees the authority and responsibility to manage themselves. This increase in authority and responsibility increases the employee's commitment to the organization (İnce & Gül, 2005: 71).

**Salary Level:** Salary has a strategic importance in terms of organizational commitment. It can be said that there is a parallel interaction between wage levels and organizational commitment. The wage and the way it is applied are among the factors that make the employees feel committed to the organization (Bal, 2020: 30). Adequacy or low wages for the individual's social status and dignity affect organizational commitment positively or negatively (Benligiray, 2003: 32). In addition to this feature, the fair distribution of wages also affects the commitment of the employee to the organization. The more fair the employee finds the wage distribution, the more his commitment to the organization increases (Çöl & Gül, 2005: 296).

**Organizational Rewards:** It has been determined that organizational rewards have a strong and positive effect on employee commitment. If individuals perceive the awards given by the organization as adequate and fair, their commitment to the organization is higher (İnce & Gül, 2005: 79). Employees reinforce their commitment to the organization by rewarding them according to their needs. In this respect, organizational rewards have strong and positive effects on commitment. If the employee perceives the awards offered to him by the organization as adequate and fair, he will have a higher level of commitment to the organization (Hoş & Oksay, 2015: 7).

**Organizational Culture:** Organizational culture plays an important role in the achievement of the goals and objectives of the enterprises and in the formation of norms, principles and values. It can be said that organizational commitment is a positive culture so that employees can feel themselves as a part of the organization with the level of adopting these goals and principles. However, organizational culture is expected to have a strong institutional structure in order to affect the commitment of employees. Strong emotions are shared with employees when organizational culture creates the infrastructure so that employees can feel the sense of "we" (Özdevecioğlu, 2003: 117). The formation of a safe culture at the highest level in organizations is ensured primarily by the commitment of the management and then by the vision of the organization and the importance they attach to the employee (Çavuş & Gürdoğan, 2008: 21).

**Teamwork:** A team is a person who implements and completes the decisions taken jointly by more than one person for a purpose or business. Recently, it is thought that individual studies provide less efficiency than team studies. Teamwork instills a sense of both commitment and trust in the employee, such as spending less individual effort and increasing productivity. This plays an important role in increasing motivation (Küçük, 2008: 170). Teamwork improves communication between employees and they feel more belonging to the organization as a member of a team. Teamwork enables employees to adapt to innovations quickly, develop cooperation, work with high motivation and create synergy. All these affect organizational commitment positively (Becerikli, 2013: 97).

**Organizational Communication:** Organizational communication is primarily effective in terms of open information channels, clear transfer of duties and responsibilities to employees, and effective communication meeting the social needs of people. Interaction has a significant impact on employees' organizational commitment. Organizational commitment can be achieved by managers creating a positive atmosphere within the organization. Organizational commitment occurs when employees are treated fairly, equitably and equally. In order for employees to feel that they belong to their organizations, healthy interaction with other people in the process affects their organizational commitment positively (Saltık et al., 2015: 48). Thanks to this environment, it will positively affect the attitudes of the employees towards the organization. In this respect, when effective communication is provided,



employees who see that they are valued and listened to will be happy and their commitment to the organization will increase (Çöllü & Summak, 2010: 279).

**Organizational Support:** According to the concept of organizational support, the employee feels safe in the organization and expresses that the organization constantly supports him. According to the researches, there is a strong positive relationship between perceived organizational support and organizational commitment. According to the findings of the studies, it is stated that there is a strong relationship between organizational support and emotional commitment (Currie & Dollery, 2006: 741).

**Organizational Trust:** Organizational trust refers to both inter-organizational and intra-organizational trust. It is very important to establish and maintain the trust and commitment of the employees to the organization in order to internalize the goals of the organization and to work voluntarily and willingly (Akın & Orman, 2015: 93). Organizations with high organizational trust are more successful than their competitors and are easier to adapt to development (Arslan & Esatoğlu, 2017: 317). Organizational commitment indicates the degree of an employee's self-identification and involvement in the organization. Therefore, the higher the organizational commitment, the lower the chance of the employee to leave the company voluntarily. The more the employees of the organization trust each other, the less the need to control is felt (Neves & Caetano, 2006: 353).

## CONSEQUENCES OF ORGANIZATIONAL COMMITMENT

### Individual Results

Organizational commitment is related to the psychological states of individuals. Confidence in the organization, reducing uncertainties, and making the employee feel important and valuable are important in terms of psychology. These conditions of employees also affect their behavior and make them happy or unhappy. This relationship between the employee and the organization affects the physical and psychological health of the individual (Bakan & Büyükbeşe, 2004: 6). One of the important results of organizational commitment is performance and productivity. It is stated as one of the important results obtained in many studies that an employee with high organizational commitment will spend more effort for the job and show higher performance (Steers, 1977: 46).

It is seen that the employees with a high level of organizational commitment adopt the following attitudes and behaviors (Paşamehmetoğlu & Yeloğlu, 2013:156):

- Putting organizational goals and objectives ahead of individual goals and objectives,
- Accepting the achievement of organizational goals as an individual goal,
- Internalization of working in the workplace and assuming non-duty roles, since the organization is not only considered as a workplace,
- Employees being proud of their organizations and defending the workplace on every platform,
- Focusing on performance improvement and pushing capacity to achieve organizational goals and objectives,
- A special effort and a strong desire to continue working in the enterprise.

### **Organizational Results**

Employees with low levels of organizational commitment tend to leave their organizations when alternative job opportunities are available. It is seen that these employees have a tendency to come to work late and to avoid work if they stay in the organization. Employees who have a positive attitude towards their organizations will want to maximize their individual performance and will contribute to the realization of organizational goals and objectives (Balay, 2000: 86). Employees with a high level of organizational commitment dedicate themselves to their organizations. A strong sense of commitment and the ability of employees to present their energy and efforts to the organization are important for productivity. This situation enables employees to establish positive relationships in the organization, avoid conflicting behaviors and increase their productivity (Şahin & Kavas, 2016: 126).

The organizational effects of organizational commitment levels can be summarized as follows (Bakan, 2018: 216-217):

- Organizational commitment directly affects the performance of employees.
- There is a linear relationship between motivation and job satisfaction and organizational commitment. As the organizational commitment levels of the employees increase, their attitudes towards their jobs are also positively affected.

- Employees' willingness to leave and turnover rate are related to organizational commitment. The work behaviors of employees with high organizational commitment are positive and their willingness to leave their job decreases due to their wholehearted attachment to their businesses.
- Failure of employees to come to work on time is associated with organizational commitment. In order for people to be willing to go to work, they must be happy in the organization they work for.
- Organizational commitment is also effective in continuing to work regularly.
- Organizational commitment is an important concept that affects the attitudes of employees towards their jobs.
- Depending on their level of organizational commitment, employees may have extra role behaviors. Organizational citizenship behaviors are directly related to emotional commitment.
- Depending on the level of organizational commitment, employees' resistance to changes in the organization decreases.

## CONCLUSION

The way for organizations to be effective is through the commitment of their employees. Every organization wants to increase the organizational commitment of its members. Because organizational commitment transforms employees into problem solvers, not problem creators. If organizations want to be prosperous or to maintain their existence, they must ensure the loyalty of their members (İnce & Gül, 2005: 13-14). Employees with high organizational commitment also have high commitment to their jobs. These employees fulfill their responsibilities with great enthusiasm and care. Positive attitudes and behaviors exhibited by these employees increase the efficiency of the organization. These people do not even consider another organization that offers them better conditions and opportunities (Yavuz & Tokmak, 2009: 23). A high level of commitment can foster personal career development.

The issue of organizational commitment is among the objectives that have come to the fore in recent years, especially in terms of organizations, with the idea that the organization is people-oriented and the organizational commitment of the employees is high. Because, it is claimed that employees who are committed to the organization are also highly productive and act with a sense of responsibility. Employees with high organizational commitment are away from situations that harm the organization such as quitting the job and absenteeism.

They care about their jobs and work with a sense of duty. In addition, it is thought that employees with high organizational commitment will greatly benefit the organization by reducing the costs of the organization (Öztürk, 2013: 11). Organizational commitment is the process of adapting to the workplace climate and culture around common goals and values, as well as the sense of loyalty to the organization of the employees. Organizational commitment, in terms of employees and organizations; It has a vital importance in terms of attendance, productivity and effectiveness, performance, job satisfaction and turnover. Organizations should determine some policies in order to increase organizational commitment in order to make employees feel like the owner of this institution. The determined policies are extremely important in terms of both the survival of the organization and the happiness and peace of the employees in their current jobs (Sıgır, 2007: 262).

Organizational commitment not only affects the productivity of the employees, but also increases the cooperation and coordination in the workplace, and enables the establishment of cooperation and friendship relations in teamwork more easily. The level of adoption of organizational goals, on the other hand, reduces the staff turnover rate by making more effort and enabling employees to stay in their organizations for longer (Sezgin, 2010: 146). Today, effectiveness and efficiency at the organizational level depend on the level of commitment of the employees at the desired level. In order for employees to exhibit organizational citizenship behaviors that express positive behaviors beyond the duties and responsibilities assigned to them, their level of commitment must be high. Organizational commitment is ensured by the fact that the employees do not leave the company and love their business by showing dedicated behaviors out of the role. At the organizational level, this situation is seen as the key to efficiency, while cost and labor loss are prevented.

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## Chapter 36

# Optimum Product Detection in the Marketing Industry by SPSS Applied Turf Analysis Method

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## **1. INTRODUCTION**

Allocating resources to product groups is one of the important problems in marketing. While a wide variety of choices in a product are potentially more attractive to consumers, this means higher costs to the manufacturer. As the variety in the product increases, so do the costs of packaging, advertising, and inventory management. As a result, marketing managers need to find a range of product groups that provide the most optimal product line combination for a fixed number of products that maximize total sales or profits. The difficulty in solving this problem is that the incremental value of a particular product variant depends on what other variants are currently available (Conklin & Lipovetsky, 2005).

In particular, any problem with combinations of elements, such as products and concepts, is likely to become very complex as the number of elements and combination sizes increase. In such cases, it is unlikely to find real-time solutions to these problems, except for revolutionary technologies in computer science. TURF (Total Unduplicated Reach and Frequency) analysis, which is one of these solutions, has long stood out as a very efficient technique in market research (Ennis, Ennis, & Fayle, 2012).

TURF analysis first appeared in the media industry. Owners of companies in the media industry wanted to maximize the number of customers reached while minimizing costs. For this reason, they needed informations to show whether those who were interested in one media tool were also interested in other media tools (Cohen, 1993). TURF analysis was also used to provide quality service in the banking sector in terms of operational strategies, quality management and operational excellence (Tornjanski, Marinkovic, & Jancic, 2017).

Through the increasing mechanization of production, trade between companies and countries has developed. Therefore, TURF analysis has started to be applied in the marketing sector as well. The reason why TURF analysis is preferred by the companies is that the analysis offers the most optimal option to the companies in terms of production so that the companies save time and do not have to bear unnecessary costs and materials.

## **2. MATERIALS AND METHOD**

TURF analysis stands for "Total Unduplicated Reach and Frequency". "Reach" shows how many are reached through the combination of products. "Frequency" refers to how many times consumers have showed interest in individual products that make up the combination.

TURF is a widely used market research tool that seeks the best optimum combinations from a large number of potential product or service groups. The

definition of what qualifies as the best combination depends on the number of customers reached with the relevant product or service.

That is, the purpose of the TURF analysis is to identify combinations of a fixed number of items, such as three out of 12 possible products that reach as many participants as possible (Ennis, Ennis, & Fayle, 2012).

Consider a problem where there are "n" alternative options for a product. Then let a survey be conducted with the "m" number of people about which options they should or should not buy. Thus, a data matrix is obtained in which the options that each individual will want to buy are known. In this case, the following set can be defined:

$$N_i = j / \text{consumer } i \text{ chooses variety } j \quad (1)$$

In other words, it is the set of options that each individual indicates he or she would like to purchase. In this way, the data in the model can be introduced.

In addition, it is necessary to know which varieties of the product will be put on the market or not. These binary probability variables will have binary options:

$$x_j = \begin{cases} 1, & \text{put } j \text{ on the market} \\ 0, & \text{do not put} \end{cases} \quad (2)$$

The problem is to find the combination of the minimum number of varieties that will make all individuals buy at least one of the varieties they choose. The target function will therefore be to keep the number of product variants to be released to a minimum;

$$\text{Min}Z = \sum_{j=1}^n x_j \quad (3)$$

However, it should be noted that all interviewees should be able to purchase at least one of the varieties they choose.

$$\sum_{j \in N_i} x_j \geq 1, \quad i = 1, \dots, m \quad (4)$$

It is desirable that at least one of the varieties chosen by each individual is put on the market.

Thus, the final formulation of the TURF model will be:

$$\begin{aligned}
 \text{Min}Z &= \sum_{j=1}^n x_j \\
 \sum_{j \in N_i} x_j &\geq 1, \quad i = 1, \dots, m \\
 x_j &= (0,1), \quad j = 1, \dots, n
 \end{aligned} \tag{5}$$

By using this model, the purpose of TURF analysis is fulfilled because an individual has already been reached by one variety, and the individual is no longer considered for the selection of the remaining varieties. Therefore, the method includes new buyers in the analysis and never considers the extent to which individuals who are already buyers duplicate the purchase of more than one variety (Serra, 2013).

## 2.1. TURF Analysis Algorithm

- The TURF algorithm analyzes all combination possibilities, taking into account the answers given for a multiple choice question.
- As a result, TURF analysis may give options that are not predicted to be useful.
- TURF analysis does not depend on the basic percentage results, yet offers an algorithm that will produce multiple combinations formed by the target customer population by further improving the results.
- The most important fact in TURF analysis is to choose the right “combination”. Therefore, it is necessary to consider other complex combination options that the target population can choose when purchasing a product or service.

In addition, the following two basic questions are answered with TURF;

1. How many of each product can be needed to reach the maximum number of possible customers?

This question seeks an answer to the "reach" part of the TURF analysis.

2. How many times will these customers buy the product they have already bought?

This question answers the "frequency" part of the TURF analysis.



## **2.2. Advantages and Disadvantages**

The technique is very pliable, so it can be used for nearly all topics in media, assortment and category planning.

If there is a loss of sales caused by a company launching a new product instead of one of its old products, this loss of sales can be detected by means of TURF analysis.

TURF analysis is only useful if the problem is fully identified. Other factors in the market, such as competitors and substitute products, cannot be automatically included in the analysis. Therefore, in order for them to be taken into account, they must be manually included in the analysis.

## **2.3. Areas of Application of TURF Analysis**

TURF analysis is often used in the media sector, as well as in product production planning, demand testing, etc.

It is used in the selection of products to be put on the shelves in supermarkets that are experiencing budget and space shortages.

Below are some sample questions that can be answered using a TURF Analysis:

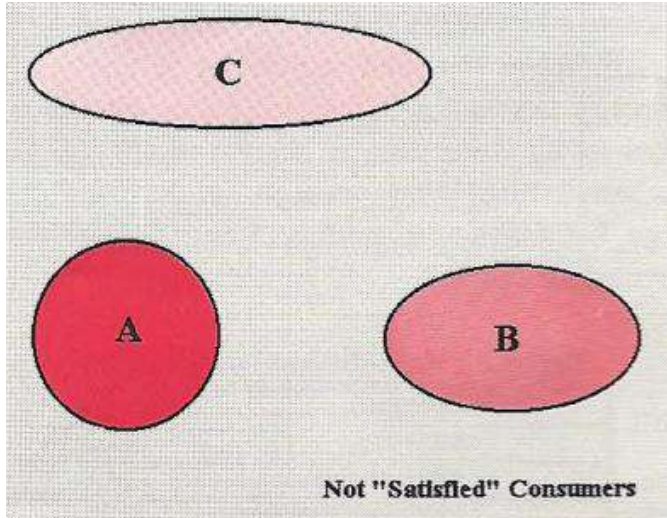
- There are 12 kinds of vegetables in the warehouse, but there is only room for 5 kinds of vegetables on the vegetable shelf. Which vegetables should be placed on the shelf to reach the maximum possible number of customers?
- There are various chocolates already produced at the moment. Are there any other types of chocolate(s) that will win new customers? If so, is the cost of these new varieties too much for the company?
- There is only one place in the product packaging for the USPs (Unique Selling Proposition), which will ensure that the product reaches the maximum number of customers. Which USP is better to be printed on the packaging to appeal to the most customers?
- It is desired to advertise the new campaign by advertising in many magazines. However, the company has been able to budget for only three magazines. Which magazines should be selected so that the company can reach the maximum number of customers?

TURF analysis is very versatile and can therefore also be used in the areas of

- Assortment management
- Marketing and activation
- Category Management
- Advertisement and media planning

## 2.4. Unduplicated Reach

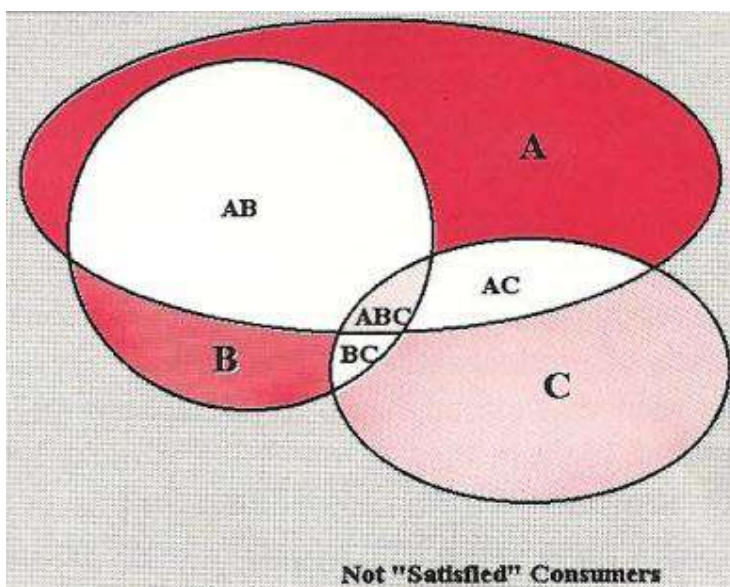
The total market for a product group is shown by the rectangle in Figure 1. The areas of the three ellipsoids of products A, B, and C represent customer satisfaction in the products. As can be seen from the figure, there is no duplication as no ellipsoid intersects with the other(s).



**Figure 1.** Total market for a product category with segments satisfied by products A, B and C (Ennis & Mullen, 1995).

Figure 2 shows all the satisfaction (ABC) and dual satisfaction (AB, BC, and AC) domains applicable to all three products. Although A and B satisfy the largest groups of consumers, they also overlap widely. For this reason, to maximize unduplicated reach for a product combination that includes two products, A and C should be chosen instead of A and B because (Ennis & Mullen, 1995);

$$A + C - AC > A + B - AB \quad (6)$$



**Figure 2.** Products A and C optimize unduplicated reach  
(Ennis & Mullen, 1995)

### 3. APPLICATION

In this research, a pizza manufacturer in Italy wonders which triple combination will be preferred by the customers the most among the 9 material options and wants to produce the pizza consisting of that triple combination. This pizza manufacturer was contacted and information was obtained about the materials used in pizza production. Then, 100 individuals were reached by face-to-face interview method in the center of the city of Turin in Italy and they were asked to choose 3 of the 9 materials they preferred the most. Information on material choices obtained from individuals was transferred to SPSS (Statistical Package for the Social Sciences). Then, adhering to these 100 observations, 2204 observations were derived using the SPSS, and a data set consisting of a total of 2304 observations was obtained.

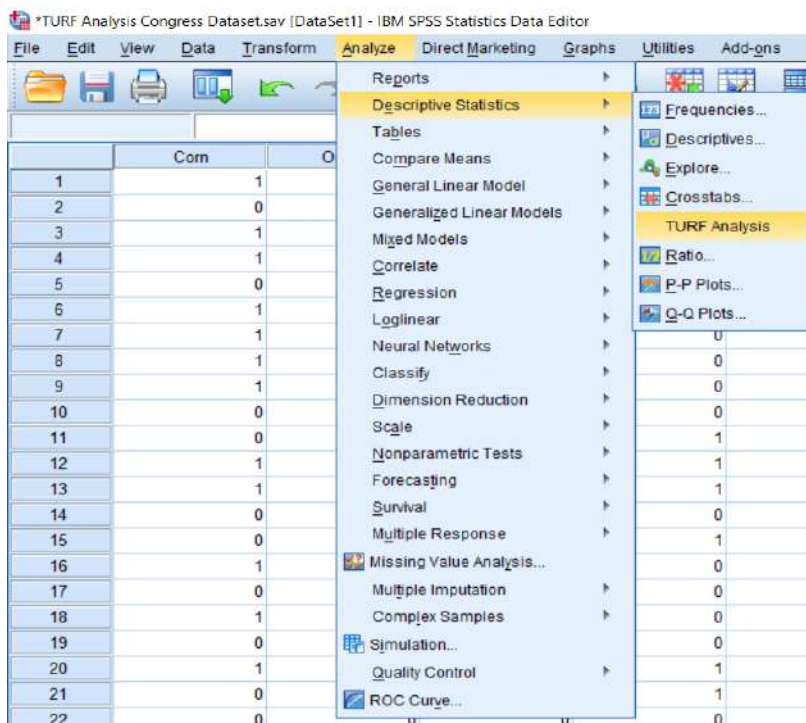
An overview of the dataset consisting of 9 variables and 2304 observations;

	Com	Onion	Olive	TomatoSauce	Cheese	Pepper	TunaFish	Mushrooms	Salami
1	1	0	0	0	0	0	1	0	1
2	0	0	0	1	0	0	1	1	0
3	1	0	1	0	0	0	0	0	1
4	1	0	0	1	0	0	1	0	0
5	0	0	0	1	1	0	0	0	1
6	1	1	0	0	0	0	1	0	0
7	1	0	0	0	0	1	1	0	0
8	1	1	0	0	1	0	0	0	0
9	1	0	0	0	1	0	1	0	0
10	0	0	1	0	1	0	0	0	1
11	0	0	0	1	0	0	1	0	1
12	1	0	1	1	0	0	0	0	0
13	1	0	0	1	0	1	0	0	0
14	0	0	1	0	0	1	0	0	1
15	0	0	1	1	0	0	0	1	0
16	1	0	1	0	1	0	0	0	0
17	0	1	0	0	0	0	1	1	0
18	1	1	0	0	1	0	0	0	0
19	0	0	1	0	0	0	0	1	1
20	1	0	0	1	0	1	0	0	0
21	0	0	1	1	0	1	0	0	0
22	0	0	0	0	0	1	0	1	1
23	1	1	0	0	0	0	0	1	0
24	0	0	1	1	1	0	0	0	0
25	1	0	0	0	1	1	0	0	0
26	1	1	0	0	0	0	0	0	1
27	0	0	0	0	0	0	1	1	1

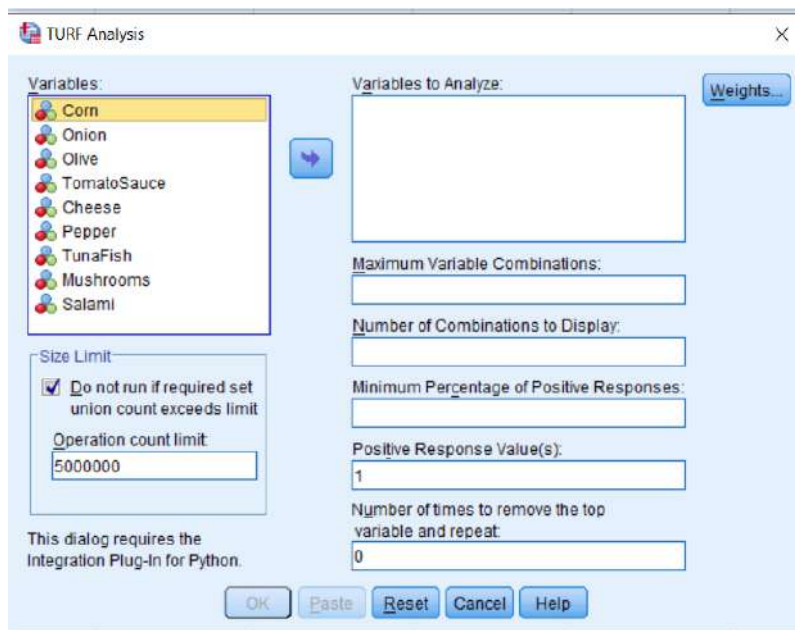
**Figure 3.** Overview of the dataset

Each line belongs to the individual whose opinion was taken. In other words, since the opinion of 2304 individuals was taken, there are 2304 lines in the dataset. The material (variable) selected by the individuals whose opinions were taken was given a value of "1".

Follow the steps **Analyze > Descriptive Statistics > TURF Analysis**.



**Figure 4.** Steps to be followed in SPSS software for TURF Analysis  
Then the "TURF Analysis" window opens.



**Figure 5.** TURF Analysis window

The variables to be analyzed are sent to the "Variables to Analyze" section via the arrow icon (All variables will be analyzed in this analysis).

The "Maximum Variable Combinations" line is used to specify how many combinations the analysis will consist of.

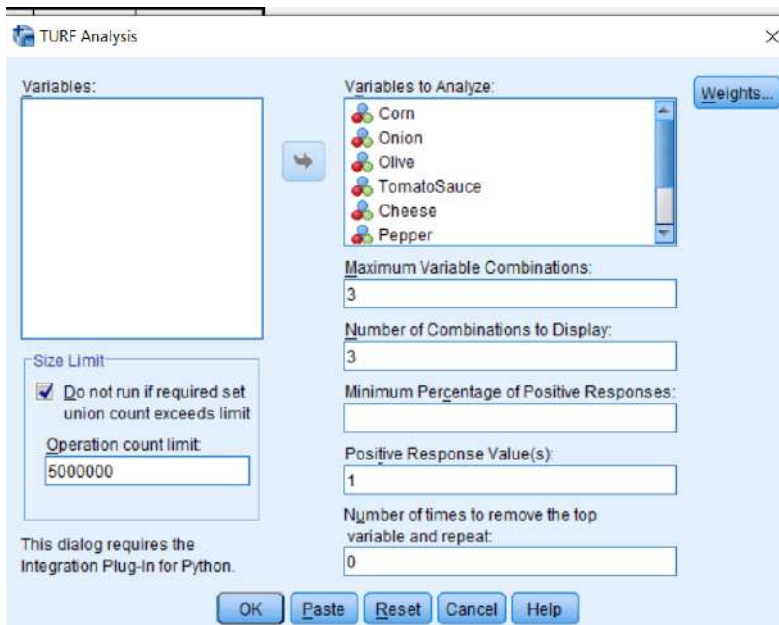
The "Number of the Combinations to Display" line sets how many combinations are displayed in the results table.

The "Minimum Percentage of Positive Responses" line is used if there is the desired percentage limit. For example, if the value 30 is written in this row, it will not show combinations with values less than 30% in the "Pct of Cases" column, where the percentage of the "Reach" value is written in the result table.

The case's value is written in the "Positive Response Value(s)" line. So in this analysis, this value is "1".

The value to be written in the "Number of times to remove the top variable and repeat" line indicates how many times the analysis will be repeated. However, each iteration is performed by subtracting the variable with the largest "Reach" value from the previous analysis. For example, when 1 is written on this line, it means that the analysis will be done 2 times because according to SPSS, the first cycle is 0. While passing to the 1st cycle, the variable with the largest "Reach" value of the 0th cycle is removed from the analysis, and the 1st cycle is performed with the remaining variables.

So, according to the purpose of the study, the lines are filled as follows. And the analysis is done by clicking "OK".



**Figure 6.** Turf Analysis window after the variables are transferred to the “Variables to Analyze” section

## TURF analysis

### Cycle: 0

#### Maximum Group Size: 1. Reach and Frequency.

Variables	Statistics			
	Reach	Pct of Cases	Frequency	Pct of Responses
TomatoSauce	819	35.5	819	11.8
Salami	795	34.5	795	11.5
Pepper	789	34.2	789	11.4

Variables: Corn, Onion, Olive, TomatoSauce, Cheese, Pepper, TunaFish, Mushrooms, Salami

**Table 1.** Reach and Frequency result values for one variable case in Cycle 0

"**Reach**" shows how many people prefer the variable in the relevant line.

"**Pct of Cases**", on the other hand, shows the ratio of people who made this choice among the total people.

"**Frequency**" indicates how many times the variable(s) in the relevant line are selected individually.



"Pct of Responses" column shows the ratio of individual preferences in total preferences.

Thus, if a tomato sauce pizza is produced, 819 people will be reached out of 2304 people. The percentage of this reach is 35.5% of the total reach. Since the combination is 1, the "Reach" and "Frequency" values are the same. However, the reason why the percentage values are different is that the calculation for "Reach" is calculated as  $819 / 2304$ , while for "Frequency" this calculation is made as  $819 / (2304 * 3)$ , since it is a triple combination analysis.

Maximum Group Size: 2. Reach and Frequency.				
Variables	Statistics			
	Reach	Pct of Cases	Frequency	Pct of Responses
Cheese, TomatoSauce	1405	61.0	1590	22.9
Salami, TomatoSauce	1387	60.2	1614	23.3
Olive, TomatoSauce	1386	60.2	1591	22.9

Variables: Corn, Onion, Olive, TomatoSauce, Cheese, Pepper, TunaFish, Mushrooms, Salami

**Table 2.** Reach and Frequency result values for two variables case in Cycle1

Table 2 is for the case where the combination is 2.

Accordingly, if the pizza manufacturer produces pizza with "cheese and tomato sauce", it will reach 1405 people with a sales rate of 61%. And if this pizza manufacturer produces and sells pizza with cheese and tomato sauce separately, it will reach 1590 people with a sales rate of 22.9%. The number 1590 is the sum of the frequency values of cheese pizza and tomato sauce pizza.

But this would not be a logical choice because it would be more logical to produce 1 pizza and reach 1405 people, rather than produce 2 separate pizzas and reach 1590 people. Thus, ingredients, time and other expenses are saved.

The important thing for TURF analysis is that the "Reach" value is high. For example, in Table 2, the "Reach" value of the combination in the first row is higher than the "Reach" value of the combination in the second row, but it is also lower in terms of the "Frequency" value.



**Maximum Group Size: 3. Reach and Frequency.**

Variables	Statistics			
	Reach	Pct of Cases	Frequency	Pct of Responses
Cheese, Salami, TomatoSauce	1800	78.1	2385	34.4
Cheese, Onion, TomatoSauce	1799	78.1	2337	33.7
Cheese, Mushrooms, TomatoSauce	1796	78.0	2343	33.8

Variables: Corn, Onion, Olive, TomatoSauce, Cheese, Pepper, TunaFish, Mushrooms, Salami

**Table 3.** Reach and Frequency result values for three variables case in Cycle2

Since the combination is 3, there are 3 iteration tables. And therefore this third table is the last iteration table.

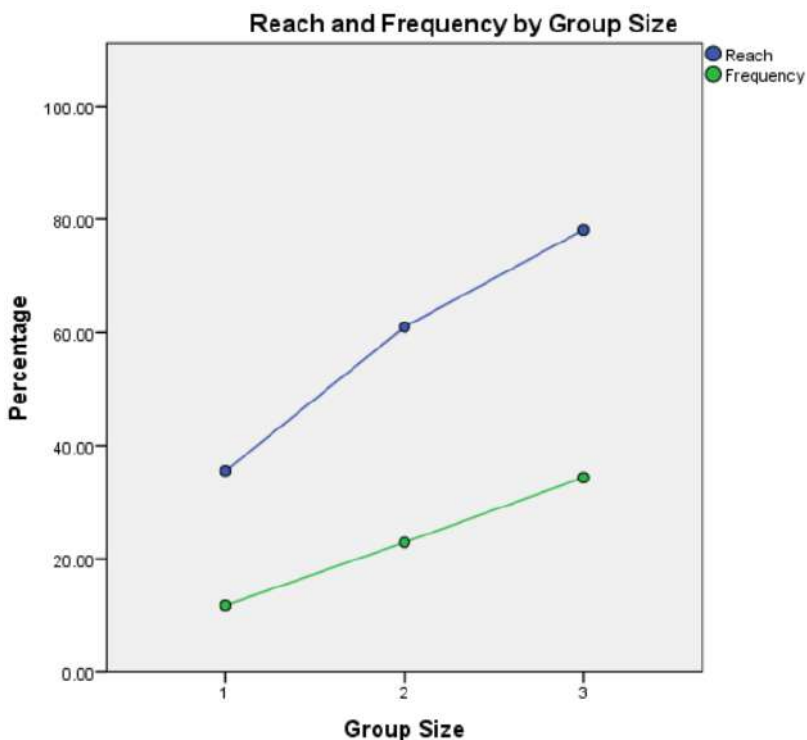
According to Table 3, if the company wants to produce a pizza with a combination of 3 out of 9 ingredients, it must produce a "cheese, tomato sauce and salami" pizza. So, the firm reaches the maximum number of customers. Because according to this table, the combination of "cheese, tomato sauce and salami" is preferred by 1800 people and reaches a sales rate of 78.1%.

**Best Reach and Frequency by Group Size**

Variables	Statistics				
	Group Size	Reach	Pct of Cases	Frequency	Pct of Responses
ADDED: TomatoSauce	1	819	35.5	819	11.8
ADDED: Cheese KEPT: TomatoSauce	2	1405	61.0	1590	22.9
ADDED: Salami KEPT: Cheese, TomatoSauce	3	1800	78.1	2385	34.4

**Table 4.** Best Reach and Frequency by group size

Table 4 summarizes the entire analysis. In addition, each row represents each iteration and each row in this table has the highest value "Reach" of the iteration they represent. This table is used to determine which variable is added and which is removed or kept in each iteration. For example, in the first line, it is suggested to add tomato sauce, in the second line it is suggested to keep the tomato sauce and add the cheese and in the last line, it is suggested to add salami in addition to tomato sauce and cheese.



**Graph 1.** Reach and Frequency by group size

The graph shows the frequency rate and reach rate values for each combination.

#### 4. CONCLUSION AND SUGGESTIONS

In this study, the pizza manufacturer, who has limited financial resources and time, aims to offer new products to the market and wants to determine the best combination of three ingredients that will be most in demand among the nine ingredients and put them on the market. These mentioned ingredients are; Corn, Onion, Olives, Tomato Sauce, Cheese, Pepper, Tuna, Mushrooms and Salami.

According to the results of the TURF analysis, the customers demanded the combination of "Tomato Sauce, Cheese and Salami" the most among the nine material options. 1800 people liked this combination in the data set consisting of 2304 people, in other words, 78.1% of the people in the data set were reached. And these people, who were reached, were interested in this combination 2337 times. This interest has a percentage of 34.4% of the total frequency. The most second popular combination, which would be the second alternative of the seller in case of any problem encountered with this combination, was the "Tomato Sauce, Cheese and Onion" combination. This combination reached 1799 people and again attracted the interest from 78.1% of

the data set. In addition, the people reached were interested in this combination 2337 times and they had a share of 33.7% in the total frequency. The "Tomato Sauce, Cheese, and Mushroom" combination, which is the third best combination for the seller, has a reach value of 1796 and represents 78% of the population in the data set. This combination, on the other hand, has a percentage of 33.8% by attracting interest from these 1796 people 2343 times.

As it can be understood from the reach and frequency values of the second and third combinations, the reach value of the second combination is higher than the third combination, and the frequency value of the third combination is higher than the frequency value of the second combination. However, in TURF analysis, it is the reach value of the combinations that is important for one combination to take priority over the other. Therefore, the second combination with a higher reach value takes precedence over the third combination.

Table 4 is a table showing the steps that the study should follow in each combination. In other words, if the aim is to produce a combination of products, the steps up to that row should be followed. For example, if the number of materials to be used is "*m*", "*m*." rows in this table are taken into account. The product groups shown in this table are the ones with the best "Reach" value in their combination. According to this table, "Tomato Sauce" must be added as the first step in the first row. In the second row as a second step, the tomato sauce must be kept, and "Cheese" must be added. And finally, in the third row, as a third step, the tomato sauce and cheese must be kept and the "Salami" must be added. Thus, the company will have the most optimum pizza option in order to reach the maximum number of customers.

As a result, if the company produces Tomato Sauce, Cheese and Salami pizza from the materials it has, it will reach the maximum customer and sales level.

**THANKS**

This study is an improved and partially modified version of the paper entitled as "Determining The Optimum Product in Marketing by TURF Analysis Method" and orally presented without its full text published in The Global Climate Crisis and the New Economic Structure 360 Degrees with Young People 8th International Student Congress.

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## **Chapter 37**

# **The Role Of Social Media Addiction in Predicting Married Individuals' Relationship Happiness Levels**

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## INTRODUCTION

Internet use is becoming remarkably widespread regardless of age in today's world. Especially, social media has already reached 58.4% of the world population. According to the data published in 2022, the number of people who use social media is currently 4.62 billion (We are social, 2022) worldwide. In Turkey, 80.5% of the people in 16-74 age group regularly (almost every day or at least once a week) accessed the internet in the first three months of 2021 (Turkish Statistical Institute [TUIK], 2021). Social media addiction skyrocketed when the developments in mobile phone technology allowed users to access the internet easily and quickly. Nowadays, not only individuals but also private and public institutions have their own social media accounts. Easy access to the internet, unfortunately, has triggered some problems such as addiction along with its many benefits. Social media addiction, which is the most common addiction problem in relation to internet use, has received increased attention in many recent studies (Kuyucu 2017). Social media addiction is often discussed within the framework of behavioral addictions. According to Büyükarıslan & Kınık (2015), individuals might suffer from psychological and physiological problems and experience communication breakdowns with their families and other individuals nearby due to behavioral addictions stemming from continuously repetitive behavior. Just like drug addiction, social media addiction is also characterized with certain symptoms such as mood modification, tolerance and deprivation (Kuss, & Griffiths, 2011). Majority of the studies focusing on social media addiction examine its effects on young people; especially high school and university students (Alhabash & Ma, 2017; Huang & Su, 2018; Cauberghe et al. 2021). However; there are relatively fewer studies conducted with adults despite the popularity of social media among them (Sağar, 2019). Social media use clearly affects people's relationships with other people and this effect is more noticeable in their relationships with the ones in their close circle – especially their spouses if they are married- since it directly affects the quality of marriage relationship (McDaniel & Coyne, 2016; Roberts & David, 2016).

Relationship happiness of married couples is often discussed as a variable in the studies focusing on close relationships. Marital satisfaction is also a concept closely related to marital quality. The related studies concluded that social media addiction is a significant factor affecting happiness level of married couples and it might cause a lot of problems in their relationships (Dew & Tulane, 2015; Güleç 2018). Marriage is considered a system of institutionalized relationships. Some variables involved in a couple's common life path remarkably affect their happiness. Among these variables are personality traits of spouses, their life styles as well as their short-term and long-term goals and demands. The



researchers report high levels of happiness as an important factor leading to longer marriages and healthier family relationships. It is clear that married couples' perception of happiness is also closely linked to the quality of their relationship. Güleç (2014) found that relationship happiness of married people positively correlates with and predicts marital satisfaction. There are some studies reporting similar findings (Kaya & Cin, 2019; Previti & Amato, 2003). The related studies also emphasize the quality of the relationship and couple's spending time together as the factors leading to happy marriages (Fatima & Ajmal, 2012). Social media addiction is considered a significant factor affecting relationship happiness of married couples since it affects how much time they are going to spend together. Therefore, this study aims to examine the role of social media use in predicting relationship happiness levels of married individuals. The research questions of the study are as follows:

1-a) Do social media addiction total mean scores significantly predict relationship happiness mean scores of married individuals?

b) Do virtual communication mean scores significantly predict relationship happiness mean scores of married individuals?

c) Do virtual tolerance mean scores significantly predict relationship happiness mean scores of married individuals?

2-a) Do married individuals' social media addiction mean scores significantly differ according to gender?

b) Do married individuals' relationship happiness mean scores significantly differ according to gender?

3-a) Do married individuals' social media addiction mean scores significantly differ according to length of marriage?

b) Do married individuals' relationship happiness mean scores significantly differ according to length of marriage?

The model of the study is as follows:

HR (Relationship Happiness):  $a_1x_1$  (Social Media Addiction Total Score) +  $a_2x_2$  (Virtual Tolerance) +  $a_3x_3$  (Virtual Communication) + b

## **METHODOLOGY**

### ***Research Design***

This descriptive study is based on the relational survey model and aims to determine to what extent married people's social media addiction levels predict their relationship happiness levels. The descriptive method, which allows researchers to explore relationships between different situations, is characterized with high levels of generalizability and external validity (Heppner et al. 1999). As a type of descriptive research model, relational survey model aims to examine

variation between two or more variables (Vanderstoep & Johnston, 2009). The dependent variable of the present study is married people's relationship happiness levels while the total score obtained from Social Media Addiction Survey and the scores from its two dimensions – i.e. Virtual Communication and Virtual Tolerance - are the independent variables.

### ***Data Collection Tools***

#### ***Social Media Addiction Scale - Adult Form (SMAS-AF)***

This 5-point Likert scale is administered to determine social media addiction levels of individuals who are older than 18 years old. It consists of 20 items aiming to collect data regarding the following two dimensions: virtual tolerance and virtual communication. The factor loads of the scale range between 0.61 and 0.87. The Cronbach Alpha internal consistency coefficient was calculated as 0.94 for the overall scale. Test-retest reliability coefficient was 0.93 for the overall scale and 0.91 for virtual tolerance dimension and 0.90 for virtual communication dimension. The analyses confirmed that SMAS-AF is a reliable and valid scale in determining social media addiction levels of adults. The values obtained for the scale in the present study are displayed in Table 1 and 2.

#### ***Relationship Happiness Questionnaire***

This 6-item scale aims to make a general evaluation of close relationships. The items measure individuals' perceptions regarding love, happiness, general satisfaction, relationship stability, seriousness of problems and level of commitment / responsibility. The scores are based on a 7-point Likert scale. The internal consistency (Cronbach Alpha) coefficient was calculated as 0.80. The values obtained in the current study for the questionnaire are presented in Table 1 and 2.

#### ***Personal Information Form***

Developed by the researcher in parallel with the purpose of the study, the form aims to collect socio-demographic information about the participants.

In addition, informed consent was obtained from the participants and the privacy rights of human subjects were observed.

#### ***Study Group***

The participants of the study were determined using convenience sampling method, in which the sampling of a study is selected by taking "easy access" and "convenient administration" criteria into consideration due to certain limitations such as time, money and labor (Büyüköztürk, 2012). 1599 married individuals

voluntarily participated in the study. When extreme values were excluded from the data set, the analyses were done for the data collected from 1402 participants. The average age of the participants was calculated as 38.63 and the standard deviation as 10.87. The participants reported that they use social media 2.20 hours a day in average. 58.9% of the participants stated that they have a medium income. When the study group is analyzed in terms of marriage duration, 21.1% of the participants are 0-2 years, 17.3% are 3-5 years, 16.1% are 6-10 years, 12.6% are 11-15 years and 32.8% of them stated that they were married for 16 years or more. In addition, 27% of the participants stated that they had no children, 28.8% stated that they had one, 28.5% two, 11.4% three and 4.2% four or more children.

This study have been approved by a suitably constituted Ethics Committee of the institution within which the work was undertaken and that it conforms to the provisions of the Declaration of Helsinki in 1995 (as revised in Edinburgh 2000). In addition, informed consent was given to all participants.

### ***Data Analysis***

The data were analyzed by using SPSS 24.00 statistics software. The data set was examined prior to the analysis and the extreme values were excluded from the data set. As a result, the data collected from 1402 participants were analyzed. The techniques used in the analyses included Pearson correlation, arithmetic mean, standard deviation, Cronbach Alpha internal consistency coefficient, multiple linear regression analysis, t-test for independent samples, and One-Way ANOVA.

According to multiple regression analysis, data sets should be evaluated in terms of certain conditions such as normality, multiple linear regression and autocorrelation. As for the normality evaluation, Kolmogorov Smirnov normality test was done. The results revealed a normal distribution of error terms ( $KS=0.37$ ,  $p=0.076$ ). The presence or absence of multiple regression problems between the data was tested by calculating tolerance and VIF values. Tolerance values are supposed to be higher than 0.10 and VIF values lower than 10 (Çokluk et al. 2012). The tolerance (0.43-0.91) and VIF values (1.09-2.33) of the data set in the present study met this criteria. The autocorrelation between error terms in the data set was evaluated using Durbin Watson test. Values ranging between 1.5 and 2.5 in this test indicate the lack of autocorrelation problem (Küçüksille, 2014). The Durbin Watson values in this study were calculated as 1.90 and 2.05, which shows that the data set did not have an autocorrelation problem. As a result, it

was concluded that the data set met the required assumptions for multiple linear regression analysis.

FINDINGS

The descriptive statistics regarding married individuals’ Social Media Addiction Scale total scores as well as the scores they received from Virtual Tolerance dimension, Virtual Communication dimension and Relationship Happiness Questionnaire are displayed in Table 1 below.

Table 1 *The Descriptive Statistics and Pearson correlation analysis results of the scores obtained from the scales*

Variables		N	Min.	Mak.	$\bar{X}$	Standard deviation
Social Media Addiction Score (SMAT)	Total	1402	20	100	45.27	16.33
Virtual Tolerance (VT)		1402	11	55	25.94	9.83
Virtual Communication (VC)		1402	9	45	19.33	7.61
Relationship Happiness (RH)		1402	6	42	34.44	6.20

According to Table 1, the participants received scores higher than average values both as the total score or the scores from each dimension separately.

The correlations between the variables “social media addiction”, “virtual tolerance”, “virtual communication” and “relationship happiness” were examined using Pearson Correlation technique. Cronbach alpha internal consistency coefficient was calculated in order to evaluate the internal reliability of the scales. The results of the analyses are displayed in Table 2.

Table 2 *The Results of the Correlation Analysis and Cronbach Alpha Internal Consistency Coefficients*

Variables		A	SMAT	VT	VC	RH
Social Media Addition Total Score (SMAT)		0.93	1	0.95*	0.92*	-0.13*
Virtual Tolerance (VT)		0.89	0.95*	1	0.75*	-0.13*
Virtual Communication (VC)		0.88	0.92*	0.75*	1	-0.10*
Relationship Happiness (RH)		0.86	-0.13*	-0.13*	-0.10*	1

\*p<0.01

Table 2 shows positive and significant correlations between SMAT and VT ( $r=0.95$ ;  $p<0.01$ ), between SMAT and VC ( $r=0.92$ ;  $p<0.01$ ) and between VT and VC ( $r=0.75$ ;  $p<0.01$ ). On the other hand, there were negative and significant correlations between SMAT and RH ( $r=-0.13$ ;  $p<0.01$ ), between VT and RH ( $r=-0.13$ ;  $p<0.01$ ), and between VC and RH ( $r=-0.10$ ;  $p<0.01$ ). In addition, The Cronbach alpha internal consistency coefficients for all the scales and their dimensions were high ( $\alpha = 0.86-0.93$ ), which shows that the scales were reliable.

Multiple linear regression analysis was done to evaluate the predictive role of social media addiction in relationship happiness. The results of this analysis are displayed in Table 3 below.

Table 3 *The Results of the Analysis regarding the Predictive Role of Social Media Addiction in Relationship Happiness*

Variable	B	Standard Error	B	T
Constant	22.734	0.731		31.09*
SMAT	-7.510	0.324	-0.524	-23.17*
VT	-0.058	0.021	-0.089	-2.71*
VC	-0.002	0.027	-0.002	-0.06

R=0.54    R<sup>2</sup>=0.29

\*p<0.01    F<sub>3-1398</sub>=190.01\*

According to the multiple linear regression analysis results displayed in Table 3, social media addiction significantly predicts relationship happiness ( $R=0.54$ ,  $R^2=0.29$ ;  $p<0.01$ ). Social Media Addiction Scale total score accounts for 29% of relationship happiness together with virtual tolerance and virtual communication. Similarly, t-test results showed that social media addiction total score ( $t=-23.17$ ,

$p<0.01$ ), and virtual tolerance score ( $t=-2.71$  ,  $p<0.01$ ) predict relationship happiness. However, virtual communication score itself ( $t=-0.06$ ,  $p<0.05$ ) does not predict relationship happiness. For every one unit decrease in social media addiction, relationship happiness increases by 7.51; however, one unit decrease in virtual tolerance results in an increase of 0.06 unit in relationship happiness

As for the evaluation of the variance between social media addiction and relationship happiness mean scores according to gender, independent sample t-test was done for the mean scores received from both scales since gender groups are independent from each other. It is necessary to meet the assumption that score distribution variances of gender groups should be homogenous so that independent sample t-test can be done. Levene’s test results were examined in order to test this assumption and it was found that both social media addiction ( $F=0.003$ ;  $p>0.05$ ) and relationship happiness score distribution variances were equal; i.e homogenous. Accordingly, independent sample t-test was used and the results of the analysis are displayed in Table 4.

Table 4 *T-test Results for mean scores of Social Media Addiction and Relationship Happiness according to Gender*

Variables			N	$\bar{X}$	S	df	t	Levene's Test F
Social Addiction	Media	Groups						
		Female	832	46.26	16.38			0.003
	Male	570	43.83	16.16	1400	2.74*		
		Female	832	34.09	6.31	1400	-	2.09
Relationship Happiness	Male	570	34.94	6.01		2.53*		

\* $p<0.01$

The mean scores of social media addiction and relationship happiness were tested using independent sample t-test at 1400 degree of freedom and 0.01 level of significance. The t values obtained were statistically significant ( $SMA=t_{1400}=2.74$ ,  $p<0.01$ ;  $RH= t_{1400}=-2.53$ ,  $p<0.01$ ), which indicates a significant difference between social media addiction mean scores according to gender in favor of females. In other words, social media addiction mean scores of women were found to be significantly higher than those of men. In addition, relationship happiness mean scores of males significantly differed according to gender in favor of males. The mean scores of relationship happiness for men were significantly higher than those of women.

One-Way ANOVA test was done in order to test the variation between social media addiction and relationship happiness mean scores according to length of marriage. This test can be done if the assumption that score distribution variances

according to length of marriage must be homogenous is met. The results of Levene’s test showed that variances are homogenous (SMA= F4-1397=7.64;  $p>0.05$ ; RH= F4-1397=1.01;  $p>0.05$ ). One-Way ANOVA test was applied since this assumption was met. The results of the test are presented in Table 5 below.

Table 5 *The Results of One-Way ANOVA Test for Mean Scores of Social Media Addiction and Relationship Happiness according to Length of Marriage*

Variables	Source of Variance	KT	Df	KO	F
Social Media Addiction	Between Groups	39198.856	4	9799.713	10.17*
	Within Groups	334569.541	1397	239.491	
	Total	373768.396	1401		
Relationship Happiness	Between Groups	1526.486	4	240780.28	40.92*
	Within Groups	52435.100	1397	1746.30	
	Total	53961.586	1401		

\* $p<0.001$

The results of One-Way ANOVA test displayed in Table 5 below show that social media addiction and relationship happiness mean scores – at least one of them- vary according to length of marriage. In order to determine which groups of “length of marriage” differ, Scheffe test was done since this test allows researchers to make pairwise comparisons. The results of Scheffe test are displayed in Table 6.

Table 6 *The Results of Sheffe Test for Mean Scores of Social Media Addiction and Relationship Happiness according to Length of Marriage*

Variables	Length of Marriage	0-2	3-5	6-10	11-15	16 and more
Social Media Addiction	0-2	-	-0.05	5.79*	7.05*	12.50*
	3-5	0.05	-	5.84*	7.11*	12.55*
	6-10	-5.79*	-5.84*	-	1.26	6.70*
	11-15	-7.05*	-7.11*	-1.26	-	5.44*
	16 and more	-	-	-	-	-
		12.50*	12.55*	6.70*	5.44*	
Relationship Happiness	0-2	-	1.28	1.64*	2.88*	2.61*
	3-5	-1.28	-	0.36	1.59	1.33
	6-10	-1.64	-0.36	-	1.22	0.96
	11-15	-2.88*	-1.59	-1.22	-	-0.26
	16 and more	-2.62*	-1.33	-0.96	0.26	-

\* $p<0.001$

According to Table 6, social media addiction levels of people who have been married for two years or less are higher than those of the participants who have been married for more than 6 years. Similarly, social media addiction levels of people who have been married for 3-5 years are higher than those of the participants who have been married for more than 6 years. In addition, social media addiction levels of people who have been married for 6-10 years are higher than those of the participants who have been married for more than 16 years. Also, social media addiction levels of people who have been married for 11-15 years are higher than those of the participants who have been married for more than 16 years. Moreover, relationship happiness levels of people who have been married for two years or less are higher than those of the participants who have been married for 6 years or more.

## **DISCUSSION**

The results of the study showed that social media addiction accounts for 29% of relationship happiness together with virtual tolerance and virtual communication dimensions for married individuals. Also, the study concluded that social media addiction total score and virtual tolerance dimension score predict relationship happiness. As social media addiction increases, married couples have lower levels of relationship happiness. The studies focusing on social media use and relationships between spouses reported that social media use ruins marriage relationships and deteriorate life quality since it provokes conflicts between spouses and negatively affects their relationships (Aluş, 2016; Irani & Rezaei, 2019). The researchers also emphasize the link between addiction and problematic relationships between husband and wife (Ersöz, 2021; Stanley, 2012).

Married couples today spend more time on social media due to easy access to the internet and social sharing websites via mobile phones in various environments, which harms the relationship between spouses (Derici, 2018). McDaniel et. al (2017), in their study, concluded that social media use is a risk factor for relationship happiness of married individuals. Similarly, Aktaş & Çapur (2018) reported intense social media use as a significant stressor in relationships between spouses. In addition, Ersöz (2021) concluded that marriage harmony decreases as social media use increases. Lack of communication due to poor relationship between husband and wife are among the important reasons of divorce (Yıldırım, 2019). The studies often emphasized that social media use is one of the factors leading to divorce by negatively affecting the relationship between spouses (Aycanoğlu & Ünsal, 2017; Güleç, 2018; Sarı & Karadeniz, 2019). For instance, Clayton (2013) highlighted that intense use of Facebook



might have an indirect effect on physical and emotional cheating. There are also some studies reporting that social media addiction has a deteriorating effect on marriage relationships and is among the main reasons of divorce in today's world (Dızman, 2019). Despite limited in number, there are few studies that report positive contribution of social media use to marriage relationships, which contradicts with the above mentioned findings (Gökdemir, 2021). It is clear that most of the studies highlight social media addiction as a significant factor somehow affecting the relationship between spouses.

Examination of married individuals' social media use and relationship happiness levels in terms of duration of social media use, gender and length of marriage revealed significant differences between these variables. The average time spent by the participants on social media in a day was calculated as 2 hours 20 minutes in the present study. The studies aiming to determine this duration also found similar results and the average time spent on social media was determined as 2 hours 27 minutes worldwide (We are social, 2022). Pew research center found that adults check their social media accounts several times a day (Auxier & Anderson, 2021). Kalaman & Çelik (2019) reported daily 3 hours of social media use in their study. Although social media addiction is a problem associated with young people, some studies reported long duration of social media use among adults. Long hours of social media use is taken as an important criterion for the diagnosis of addiction. Intense use of social media might lead to some problems such as poor communication between spouses (Şad et al. 2016). Therefore, it is emphasized that married couples' setting a time limit for social media use and prioritizing the opportunities to spend time and do activities together will have positive effects on their relationships (Aluş, 2016).

Another finding of the study indicates that social media addiction scores of women are higher than men. The study conducted by Pew research center also reported more intense use of social media by women, and Instagram was determined as the most popular social media platform among women (Uslu, 2016; Auxier & Anderson, 2021). Coyne et.al. (2011) found similar results in their study. In Turkey, 51.25% of active social media accounts belong to women and 48.75% to men (Gökdemir, 2021). Some researchers also found similar results in their studies conducted with university students (Balçı & Gölcü, 2013). As for relationship happiness, there is a significant difference in favor of men, which is consistent with the negative correlation between social media addiction and relationship happiness.

The present study revealed that social media use decreases as length of marriage increases. Both social media addiction scores and relationship happiness scores of individuals who have been married for two years or less are

considerably high. More intense use of social media in this group might be explained by the fact that their marriage relationship is still new and they are young. As for age variable, the study showed that social media addiction scores decreases as age increases, which is consistent with the results of the related studies (Uslu, 2016; Auxier & Anderson, 2021). Kilit & Barut (2021) also found similar results. They concluded that problematic internet use decreases as length of marriage increases.

## **CONCLUSION**

Social media has been an important component of the relationship between spouses, and even it has almost replaced real social life in today's world. The present study found that social media addiction and virtual communication and virtual tolerance as its two dimensions predict relationship happiness in marriage. According to the results of the study, the participants spend 2 hours and 20 minutes a day on social media in average. In addition, the study found that women use social media more than men. Similarly, the use of social media is more common among individuals who have been married for two years or less than those who have been married for longer time.

## **ACKNOWLEDGEMENT**

None

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## **Chapter 38**

# **The Gist of Neorealism: Comparison of Waltz and Mearsheimer**

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## **Introduction**

Dangerous security competition is continuing in Post-Cold War Asia and the Middle East. Peace is never achieved. Scholars are constantly debating and writing books and establishing theories about international politics, mainly including anarchy, structure, capability, and power distribution.

The most established theoretical vantage point in international relations is realism.. Realism is statuesque oriented. Realism claims to be realistic. Some scholars argue that realism has dominated International Relations. Realist theory has evolved through time into a variety of theories that are all grouped under the umbrella term "Realism," but it still remains a crucial theoretical stance in international relations (Lynn-Jones 1998, 157). For instance, one distinction is made between "neorealist" theory and conventional realist theories (Carr 1964; Morgenthau 1978). (Mearsheimer 2001; Waltz 1979). Another distinction is between realist theories that take into account domestic institutions and variables (Lobell 2002/2003; Rose 1998; Snyder 1991) and those that do not (Mearsheimer 2001; Waltz 1979). Nevertheless, another division is among systemic-focused realist theorists, who disagree over whether significant powers seek to maximize power (Elman 2004; Labs 1997; Mearsheimer 1994; 2001) or whether a particular amount of power is sufficient to ensure security (Waltz 1979). Lynn-Jones (1998)

Realism considers what goods can and should be promoted in international politics, which contradicts neo-realism. Neorealism- Structural Realism is considered the core theory of international politics. The theory of Neorealism centers on the effects of the international system's structure when it tries to explain the results in international politics. Waltz's international system is based on structure, anarchy, and power distribution. Waltz argued that any theory of international relations ought to provide information on both the system's individual states and its constituent states. Waltz stated that despite being essential for applying external pressure on states, the system level is overlooked in IR Theory. His work was essential since it raised issues regarding the right level of analysis in IR as well as the organization and agency in the field. The transition from conventional realism to Neorealism's more scientific assertions is explained in Waltz's book. However, John J. Mearsheimer's view explains why the modern state system's ties between the big powers are so tense. Finally, Mearsheimer argues that international politics is vital in understanding this state of affairs.

In this paper, I try to explain the differences and similarities between Waltz and Mearsheimer. The level of analysis would cover the comparison and contrast

of the defensive Realist Kenneth Waltz and offensive Realist John J. Mearsheimer.

### **The Roots and the Definition of Realism**

The guiding principles and fundamental presuppositions of realism are derived from philosophical traditions that at least date back to Thucydides' works on the Peloponnesian wars between the Greek city-states of Sparta and Athens. The seventeenth-century English philosopher Thomas Hobbes and the sixteenth-century Italian political philosopher Niccolo Machiavelli demonstrate how realism is based on conventional wisdom.<sup>1</sup>

The most widely accepted theoretical stance in international relations is realism. There is no other theory than realism, which gives as much form and structure to studying international politics. Realism is a complex and rich tradition of thought. International relations, according to realists historically, has been chaos. Realists worry about a world in which there is no power greater than the state and anarchy reigns. Due to the obvious lessons that the war repeated, realism became the conventional knowledge in international relations after World War II. The lengthy history of world politics revealed by realists revealed that it was not an exercise in building international organizations or laws and treaties. Realism asserts that it is more accurate than Instead; it was a conflict about security and control. Instead, it was a conflict over control and safety under the "every country for itself" principle. Power and national interest, in their view, were the main factors influencing international politics. Realists acknowledge that morality and the rule of law play a role in world politics, but they also hold that the only way for the rule of law to be respected is if the use of force is implied. The traditional perspective holds that realism is more interested in how things are as they are than how they ought to be.

Realists maintained that states should prepare for war rather than focusing on disarmament to achieve peace and security, which was the League of Nations' main goal. They believe that the conflict is inevitable, and because of this, states should be strong enough to face the aggression.

Realists also insist that a state's primary responsibility is to its citizens, not a theoretical 'international community.'

Realist states are the critical actors in international relations; sovereignty or independence and self-control are the state's defining characteristics. States act in a self-interested manner; they are motivated by a desire for power, security, and

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<sup>1</sup> Ibid, 55

the common good. Realists view military or physical force as the primary source of authority.

Realists are divided into two categories; one is classic or traditional realists and neo-realists, sometimes called structural realism. Classical realism attempts to understand the world from the political leader or diplomat who is forced to operate in an uncertain and dangerous world.<sup>2</sup> On the other hand, neo-realism places more attention on the importance of the anarchic international system.<sup>3</sup> Realists assert that international outcomes are largely influenced by the distribution of power or capabilities.

### **Classical Realism in International Relations**

Classical realism underlines human nature. States act in their own interests; they are driven by a desire for power, security, and the greater good. Military or physical strength is the primary source of power for realists.

Classical realists emphasize the origin of international conflict and the effects of war on human nature. In classical realism, as opposed to neorealism, the system is philosophically superior to the state. Classical realists make the distinction between status quo powers and revisionist powers. Classical realism limits the analysis of international relations to personal assessments. The military, according to Morgenthau, is the most important material aspect of power, but a country's morale, character, and level of governance are even more important.<sup>4</sup> Classical realists say that war and international conflicts are incomplete in human nature.<sup>5</sup> Moreover, the state is superior to the system in classical realism. While neorealism views states as unitary actors, classical realists distinguish between status quo and revisionist powers. Traditional realism confines its analyses to opportunistic assessments of international relations.

### **Neorealism in International Relations**

The organizing principle, anarchy, and distribution of capacities in neorealism serve to explain the nature of the international system. Kenneth Waltz delineates the neorealist theory of international relations in his 1979 book called *Theory of International Politics*. Neorealism is one of the most influential contemporary approaches to international relations. Neorealism materialized from the North American discipline of political science. Neorealism reformulated the classical realist theory of E.H. Carr, Hans Morgenthau and Reinhold Niebuhr.

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<sup>2</sup> Ibid, 57

<sup>3</sup> Ibid, 57

<sup>4</sup> Pashakanlou, 2009

<sup>5</sup> Ibid

Neorealism is especially an ideological departure from Hans Morgenthau's classical realism writing. Neorealist scholars think that not egoism, strategy or motivation but structural restraints will establish the behavior in international relations. The anarchic ordering principle of the international structure is decentralized, which means that there is no formal, central authority. According to neorealist, there are three possible systems due to changes in the distribution of capabilities identified by the number of great powers in the international system. One is the unipolar system, where there is one great power. The second is the bipolar system, which includes two great power, and the last one is the multipolar system, which has more than two great power. According to neorealist, the bipolar system is more stable. There is internal balancing in a bipolar system, so there is less chance of a great power war.

There are six fundamental neorealist concepts explaining state behavior. These are anarchy, structure, capability, power distribution, polarity and national interest. These concepts are evoked by Mearsheimer in 2001 and Waltz in 1979, with a bit different in each explanation.

"Anarchy" does not imply the presence of chaos plus disorder but refers to the absence of a government.<sup>6</sup> As there is no global authority to provide security and stability in international relations, world politics is not formally and hierarchically organized. Domestic politics are structured by hierarchy, whereas international politics is structured by anarchy.

Neorealism provides an explanation for occurrences in a multi-state international system, such as war, alliances, negotiations, and weapons races. Only at the system level are explanatory variables present. Neorealist sees threats and security as absolutes. States are extremely alert to threats to security since security is their primary goal. The neorealist school of thought, in particular, holds that nations, always assuming the worst, take seriously the high cost of military readiness for state survival in the event of conflict. They do not believe that diplomacy or international institutions can avoid war. Below is shown what Neorealist especially consider that states take seriously<sup>7</sup>:

- Military preparedness comes at a significant cost for state survival in a war. The fact that they cannot quickly or accurately read intentions thus must always assume the worst
- The military may be the sole effective deterrent to aggression—not diplomacy, international organizations, etc.

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<sup>6</sup> Waltz 1979,88

<sup>7</sup> Retrieved from lecture notes online web site: Offensive and Defensive Realism, 2013

- Neorealist contend that due to this orientation towards threats, expressed in terms of the likelihood of a threat, nations will prioritize the here and now and disregard the future.
- This is because future returns on investments in non-military commodities (like the economy) are useless if the state is overthrown in the near future. Thus even measures to increase power in the end (such as economic investment) are ignored to bring all possible resources to bear on current defense needs.
- Actors try to prevent losses or reduce the kinds of losses that could be incurred; they do not increase utility (or power). This means that even if following the latter course would ultimately provide them more power (and so security), they will be aggressive rather than trusting.

Neorealism or structural realism is the foundation of International Relations.<sup>8</sup> Neorealism is also called structural realism because the theory mainly considers the effects of the structure of the international system as the core while defining the outcomes in international politics.<sup>9</sup> Neorealism seeks to explain how states, especially the powerful states, behave and interact in the international sphere. Neorealism has attracted many adversaries in the academic arena. Neorealism is related to outstanding issues, such as war, preventing war, power of balance, seeking power, losing states, security competition, arms races, and alliance formation. Secondly, the distribution of capabilities across the units is the defining principle of the structure of international politics.

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<sup>8</sup> Jakobsen, 2013

<sup>9</sup> Ibid

**Table 1: Realism vs Neorealism<sup>10</sup>**

	Realism	Neorealism
Interest of States	Survival	Survival
How to achieve survival	Increase power because world government is unachievable	Increase power because world government is unachievable
Human Nature	Man is flawed and therefore prone to conflict. This explains why cooperation is never guaranteed and world government is unachievable	A man could have flaws or not. Conflict cannot be explained by human nature alone.
Anarchy	The circumstances under which independent nation-states operate	Describe the interpersonal dynamics between independent nation-states that provide as a flimsy justification for war.

**Distinguishing Between Realist Theories: Offensive Realism and Defensive Realism**

Although realist theory has evolved into a number of distinct ideas unified by the term "realism," it still plays a critical role in understanding international affairs. Offensive Realism and Defensive Realism were formed because of the division between systemic realism theories. Offensive Realists are Gilpin, Mearsheimer, and Schweller, while Defensive Realists are Waltz, Copeland and Jervis.

According to the notion of offensive realism, international systems promote offensive strategy since anarchism breeds insecurity and a state can only be secure by being the strongest. Power dynamics are crucial, as they cause neighbors to fear one another, strong states to fear rising states, and weak nations to fear powerful states. States that experience this dread are more likely to attack first, take dangerous actions to maintain security, and invest heavily in their armed forces.

Condition of anarchy is underdetermined in the notion of defensive realism. By encouraging others to balance against one another and consider first strikes, it generates scenarios in which actions intended to improve security, such as violence, exacerbate the insecurity of others. States are often better off expressing restraint than violence to secure security; however aggression may be required in particular circumstances.

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<sup>10</sup> Weber, 2001, 2005

Offensive realists assume that a policymaker's initial view leads to a specific action with significant implications (war, building of alliances, gathering of more resources). Defensive realists, on the other hand, assume that legislators draft laws that have real-world consequences as well as perception-altering intent. Defensive Realist believes that: <sup>11</sup>

- The security conundrums, which will always exist, cannot be avoided. However, these dilemmas do not always increase the probability of war.
- This is due to intervening factors such as military technology, geography, and raw material access between the security challenge and action.
- Because they provide many settings that affect the choices politicians make, these intervening variables have a greater impact than the overall power balance in the system.

### **Comparison of Kenneth Waltz and John J. Mearsheimer on Evaluation of Realist International Theory**

Many scholars agree that Mearsheimer's theoretical and empirical work gives a vital supplement to Waltz's theory.<sup>12</sup> A theory of world politics known as structural realism or neorealism is linked to Kenneth Waltz (1924-2013). Waltz attempted to create a broad framework to explain recurring patterns of state behavior and relations with one another in the international system in his book *Theory of International Politics*. On the other hand, John J. Mearsheimer published his book called *The Tragedy of Great Power Politics*. Mearsheimer's novelty is his theory of 'offensive realism' that seeks to re-formulate Waltz's structural realist theory.

According to Waltz, the primary supposition of the realist model is that the state is the most important actor, and the first lively energy of the state power is the military force.<sup>13</sup> Another supposition of the realist model in international relations is exploiting the balance of power to achieve order.<sup>14</sup> The idea of structure is one of the main parts of structural realism.<sup>15</sup> On the other hand, Mearsheimer's theory aims to clarify why the great powers are burdened with conflict in the modern state system. Mearsheimer and Waltz quarrel that the critical element of international politics to consider state affairs is structure.<sup>16</sup>

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<sup>11</sup> Ibid

<sup>12</sup> Toft, 2005

<sup>13</sup> Işıksal, 2006

<sup>14</sup> Ibid

<sup>15</sup> Ibid

<sup>16</sup> Ibid



Like most realists, Mearsheimer uses five central suppositions to explain international politics' necessary parts.<sup>17</sup>

- International Politics is created in an anarchical arena, which means that there is no 'government of governments' to implement rules and chastise doers.
- States can never be sure of others' goals and intentions of using force against them.
- In the International Politics, survival is the first incentive for all-state
- States think deliberately about their external issues and choose the best strategy, which makes the most of the goal of survival because they are the lucid thing.
- States all the time own military capability to hurt and destroy each other.

Mearsheimer deduces that finally, states find out that the best way to assure survival in anarchy is to try to become an enormous power.<sup>18</sup> However, as not all states can become the strongest power, the state system will be a place for security rivalry if the system stays anarchic.

Waltz, on the other hand, aims to use the influence of the international system's structure to explain the results in international politics. Like Mearsheimer, Waltz also thinks that the arranging belief of the international system is anarchy.<sup>19</sup> The international system where the states are autonomous and the same kind of actors who are always ready to protect themselves is an entire self-help system. The system units are very much alike, and their main goal is to survive.<sup>20</sup> Survival is the most important goal of both Waltz and Mearsheimer's theories.

The distribution of capabilities among the entities that make up the international system is another fundamental characteristic of how international politics is organized; as states' capabilities and levels of power differ, their behavior varies with their relative strength..<sup>21</sup>

In Mearsheimer's thinking, power is taking a vital part. Mearsheimer follows Waltz in associating power with capabilities. Mearsheimer divides state capabilities into hidden power: economy and population and concrete power, the military.<sup>22</sup> According to Waltz, structural limitation comes from the division of

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<sup>17</sup> Ibid

<sup>18</sup> Ibid

<sup>19</sup> Jacobsen, 2013

<sup>20</sup> Ibid

<sup>21</sup> Ibid

<sup>22</sup> Toft, 2005

power force.<sup>23</sup> Mearsheimer gives two policies explaining how states achieve hegemony. One involves direct effort to gain relative power, and the other is indirect effort and intent to control other aggressors from expanding gains.<sup>24</sup> Mearsheimer says that war is the primary way to gain power, although it is expensive.

On the other hand, Waltz believes that the proliferation of nuclear weapons would increase the probability of international peace and prevent war. The concept of *balance of power* is a crucial concept of Neorealism. Both academics concur that in anarchic societies, hegemonic threats must be balanced. Waltz stated that only the two superpowers (the USA and the Soviet Union) achieved to balance each other on a global scale.<sup>25</sup> Mearsheimer says that none of the two great powers can establish global hegemony because of the approximately fair distribution of power in the world.

There is an essential difference between Mearsheimer and Waltz concerning the doubt about meanings.<sup>26</sup> Waltz's thesis is primarily based on two fundamental presumptions: the anarchic system and states seeking to survive. In other words, the two presumptions are sufficient to demonstrate that all states have enough security. Mearsheimer disagrees this and claims that security competition is impossible in a structural realist society without presuming that governments can never be certain of the intentions of other countries. According to Mearsheimer, if the state's main objective is to survive, there is no reason to fear one another because there is no reason to believe that they will engage in combat..<sup>27</sup> Instead, Mearsheimer adds two more assumptions; such as offensive military capability-, which he thinks, is implicit in Waltz- and states act rationally, which Waltz rejects. According to Mearsheimer, Governments have little choice but to dread one another in anarchic societies since states have access to offensive armed forces and may have cruel intentions. After all, there is always the chance that an assault by another state could occur.

According to Mearsheimer, each state works hard to dominate the international system in order to increase its influence. Waltz maintains that once a big power has a guaranteed capacity for devastation, it is secure and does not need to pursue superiority..<sup>28</sup>

According to Waltz, states engage in solemn business in international relations in order to increase their authority. Mearsheimer believes that the world does not

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<sup>23</sup> Jacobsen, 2013

<sup>24</sup> Humphreys, 2013

<sup>25</sup> Ibid

<sup>26</sup>

<sup>27</sup> Ibid

<sup>28</sup> Ibid

operate in this manner and that governments would rather possess nuclear superiority. Waltz and Mearsheimer differ significantly from one another in this regard. Waltz and Mearsheimer both believe that nuclear proliferation increases constancy when determining whether it increases or diminishes stability. The only significant difference between their stances is that Waltz believes it to be virtually impossible for two states to engage in nuclear war. Mearsheimer disagrees with that and says that there are many examples to prove his opposite argument.<sup>29</sup>

The peculiar thing about bipolarity, Waltz stated, that, on a global scale, at least two superpowers possess the means required to balance each other.<sup>30</sup> Mearsheimer contends that due to the nearly equal distribution of global power, neither of the two big powers in bipolarity can achieve global hegemony.<sup>31</sup> So the only way of balancing is to check the ambitions of the other great power.

Waltz and Mearsheimer differ from one another in a few important ways, demonstrating that one is an offensive Realist and the other is a defensive Realist. For instance, Waltz's miscalculation ultimately led to war. Mearsheimer contends that war can occasionally make good strategic sense, albeit he does not identify it as such for an extraordinary force. Thus, it is an essential tool of statecraft. Moreover, Mearsheimer agrees with Waltz on the significance of 'imitation' as a form of state actions, but Mearsheimer also accepts that 'innovation' is equally important.<sup>32</sup>

Mearsheimer goes after Waltz that bipolarity is more peaceful than multipolarity, but Mearsheimer differentiates balanced multipolarity and unbalanced multipolarity.<sup>33</sup> For Mearsheimer, if there is one mighty state in a multipolar system, there is a problem, but Waltz does not consider this.<sup>34</sup> Both Waltz and Mearsheimer count the number of poles, but only Mearsheimer considers how much power each pole has.<sup>35</sup>

When we contrast Waltz and Mearsheimer depending on whether the proliferation of nuclear weapons enhances or diminishes stability, we can see that both think that nuclear proliferation does increase stability. The sole point of difference between both viewpoints is Waltz's conviction that a nuclear-armed conflict between two states is practically unimaginable. Mearsheimer disagrees with this.

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<sup>29</sup> Ibid

<sup>30</sup> Jakobsen, 2013

<sup>31</sup> Toft, 2005

<sup>32</sup> International Relations Copyright © 2006 SAGE Publications

<sup>33</sup> Ibid

<sup>34</sup> Ibid

<sup>35</sup> Ibid

Waltz argues that two suppositions, anarchy and survival, are needed to create security competition, but Mearsheimer disagrees; he believes that uncertainty about intentions is also needed. Furthermore, Mearsheimer assumes states are rational actors, while Waltz does not.<sup>36</sup>

Waltz and Mearsheimer differ from one another in a few important ways, demonstrating that one is an offensive Realist and the other is a defensive Realist. For instance, Waltz's miscalculation ultimately led to war. Mearsheimer contends that war can occasionally make good strategic sense, albeit he does not identify it as such for an extraordinary force.<sup>37</sup> On the other hand, Waltz argues that there is no difference if the starting assumptions of a theory are correct or incorrect and say that what matters is if it can be tested to show if it is right or wrong. International relations are less of an issue here than epistemology.<sup>38</sup>

## CONCLUSION

Waltz is the best presenter of contemporary structural realism. He argues that the behavior of the states and the results of their interactions are replicated many times, although the nature of states changes. The units of an anarchic system are differentiated by their capabilities for the same goals, and the division of these capabilities shows the difference between structures. Academician Işıksal claims that Waltz ignores the role that international organizations, institutions, and governments have in influencing national security concerns.<sup>39</sup> Waltz constrains the capacity of international relations. Waltz failed to predict the role of the other actors. According to Waltz, countries with nuclear power co-exist peacefully because they know that the other can also cause terrible damage.<sup>40</sup> We see that Mearsheimer's work forms a significant addition to Waltz's structural realism. The fundamental theory of offensive realism developed by Mearsheimer clarifies the unanswered questions raised by defensive structural realism, including why the great powers have needed hegemony and why interstate warfare is so frequent.<sup>41</sup> Mearsheimer also contributes to the alliance theory and foreign policy theory. Waltz contributed essential issues on the merits of bipolar versus multipolar balances of power among the great powers. The dominance of the superpowers, in Waltz's opinion, is the best guarantee of peace and stability in international affairs. This was proposed at a time when many people thought that the nuclear arms race might cause a nuclear war to erupt in Europe. Kenneth

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<sup>36</sup>Ibid

<sup>37</sup>Ibid

<sup>38</sup>Ibid

<sup>39</sup>Işıksal, 2006

<sup>40</sup>Hollander, 2000

<sup>41</sup>Toft, 2005

Waltz reaffirmed the visibility of the state as the primary actor in international politics, in stark contrast to all those scholars who were arguing that international relations were undergoing a radical transformation as a result of growing interdependence in the global economy and the limitations of force in the nuclear age. Waltz claims that the interstate system is anarchic or self-help. He contends that this concept endures across time and drastically limits the extent to which a division of labor between nations can take place. After the Cold War ended, Waltz began to focus on the effects of what he perceived to be a change from bipolarity to unipolarity.

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