

INNOVATIVE RESEARCH IN SOCIAL, HUMAN AND ADMINISTRATIVE SCIENCES



Editors:

Assoc. Prof. Serap SARIBAŞ, Ph.D.
Assist Prof. Turgay AKKUŞ, Ph.D.



DUJAR

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Innovative Research in Social, Human and Administrative Sciences
Editörs: Assoc. Prof. Serap SARIBAŞ, Ph.D.,
Assist Prof. Turgay AKKUŞ, Ph.D.

Editor in chief: Berkan Balpetek

Cover and Page Design: Duvar Design

Printing : AUGUST-2023

Publisher Certificate No: 49837

ISBN: 978-625-6507-43-2

© Duvar Publishing

853 Sokak No:13 P.10 Kemeraltı-Konak/Izmir/ Turkey

Phone: 0 232 484 88 68

www.duvarayinlari.com

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Chapter 1

The Intersection of Ethics and Biometric Data in Eye-Tracking Systems

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ABSTRACT

In this thought-provoking chapter, we delve into the ethical dimensions surrounding the utilization of eye-tracking technology. as our world becomes increasingly driven by technological advancements, eye-tracking has emerged as a powerful tool for understanding cognitive processes, knowledge synthesis, and behavioral patterns. however, the profound implications of this technology raise significant ethical concerns that demand careful examination. our exploration begins by examining the intricate relationship between biometric information and cognitive identity formation. we question the ethical correctness of capturing an individual's cognitive state without their explicit consent, considering scenarios such as using eye-tracking webcams to analyze reactions to street billboards. furthermore, we contemplate the potential consequences of this technology, including its potential for identifying criminals, monitoring health conditions, and exacerbating societal disadvantages. recognizing that eye-tracking data can be processed by artificial intelligence and decision support systems, we emphasize the urgent need for a comprehensive understanding of the legal dimensions surrounding digital data. to ensure responsible usage, we argue for robust discussions that encompass both ethics and informatics law, ultimately establishing a solid infrastructure that safeguards individual rights and promotes societal well-being. this chapter serves as a critical exploration of the ethical dilemmas inherent in eye-tracking technology. by shedding light on the complexities and potential implications, we aim to foster a deeper understanding of the ethical considerations that must be taken into account when navigating the evolving landscape of cognitive research and biometric data analysis. through these discussions, we can work towards ensuring the responsible and ethical implementation of eye-tracking technology in our society.

Keywords: Eye-tracking technology, Ethical dilemmas, Cognitive research, Biometric data analysis

1. Introduction

According to the Turkish Language Association (2020), stimuli such as images, objects, and events that are perceived in consciousness, but not originating from the external sensory world, are classified as dreams and images. Over millennia, humans have employed visual media, including sculptures, paintings, and symbols, as means of communication among themselves and with other entities, as well as for religious rituals. Gür (2013) postulates that an image is a conscious act aimed at distinguishing the individual from the generic and unique, covering the entire domain but particularly concentrating on disassociating from the common sphere and exposing its unique aspects (p. 34). In response to the question of what constitutes an image, Mitchell (1986) suggests that it involves similarity, akin to a simulation or resemblance.

Ryan (2001) posits that an image's interpretation can vary greatly, contingent upon numerous factors. Given its potential to be a narrative in terms of meaningful relationships, an image allows for the perception of objects as a narrative that uncovers their *raison d'être*, rather than an attempt to categorize or elucidate them. This narrative yields a multilayered and polysemic reading that expands in a cyclical pattern, moving from comprehension to explication, and vice versa. Keser (2005) argues that an image is not a precise replication of reality but rather a mentally reconfigured version of it, thus it embodies something novel. Işıldak (2008) further elucidates this point by stating that an image is a subjective portrayal of the objective world (p. 65).

Şiray (2019) notes that research on images from Ancient Greece to the present day has prompted a range of inquiries regarding the origin, essence, and existence of images, as well as the philosophical responses to these questions (p. 550). Furthermore, we currently analyze images within a broad framework, employing perspectives that consider images as living entities and theoretical approaches asserting, they are distinct models from which our cognitive abilities derive. Berger (2010, originally published 1999) suggests that the act of perceiving and observing is not the function of the eye or the brain, but rather the experience of visual perception itself. The act of seeing is an attempt to ascribe form, order, and meaning to visual perceptual experiences, leading to the process of mental interpretation. Thus, abstract images are perceived in the mental process, and the perceived images are consciously interpreted and assigned meaning.

The process of seeing extends beyond the biological and physical realm, specifically, the interaction of light waves with the retina. It is more accurately a cognitive and intellectual process. Once we engage in thought, the intricacy of seeing increases exponentially as language becomes part of the equation. Gom-

brich (1961) asserts that the primary instrument for seeing and observing is the mind. He draws parallels with ancient philosophy, likening the role of the eyes to a vessel that receives and carries the visual components of consciousness (p. 414). Information gathered from the external world through our eyes, our primary sensory organ, is selected by our consciousness via our cognitive abilities and intuition, resulting in image formation in our brains. According to Işıldak (2008), images are remnants of the sensations we experience when the stimulating objects and events impacting our sensory organs disappear (p. 65).

Korkmaz (2021) notes that common sayings such as "Eyes do not lie" and "Eyes are the mirror of the heart" suggest an ongoing belief that an individual's cognitive processes are mirrored in their eyes (p. 16). Eyes, serving as the mind's window to the external world, have been critical in determining the validity of information within this context. Eyes are among the most significant mediums through which individuals interact with each other and the world around them. On entering a new setting, we typically survey our surroundings for visual data using our eyes. Furthermore, phrases like "You shut up, let your eyes talk" underline the extensive use of eye-gaze as a form of nonverbal communication. Sometimes, it's believed that our eyes express more of our emotions than words ever could. Therefore, tracking eye movements and predicting eye-gaze could considerably enhance our daily lives, particularly in terms of information acquisition and management.

Gülseçen (2014) postulates that knowledge has served as a guide for human decision-making and behavior throughout history (p. 63). In the current information society, there is an observable trend of knowledge proliferating as it is shared. Knowledge Management (KM), encompassing information - arguably the most intricate and abstract concept to manage - has been a subject of study for many years. Broadly, knowledge encompasses facts, truths, and principles that the human mind can comprehend. When attempting a more specific definition, it is beneficial to consider knowledge in terms of temporal and spatial aspects, as well as its economic and philosophical dimensions. Yenal (2009) adds that knowledge, regardless of one's social identity, consistently yields the same outcome when replicated under identical conditions. Moreover, education, being the foundation of new knowledge and skills, facilitates the development of these competencies.

Baláž, Williams, Moravčíková, and Chrančoková (2021) discovered in their extensive literature review on tacit knowledge that the majority of the studies primarily emphasized knowledge management and the sharing of knowledge within and among organizations (p. 1758). Tacit knowledge is developed and conveyed through formal education, informal learning, observation, and routine

practice. Polanyi (1966) expressed concern over the paradoxical reality that a substantial portion of human knowledge is "tacit," and although it cannot be transferred through explicit instructions, humans are intent on acquiring and codifying "explicit" knowledge. Hoksbergen, Chan, Peko, and Sundaram (2021) suggest that knowledge management is often perceived as the interplay among individuals, processes, and technology (p. 2). Tacit knowledge sharing is predominantly facilitated through social interaction among individuals. In the current era, with the evolution of digital communication tools, these interaction processes are conducted via social media.

Arnett, Wittmann, and Hansen (2021) propose that in a market characterized by persistent changes and escalating customer demands, information serves as a crucial resource that can sustain a superior market position for organizations (p. 259). Companies excelling in learning and disseminating information about their customers and competitors generally outperform their rivals. This is primarily because information is a complex, high-level resource that is not easily replicable. The value of technology is directly tied to the quality of information it encompasses, and it is important to note that not all information holds equal significance.

Osburg and Lohrmann (2017) posit that in the context of contemporary information technologies, as digital development persists, it will continue to pervade all life aspects and create new structures in our social and economic lives. In the digitally created society, individuals will confront and overcome novel challenges. Currently, information, being the most vital input source for creating competitive advantage, loses this edge in a data context because open information from anywhere in the world is accessible without time or location limitations. Using tacit knowledge as a new data input for knowledge management will offer significant advantages for organizations. In this regard, the importance of acquiring tacit knowledge as neurological data is heightened. With the advancement of human-computer interaction technologies, it is now possible to gather neurological data from eye movements without directly interacting with individuals.

2. Eye tracking as human-computer interaction

Carroll (2003) characterized Human-Computer Interaction (HCI) as a multi-disciplinary field of study that endeavors to explain the interaction between humans and computers during the usage of a computer system and the reasons underlying this interaction (p. 1). Conversely, Samara, Galway, Bond, and Wang (2019) noted that a variety of input methods can be employed to gather information about the user in computer systems (p. 2175). Such input methods

can initially include auditory and visual-based inputs like eye-tracking, facial expressions, body movement detection, speech, and auditory analysis. Additionally, physiological input systems utilizing sensor-based signals such as electroencephalography (EEG), galvanic skin response, and electrocardiogram can be employed. Korkmaz (2020) further noted that EEG, which measures brain electrical activity, and eye-tracking systems are the most commonly used experimental methods in HCI cognitive processes (p. 290).

According to Wolf and Ueda (2021), the field of vision science extensively explores the quality of environments observed under an array of experimental conditions (p. 1). It also provides insights into how humans interpret visual stimuli and leverage this gathered information to develop effective strategies aimed at achieving certain goals. The authors highlight a rapid progression in the research concerning the capture of cognitive states and decision-making processes, facilitated by the use of eye-tracking technology.

In order to comprehend how individuals perceive what they observe, it's crucial to gather quantitative neurological data from them. Rayner (1998) suggested that by analyzing data such as fixation count, average fixation duration, and the total number of fixations via the eye-tracking method, cognitive processes can be measured in real-time. Further, Russell (2005) indicated that the data garnered from eye movements provide insights into areas of focus, information overlooked, and points of discomfort (p. 1). Just and Carpenter (1976) posited that the fixation point of the eyes indicates the data being processed in cognitive functions (p. 442). Eye-tracking, which involves tracing eye movements or gaze directions while observing a scene or environment, has been found to be useful in studying human behavior in everyday activities. Shepard (1967) noted that the capacity for visual information memory significantly surpasses that for verbal information. Eye movements consist of two basic actions: fixations and saccades. A fixation is when the eye pauses at a point for a duration between 50 ms and 600 ms, while a saccade, lasting between 20-40 ms, is the transition period between fixations. Fixations represent situations where the individual engages in cognitive processing about the focal point, depending on the research subject. Saccades, on the other hand, denote instances where search operations are conducted based on the field of view. The advancements in eye-tracking technology in terms of precision, capacity, and affordability have heightened its popularity among researchers in various fields such as cognitive psychology, medical diagnostics, marketing, and human-computer interaction.

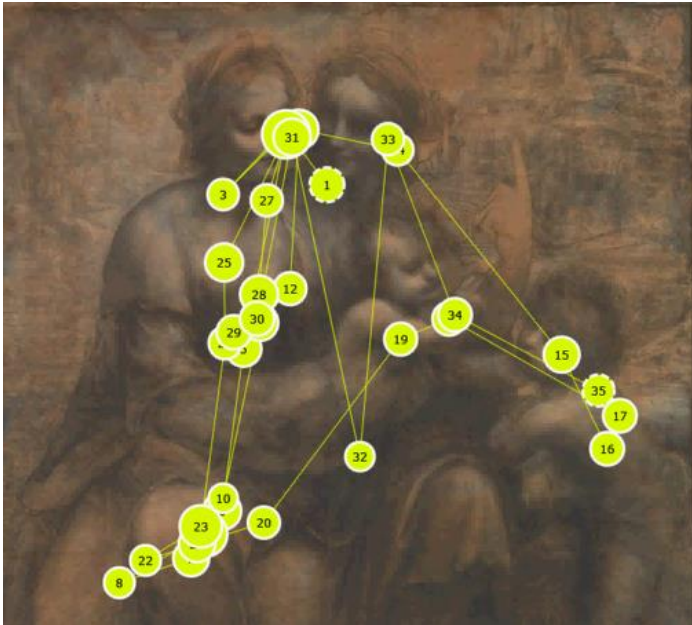


Figure 1: Fixation and saccade movement of the eye (Korkmaz, 2021)

2. Studies on eye-tracking and knowledge management

Sloman (1996) proposes a solution to information overload by presenting information in ways that invoke automatic processes such as visual recognition and usage of the associative system where meaning is embedded via gestalt. Eick and Wills (1995) suggest that interactive visualization tools could better align task and decision environment by enabling decision-makers to restructure the information environment, which could either enhance decision quality or reduce the required effort (p. 445). However, Lurie and Mason (2007) argue that visual perspective can alter the decision-maker's capacity to manipulate information and perceive both details and overarching information (p. 160). While this influences the overall relationship between visual information and the decision-maker, the context of the information dictates the information the decision-maker engages with.

Özdenören (2011) questions the completeness of an image, suggesting that regardless of how comprehensive or detailed an article might be, it may still be deficient (in terms of image or sound) (p. 56). He proposes that each text potentially transforms into an image of its own and that an image only reveals itself to interpretation to the extent of the cultural background of the individual engaging with the image. He further suggests that the information we experience or learn only becomes apparent in our minds as a result of interaction. Despite the fact that a significant portion of daily flow is digitized through social media

tools, the information that is transferred is only as much as an individual can convey, not necessarily what they know. As a result, only a small fraction of the emerging information is transferred to open information sources. However, the significance of the tacit knowledge that the individual cannot express verbally or in writing is emphasized as being of much greater importance.

Visualization, as a means of expressing thoughts, has been present since the dawn of humanity. Given the socio-economic impact of visualization, it is no surprise that we encounter advertisements and news frequently. In this context, Danciu (2014) posits that both the informative and persuasive functions of advertising rely on factual and emotional appeals (p. 21). Informational advertising delivers authentic information to consumers, while emotional advertising engages in an emotional play intended to positively sway consumer decisions. Research conducted by Peterson and Spratt (2005) has discovered that exposure to news images can modify problem perception, hinder the recall of factual information, interact with pre-existing values, and incite mood changes, which can, in turn, alter emotions and even individual perceptions (p. 6).

The Organization for Economic Co-operation and Development (OECD) (2022) describes the 21st century as an era marked by knowledge creation and innovation, where the generation, dispersion, and application of new knowledge is crucial to national advancement. Tan et al. (2021) further highlight that an accompanying development in this century is the swift progression of digital technologies, which have had a significant impact on our daily lives (p. 2244). They cite advancements such as social networking software, communication and information retrieval technologies, high-speed wireless networks, mobile personal devices, and cloud computing as key examples. The accelerated growth of technology and the ubiquity of smartphones have fueled a desire for access to tacit knowledge. With the rapid advancement of technology and the increasing importance of accompanying data, eye-tracking technology, in use since the 1900s, began to find commercial applications in the 2000s. By the 2020s, eye-tracking methodology could be implemented even with mobile phone cameras, eliminating the need for a laboratory environment (Korkmaz, 2021, p. 5). Today, this technology is utilized in a wide range of fields, including education, health, design, marketing, industry, art, and cognitive science.

Torabi and Teeravarunyou (2021) highlight that numerous camera industries are beginning to incorporate artificial intelligence into their products to assist novice users in capturing images with expert-like skill (p. 751). They note that one of the primary distinctions between novices and experts lies in the knowledge and proficiency of image composition. In accordance with these recent advancements in sensing and information processing technologies, Li,

Chowdhury, Fawaz, and Kim (2021) further indicate that the popularity of eye-tracking systems has seen a resurgence (p. 1793).

Eye-tracking technology is now utilized in a wide array of interactive systems, ranging from mobile phones to high-end mixed reality headsets. Hollenstein, Chersoni, Jacobs, Oseki, Prévot, and Santus (2021) assert that the eye-tracking technique enables the collection of millisecond-precise data regarding the focal point of individuals' gaze, shedding light on their attentional focus during reading and comprehension processes. Moreover, Li, Chowdhury, Fawaz, and Kim (2021) highlight that eye gaze data serves as a valuable source of sensitive information, unveiling an individual's physiological and psychological characteristics (p. 1793). The advancements in eye-tracking technologies not only provide users with valuable insights into their viewpoint but also offer immediate feedback on cognitive load experienced by participants utilizing these systems.

Eye-tracking technology is actively employed in the healthcare field to bring participants' expertise to lower levels. This application is utilized to assess participants' knowledge levels and their awareness of such knowledge (Korkmaz, 2021, p. 3). In a study by Jarodzka, Balslev, Holmqvist, Nyström, Scheiter, Gerjets, and Eika (2012), a novel teaching method called eye movement modeling examples (EMME) was implemented to educate students on the acquisition of skills related to symptom exploration and interpretation. EMME involved demonstrating how expert models visually investigate and interpret symptoms (Jarodzka et al., 2012).

Lindner, Eitel, Thoma, Dalehefte, Ihme, and Köller (2014) investigated students' decision-making processes during a multiple-choice knowledge assessment test by employing eye-tracking methodology. The study unveiled that students with varying levels of prior knowledge were capable of answering the items in the 21 multiple-choice tests, but those with high prior knowledge allocated more time to correct answers. In a different study, Dzeng, Lin, and Fang (2016) developed a digital job site featuring four workplaces with both obvious and non-obvious hazards, and they conducted a hazard identification experiment utilizing eye-tracking techniques with experienced and novice workers. The findings indicated that experience significantly enabled experienced workers to identify both obvious and non-obvious hazards at a notably faster rate than their novice counterparts.

Wolff, Jarodzka, van den Bogert, and Boshuizen (2016) conducted a study utilizing eye-tracking technology to explore the disparities between expert and novice teachers in perceiving problematic classroom scenes (p. 243). The findings revealed that expert teachers tended to direct their attention towards rele-

vant knowledge areas, whereas novice teachers exhibited greater interest in the overall classroom environment. The perception of experts appeared to be more focused on acquiring information, whereas novices demonstrated a stronger inclination towards visual aspects. In another investigation by Warren, Donnon, Wagg, Priest, and Fernandez (2018), the visual evaluation processes of novice and expert veterinary pathologists examining cytology samples were examined, encompassing both quantitative and qualitative analyses. Experts demonstrated a quicker diagnosis time, employed more effective eye movement patterns, and displayed a preference for viewing areas of interest, thereby indicating their higher proficiency in confirming their diagnoses.

Dong, Zhang, Liu, and Meng (2018) employed eye-tracking technology to examine the variations in spatial abilities between geographers and non-geographers. Their study findings indicated that geographers, in comparison to non-geographers, exhibited shorter map reading times, higher accuracy rates, a greater focus on key information points as evidenced by fixations, lower perspectives, and faster inference speeds when processing key points. This investigation shed light on the distinctive spatial cognitive capabilities of individuals with a background in geography.

Chen, Burke, Hui, and Leykin (2021) conducted eye-tracking studies to analyze consumers' field of view during the scanning process in-store, particularly focusing on the shelf products situated on the right and left sides of the aisle (p. 1120). The findings revealed that participants directed greater attention towards the shelf products on the right side while walking down the aisle. Additionally, it was observed that the highest level of purchase intent occurred at an approximate vertical distance of 14.7 inches, located at chest level rather than eye level.

Using eye-tracking techniques, Wang, Xu, Cui, Wang, and Ouyang (2017) explored women's inclination to purchase products advertised with either a genuine smile (Duchenne smile) or a fake smile (non-Duchenne smile) pose (p. 609). The study findings indicated that participants showed a stronger preference for purchasing products associated with the Duchenne smile.

Zacharia and Hamelin (2021) conducted a study to investigate the analysis of subliminal static images and words utilizing eye-tracking techniques. The research involved the use of static subliminal stimuli in the form of pictures and words, which were embedded within seven distinct perfume packages. The objective was to examine the observed differences between two groups exposed to subliminal stimuli. Findings from the study revealed that participants, particularly male participants, demonstrated a heightened focus on the subliminal stimuli within the group that received the subliminal stimuli.

Cummins, Gong, and Reichert (2021) conducted an eye-tracking study aiming to investigate the impact of visual sexual appeal on distraction in advertisements (p. 723). The study involved presenting participants with advertisements featuring visual sex appeal, no sex appeal, and no models (i.e., product-only). The findings indicated that while sexual attraction did not necessarily enhance interest in the advertisement itself, both men and women exhibited greater attraction towards the model featured in advertisements with sexual appeal. Furthermore, it was observed that advertisements incorporating sexual appeal tended to elicit lower visual interest in the accompanying text of the advertisement.

3. Digital ethical issues in knowledge management

Rachels and Rachels (2019) provide a general definition of ethics as the study of what is right and wrong, encompassing moral considerations, reasons behind ethical judgments, and individuals' connection to ethical principles. Ethics becomes particularly relevant when examining the extent to which the violation of personal freedom can be justified. Thornley, Saabeel, McLoughlin, and Murnane have explored the interrelationship between ethics and knowledge management, posing the following questions:

„Knowledge Management (KM) concerns knowledge, but what kind of knowledge is ethics? This is not only a question for individuals but also plays out in the workplace and wider society. How can we know what is ‘good’ and how can we get better at doing it? The concept of professional ethics is familiar within our understanding of established professions, such as medicine or law. our understanding of established professions such as medicine or law. (2020: 1, preprint page)”

The statement highlights the significance of ethics in longstanding professions and relationships. However, the continuous emergence of new technologies introduces novel directions and professions into our daily lives. It becomes imperative to ethically assess decision-making scenarios within this realm at a pace that matches the rapid development of technology.

Diebel-Fischer (2018) emphasizes that various institutions, including universities, colleges, for-profit and not-for-profit research organizations, and companies, serve as workplaces where individuals engage in scientific, engineering, and humanities research. Each of these fields not only differs in their research subjects but also in the potential applications and impact of the knowledge they acquire. Nevertheless, every research outcome, regardless of the field, can have unforeseen and minor effects. Hence, it is crucial to evaluate the possible outcomes of research as early as possible. Ganascia (2021) further underscores the importance of rigor in science, asserting that research failing to meet the re-

quired criteria will lead to erroneous results, misleading decision-makers and obscuring the extent and nature of the risks involved.

The advancement of technology not only shapes human needs but also creates diverse interaction environments for individuals. To ensure healthy development and interaction, it is crucial for ethical norms in society to keep pace with technological progress. This entails understanding the ethical needs of individuals in the digital society. Ribble, Bailey, and Ross (2004) have identified nine key domains of behavior that constitute digital citizenship. These include etiquette, communication, education, access, commerce, responsibility, rights, safety, and security. According to Ribble, Bailey, and Ross (2004), digital citizenship encompasses different levels of responsibility related to technology, with certain issues being more relevant to technology leaders, while others are more pertinent to educators (p. 7). By addressing these various dimensions, digital citizenship promotes responsible and ethical engagement with technology within society.

Güler (2021) highlights that the concept of digital ethics, which focuses on identifying the behavioral dynamics of human-machine interaction in the digital world, is discussed using various terms such as cyberethics, internet ethics, informatics ethics, and robot ethics (p. 517). Özcan (2021) emphasizes the importance of the symbiotic relationship between digital development and ethics, stating that technology devoid of ethical principles can become uncontrollable and pose a threat to humanity (p. 91). Furthermore, Şeşen (2021) underscores that alongside malicious and intentional misuse of digital technologies, irresponsible, meaningless, and unethical use can also have adverse consequences at the individual and societal levels (p. 24). This highlights the need for ethical considerations to guide digital advancements and ensure responsible engagement with technology.

Floridi (2021) presents the concept of digital ethics as a comprehensive field of study that examines and evaluates moral issues arising from various aspects of digital technologies, including data management (such as production, recording, processing, dissemination, and use), algorithms (including AI, artificial agents, machine learning, and robots), and related practices (such as innovation, programming, and hacking). The goal is to formulate and endorse morally sound solutions, encompassing right behaviors, values, and policies (p. 12). Rogerson (2021) emphasizes that digital technology is shaped by human beings who have the power to bring about change and utilize technology for both positive and negative purposes (p. 1). Jain (2022) highlights that the rapid transformation brought about by digital technology is fundamentally altering our lifestyles and presents ethical challenges for global organizations and regulators.

Consequently, the imperative of practicing digital ethics becomes paramount in ensuring responsible and ethical conduct in the digital realm.

Luke (2018) highlights that the challenges related to the implementation of digital ethics are not merely about technological skills or competencies but revolve around issues of participation and ethics from an educational perspective (p. 185). Similarly, Capurro (2001) asserts that information should be acknowledged as a valuable product accessible to all, emphasizing the need for equal and unrestricted access while also considering its economic value that requires protection (p. 4). This prompts the question of determining which information should be made freely accessible to whom. Moreover, intellectual capital, whether expressed through various forms of artificial media or embedded within individuals' minds, plays a vital role in driving economic and social development.

Pastor-Escuredo (2020) emphasizes that with the advancement of technology, artificial intelligence (AI) and data play a central role in the new industrial revolution of the information age (p. 1). However, it is crucial to go beyond the socio-economic dimensions of this revolution. The significance of ethics becomes increasingly apparent as machine behavior and decision-making styles have an impact on human decisions and behaviors. Kirchschräger (2020) argues that in a globalized world where technology encompasses the entire planet and affects all individuals, it is essential to establish ethical reference points that are universal and independent of specific traditions, cultures, religions, worldviews, and philosophies. The relationship between ethics and technology is reciprocal, as both influence and shape each other. Therefore, it is necessary to establish a set of fixed rules to ensure the sustainability of technology.

Savin-Baden, Burden, and Taylor (2017) conceptualized the human-computer/machine system as a "Digital Immortal," perceiving it as a living entity (p. 18). Within this system, there exists a central core that governs various cognitive processes such as memory, reasoning, motivation, planning, and potentially even emotion. By accessing implicit information from open information sources such as the internet, social media, and digital libraries, as well as utilizing face recognition to gauge individuals' emotional states, the system enables two-way communication with people. However, it is crucial to establish clear boundaries regarding the content of human-machine interaction and to determine which data can be processed within which frameworks and to what extent.

The advancement of technology has resulted in a shift of decision-making from humans to machines. Machines now generate responses based on algorithms specifically designed for them. As artificial intelligence (AI) has

evolved, rule-based algorithms have been replaced by AI-based algorithms. These algorithms often rely on previous datasets to generate answers. However, this reliance can introduce biases into the results. Biased outcomes can arise, particularly when biometric data of individuals is used in producing results, and when machines employ these results in decision-making processes. Such biases can give rise to significant problems that need to be addressed.

Biometric technology is widely utilized by various organizations to identify individuals based on their physiological and behavioral characteristics. Andrea North-Samardzic (2020) highlights the diverse range of biometric characteristics that can be utilized, including fingerprints, palm prints, hand vein patterns, finger joint prints, face, ear shape, tongue print, iris, retina, voice, keystroke dynamics, gait, and signature (p. 434). Notably, commercial and civilian applications such as Facebook and iPhone have recently incorporated biometric technology for identity management. Marcus Smith and Seumas Miller (2022) discuss the current use of AI-assisted biometric facial recognition systems by law enforcement agencies to identify suspects through photographs and closed-circuit vision systems (p. 167). The adoption of biometric systems has expanded in various domains due to their advantages in terms of faster usability, verification processes, and data security.

With the outbreak of the Covid-19 epidemic, discussions surrounding the acquisition and utilization of biometric data have gained prominence. Alex Dubov and Steven Shoptawb (2020) point out that countries like Israel, Taiwan, and Singapore have implemented geolocation and mobile tracking to monitor contacts and prevent the spread of the virus, while private organizations in countries such as the USA and UK have begun developing similar applications (p. W8). The World Health Organization (WHO) is also considering the implementation of a comparable application on a global scale. Federica Angeli, Silvia Camporesi, and Giorgia Dal Fabbro (2021) emphasize the importance of determining the socio-cultural acceptability of public health policies aimed at protecting the collective well-being while restricting individual freedoms (p. 4). Additionally, public health measures designed to control the epidemic must consider the potential disproportionate impact on specific population groups. On the other hand, the processing and use of non-anonymized data for situations that benefit society can raise concerns about data security when it comes to matters of public interest. To effectively obtain numerical data through evolving technologies, it is crucial to establish appropriate levels of data collection and permissions in both public and private domains.

Personal biometric data is classified into two main components: physiological and behavioral. Physiological data encompasses biological characteristics

that are unique to an individual, including fingerprints, facial features, iris patterns, and palm prints. On the other hand, behavioral data consists of individual behavioral patterns, such as handwriting, signature, keystrokes, gait, eye movements, and voice/speech patterns. Literature reviews indicate that the pursuit of biometric data has gained momentum with the advancement of information technologies as an alternative to traditional open data sources.

In a study conducted by Subash and Song (2021), a real-time behavioral biometric information security (RBBIS) system was developed using deep learning techniques to facilitate authentication in the online education system. The researchers analyzed the keystroke biometric data of the participants utilizing machine learning algorithms. Through the implementation of the convolutional neural network (CNN) algorithm, the individuals were accurately identified with a success rate of 92.45%.

In a biometric study conducted by Chirra, Uyyala, and Kolli (2019), the detection of drowsiness and sleepiness based on drivers' eye states was examined using a deep convolutional neural network (CNN). The study aimed to identify instances when the driver's eyes exhibited signs of sleepiness or drowsiness and alert the driver through an alarm system. The researchers utilized the Viola-Jones algorithm for face and eye area detection, achieving an accuracy rate of 96.42%. The study successfully determined the sleep states of the drivers based on their eye states.

In the biometric study conducted by Safalı and Avaroğlu (2021), deep learning techniques were employed for face recognition and emotion analysis. The study utilized a dataset consisting of 360,000 images from the CelebA, FFHQ, LFW, and YouTube Faces datasets. Image analysis was performed using architectural algorithms such as VGG-16, AlexNet, and ZF Net. Among the developed models for facial recognition and facial expression recognition, the VGG-16 model achieved the highest success rate, reaching 92.03%. These results demonstrate that the emotional state of an individual can be inferred based on their facial expressions.

In the study conducted by Tumpa and Gavrilova (2022), social behavioral biometric (SBB) analysis was employed to identify individuals based on their Twitter activities. The research focused on users' tweets and interactions on Twitter, including various behavioral features such as tweeting behavior, user-to-user communication through retweets, replies, mentions, shared URLs, and hashtags, as well as timestamps. The SBB analysis successfully achieved accurate identification, with a remarkable success rate of 99.25%. The findings suggest that the Social Behavioral Biometric system has potential applications in various domains, including cyber security, identity concealment, psychological

feature detection, continuous authentication, identity theft detection, author profiling, anomaly detection, and forensic applications.

Gornale, Kumar, Patil, and Hiremath (2021) conducted a behavioral biometric analysis study to determine users' gender based on handwritten signatures, which are still widely used. The study focused on the analysis of textural and statistical features extracted from signature images. A total of 4790 signatures, with 10 signatures per person from 479 individuals, were analyzed using machine learning algorithms. The results revealed high accuracy rates, with 96.17% accuracy for k-NN, 98.72% for Decision Tree, and 100% accuracy for Support Vector Machine. These findings highlight the effectiveness of utilizing signature analysis as a biometric method for gender identification.

Gholami, Taghvaei, Norouzian-Maleki, and Mansouri Sepehr (2021) conducted an eye-tracking study aimed at evaluating urban parks as settings for the human-nature relationship, specifically focusing on landscape aspects. The study utilized eye-tracking glasses to analyze the visual perceptions of participants during their visits to city parks. The findings revealed that man-made factors emerged as the most influential elements, accounting for 59.12% of the total fixation time. Interestingly, participants demonstrated a greater interest in man-made factors compared to natural elements, as well as human activities and behaviors during their nature experiences in city parks. These results shed light on the significance of man-made features in shaping individuals' visual attention and engagement within urban park environments.

Wang, Zhao, and Zhang (2021) conducted a study focused on deep learning-based behavioral biometric verification using users' eye movements during text-to-reading processes. The analysis aimed to detect individuals through a deep learning algorithm that incorporated text, fixation, and text-based linguistic features. The developed deep learning model achieved a correct identification rate of 86.5%. This research highlights the potential of leveraging eye movement patterns as a behavioral biometric modality for user verification during text reading tasks.

4. Conclusion

Currently, several companies, including GazeRecorder (2021), RealEye (2021), and Tobii (2021), provide the capability to conduct eye-tracking studies using standard webcams and mobile phone cameras, eliminating the requirement for specialized laboratory eye-tracking devices. These companies offer both paid and free software solutions that enable the processing of eye-tracking data from users who interact with various mobile applications or web pages.

This technological advancement has made eye-tracking methodology more accessible and feasible for a broader range of research and application domains.

While individuals have control over the sharing of information in open information sources, the same cannot be said for implicit information sharing, which is not always within their control. The emergence of social media platforms and the advent of Web 2.0 have transformed implicit information sharing into explicit information, subject to the permissions set by individuals based on their social interaction needs. However, the widespread utilization of artificial intelligence and human-computer interaction systems, coupled with their ability to acquire tacit knowledge without direct human interaction, raises ethical concerns regarding digital information. Existing facial recognition systems are limited to providing insights into an individual's current emotional state, such as happiness, anger, or worry. They are unable to unveil an individual's intellectual knowledge on a particular subject. However, the advent of eye-tracking systems has enabled the assessment of an individual's formal knowledge and expertise in specific domains.

With the widespread use of smartphones and the pervasive nature of social media applications, companies indirectly gain access to smartphone devices through these applications. This access allows the applications to analyze conversations and interactions within the digital environment, enabling them to present personalized advertisements based on the user's interests. It is important to note that these processes occur with the users' consent, albeit indirectly, as they agree to the terms and conditions of the applications. Furthermore, the advancement of artificial intelligence has led to the proliferation of autonomous systems. This development has sparked discussions surrounding the decision-making mechanisms of machines, their consequences, and the determination of responsibilities in such contexts.

The intergovernmental Artificial Intelligence Recommendation on AI was officially adopted by 44 countries at the Ministerial level during the meeting of the OECD Council on May 22, 2019, based on the recommendation put forth by the Digital Economy Policy Committee (CDEP). The primary objective of this recommendation is to foster innovation and instill trust in artificial intelligence (AI) technologies. It does so by promoting responsible management and deployment of trusted AI systems, while simultaneously ensuring the protection of human rights and upholding democratic values (OECD, 2022). As autonomous systems continue to proliferate, several countries, including the United States, European Union, England, Japan, and China, have started developing their own national strategies and frameworks to govern the development and implementation of artificial intelligence.

With the continuous advancement of technology, eye-tracking technology has emerged as a valuable tool in understanding various cognitive processes, such as those related to expertise, experience, education, measurement, and evaluation. It allows researchers to gather valuable insights into the cognitive mechanisms underlying individuals' behavior and decision-making. However, the acquisition of implicit knowledge without the explicit consent of the individual poses a significant ethical challenge. There is a pressing need to establish a comprehensive roadmap and framework that clearly delineates the purposes and permissible uses of the data obtained through eye-tracking technology. Such guidelines are crucial to ensure that individuals' privacy and autonomy are respected, and that the data collected is employed ethically and responsibly, without infringing upon their rights or interests. The establishment of ethical standards and regulatory measures will contribute to safeguarding individuals' well-being and ensuring the proper and beneficial use of eye-tracking data.

In our perceptual world, knowledge is synthesized within our minds by integrating the information we encounter and previously experienced. This cognitive identity structure contains biometric information unique to each individual. However, ethical considerations arise when considering the capturing of cognitive states through eye-tracking webcams while observing billboards or other visual stimuli in public spaces. Questions regarding the appropriateness of collecting such data and the potential implications of identifying criminal, ill, or vulnerable individuals must be addressed. The use of eye-tracking systems, combined with artificial intelligence and decision support systems, raises legal concerns regarding the handling and processing of digital data. It is crucial to engage in discussions that encompass both ethical and legal perspectives to address the implications of emerging eye-tracking technology. The establishment of an appropriate framework and infrastructure is necessary to ensure the ethical use and legal compliance of the data collected through eye-tracking systems.

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Chapter 2

Work-Family Balance in the Changing Social-Demographic-Technological Conditions of the 21st Century

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ABSTRACT

Work and family (or, more generally, private life outside of work) are two key areas in people's lives and prioritizing one can make it difficult to meet the demands of the other. This is understandable, as people's resources (time, energy, etc.) are limited. Work-family balance is expressed as a concept that integrates different living areas by successfully fulfilling the requirements of every area of life without neglecting the needs of different areas of life.

Flexible working is used as a general definition expressing practices that allow employees to decide where and when to work. Of course, flexible working practices do not mean that employees deviate from getting the job done efficiently. Employees see flexible working practices as an advantage that enables them to manage their work and personal responsibilities, thus making it easier for them to establish a work-family balance. Maintaining a healthy work-life balance is not only important for the private lives of employees, but also positively contributes to business goals as it positively impacts their productivity and ultimately their performance.

In the 21st century, everything started to change very quickly; demographic change (decreasing household size and aging population), technological advances, and finally the pandemic. Working from home has become the new normal for many employees, especially after the pandemic, and it has become increasingly difficult to separate work and private life. Checking e-mail constantly, having business meetings at the dinner table, and working on our laptops on the weekends has become commonplace. In this new era, instead of defining work-life balance as the balance between personal and professional pursuits, a kind of work-life integration approach, which accepts that the two are inextricably intertwined and tries to make the relationship between the two, has begun to be accepted. In this study, besides a general evaluation of the issue of work-family balance, new approaches that emerged as a result of the developments in the social, demographic and technological environment, will be mentioned.

Keywords: Work-family balance, work-life balance, work-family conflict, flexible working

INTRODUCTION

The idea of work-life balance emerged largely during the spread of the eight-hour workday in the early 20th century (Library of Congress, <https://www.loc.gov>). Work-life balance was often defined as the ability to compartmentalize work tasks and life, as workers earned the right to the eight-hour day through organizing and striking. Since work and life are interconnected, commitment to work and family roles is often in conflict because investing in one can hinder one's ability to fulfill the demands of the other (Hochschild, 1997 as cited in Lupu et al., 2018: 157). Today, this balance is expressed as a concept that successfully fulfills the requirements of all areas of life and integrates different areas of life without neglecting the needs of each (Thilagavathy and Panboli, 2017:944). Employees complain that the distinction between work and non-work hours is gradually disappearing, and this situation causes conflicts and stress in their personal lives (Robbins and Judge, 2017: 20). Employees experience stress at home, even on vacation, by thinking about their jobs and cannot maintain work-life balance. Since people's resources (such as time and energy) are limited, allocating more resources to work-related issues reduces the amount of resources that can be allocated to private life and disrupts the balance. Economic, social, technological, and global changes have a great impact on work-family problems. In order to balance these two areas of life, lower levels of work-family conflict and higher levels of work-family facilitation are recommended.

Before the industrial revolution, families were producing for themselves, but with industrialization, business life in factories and family life at home began to separate significantly. As a requirement of traditional gender roles, while men worked in factories, women were responsible for housework. While there was no difference between work and family life in the past, this situation has changed after the industrial revolution, and although work and family have been separated from each other in time and place, they have continued their existence as two important social subsystems with strong structural relations and strong interaction. The fact that women are increasingly taking part in business life has added new dimensions to the problem, and it has been observed that women entering business life have more difficulty in establishing a work-life balance than men due to their role at home (Korkmaz and Erdogan, 2014: 544). Another important point is that while individuals were working to live at the beginning of social life, now they started living to work.

According to a global research result presented at the World Economic Forum in 2016, incentives for work-life balance are more important in people's job preferences, rather than wages and other financial opportunities (Enderby, 2016). In the report prepared by the Organization for Economic Cooperation and

Development (OECD, 2005), this situation was mentioned, and it was stated that if parents cannot reach the work-family life balance they desire, not only will their welfare decrease, but also economic development will be limited due to the decreasing labor supply.

For this reason, for the long-term well-being of societies and its sustainability, policy makers need to develop policies that reduce work-family conflicts and help parents establish a better work-family balance. In recent years individuals, institutions and even the society as a whole, have started to make more demands on employers to be more family friendly, and family-friendly discourses supported by non-governmental organizations have increased. Thus, it is tried to lay the groundwork for employees to establish an appropriate balance between their work and family lives.

WORK-FAMILY BALANCE

There are two important goals in ensuring a balance between work and family for both individuals and societies. The first is to obtain success and satisfaction from working life, which is one of the main social environments of modern life, while providing the income it needs by working in a good job. The second is to meet the care, nutrition and other needs of his family and children in the best way. Family-friendly policies help working parents to better fulfill their responsibilities to their families and improve their living standards with the earnings they will gain from working life.

Failure to establish a balance between work and non-work environments opens the way to work-family conflict. Work-family conflict has many negative consequences for the individual, such as job dissatisfaction, depression, life dissatisfaction and family unrest. In addition, there are negative organizational consequences such as job dissatisfaction, absenteeism, decreased emotional commitment to the organization and intention to leave. Individuals are having more and more difficulties in meeting the increasing demands coming from their work and family environments. It is known that longer working hours directly affect the work-family balance and that the biggest victims of this conflict are children.

Harrington and Ladge (2009) described the work-family balance as “one of the most important business problems to be solved in the 21st century” (cited in Adisa et al., 2016:772). A good understanding of the causes and consequences of work-family conflict is important for both employees and employers in their efforts to develop policies for the resolution of conflict, or at least its management. Defining the problem in detail will help employees' efforts to resolve/reduce conflict by establishing a balance between work demands and

family obligations and will also contribute to employers' ability to support their employees and ultimately have a healthy, happy, and productive workforce, thus promoting social cohesion.

When work-life balance cannot be established, some undesirable results occur. These undesirable results are handled in two groups as individual and organizational results. Undesirable results from an individual point of view can be listed as unhappy individuals at work and at home, conflict and negative relationships at work, undeveloped self, problem of focusing on work, inability to spare enough time for private life and family, and pressure from working life. The undesirable results from the organizational point of view are: losing the trained and successful employees, decrease in workforce quality, motivation, and productivity, decrease in customer satisfaction, increase in recruitment costs, employee health problems, occupational accidents, absenteeism rates, and the rate of workforce turnover, and the formation of a negative image towards the organization.

Family-supportive managers and a family-supportive organizational culture allow employees to adjust work schedules and make appropriate work arrangements to meet family needs, as long as business runs smoothly, and responsibilities are met. In contrast, organizations with a high level of work-intensity, such as professional services firms, encourage prioritizing work over family (Greenhaus and Powell, 2012:248). Although companies that initiate work-life balance initiatives provide direct benefits for all their stakeholders in the long run, many organizations restrict and are moving away from work-life balance initiatives in recent years due to recessionary trends, as an easy way to control expenses.

Attitudes of the Businesses and Managers in Ensuring Work-Family Balance

The attitudes and behaviors of the managers and the support they will provide for the solution of the problems of the employees are very important in terms of ensuring the work-life balance of the individuals. Employees perceive the support of managers as the importance given to them. The support of the managers may be physical supports such as providing flexible working hours and providing nursery services for the children of the employees, as well as psychological supports. It is expected that these supports will help employees achieve work-life balance and have a positive impact on their productivity.

Manager support, which means trying to contribute to the elimination of work-related problems of the employees, is related to the attitudes and behaviors of the managers rather than the characteristics of the job. This support includes both

work-related physical arrangements, such as the organization of working hours or job flexibility, and emotional support. The fact that people receive support from those around them at every stage of their lives relieves them emotionally. When managers give the necessary support to their employees in business, employees can more easily balance work and family roles. As a matter of fact, there are studies in the literature that support this approach. In the study conducted by Ekici et al. (2017:102) on nurses, it was revealed that management support reduces conflict by supporting work-family balance.

Many alternative work arrangements regarding working conditions arise from requests by individuals who negotiate with their managers to make these arrangements when necessary. So even if a business doesn't have specific family-friendly programs or policies, managers individually can provide flexibility to people by informally promoting such options. However, the manager's response to an employee's request for an alternative job arrangement depends on his or her management style, personal beliefs, and experience in balancing work and family. Also, even if companies have formally adopted such programs, some supervisors may not support employees' demands for flexible work arrangements.

Social support of businesses and managers is defined as an important coping mechanism to reduce the stress factors of employees. Work-related social and emotional support, especially from managers, increases flexibility on the employee, making the individual's work situation less stressful. For example, Thomas and Ganster (1995:6) found that managerial support positively influences employees' perceptions of control over work and family matters, and that such control is associated with lower levels of stress and work-family conflict. Similarly, as an overall assessment of perceived social support in the workplace, Carlson and Perrewé (1999:536) linked the quality of an employee's relationships with his/her manager, co-workers, and subordinates to a reduction in perceived stress factors such as conflict, uncertainty, and excessive workload and stated that it reduced the work-family conflict.

In addition to the efforts of the human resources department to design suitable work environments for employees in order to reduce work-family conflict, "managerial support" has a very important effect in this sense (Dede et al. 2014:124). The availability of alternative applications such as pregnancy, maternity and paternity leave and flexible working hours make employees comfortable. Organizational commitment can be thought of as an imaginary power that raises performance levels by motivating employees, and these people devote themselves to their roles at work and show extra effort to increase productivity, quality, and performance. For this reason, increasing the commitment of employees is very important for business managers.

Organizations can support their employees with flexible working hours, parental leave, childcare allowance, and similar practices to help their employees balance their roles arising from family and work areas, but a cultural transformation is needed for such arrangements to become widespread in the organization. Organizations can form a work-family culture to minimize the conflict between family and work roles (Fiksenbaum, 2014:655). In order to achieve this, and to spread the beliefs and values that can help to establish a balance between work and family within the organization, managerial support is also required. Managers should exhibit supportive leadership behavior rather than autocratic leadership behavior, which is an oppressive type of leadership and is generally not seen as an “employee-friendly approach”.

Therefore, it is obvious that managerial support, which is one of the main work-related factors, directly affects the work-family balance. Both female and male employees are equally concerned and affected by managerial support and career outcomes. Recognizing that these issues are salient for both women and men highlights the importance of managers' roles in promoting alternative work arrangements that help all other employees better balance work and family responsibilities.

Today, it is seen that there is an intense competition not only in the marketing of goods and services, but also in terms of production factors. Successful managers now regard their employees as “human capital” that increases their return on investment. In the past, businesses highlighted their salary and retirement benefits to attract new talents. Today's employees, on the other hand, prefer companies that offer opportunities such as work-life balance and flexible working arrangements. As a result, the concept of “employee commitment”, which has become more and more vital for the success and competitive advantage of businesses, has become one of the main issues that the human resources managements are interested in. In order to achieve this, many scientific studies and articles examine the desire of employees to have more flexible work schedules and discuss the issue of making regulations in the legislation. Studies show that flexible working arrangements lead to better health, job satisfaction and commitment, as well as lower turnover intention. Employers, on the other hand, seek ways to facilitate their employees' work-family balance in order to retain a skilled and productive workforce.

Many countries encourage employer support initiatives (such as day-care facilities, flexible working hours, compressed work weeks, remote working, etc.) as a basic strategy to provide the support needed by working families. Organizations that offer these practices, called work-family or work-life support, often anticipate that they will have a positive impact on employees' work-family

balance. These employers view these “employer support initiatives” as strategies that can help them recruit and retain talented employees, compete with the advantages offered by other employers, and improve employee performance and productivity. For this reason, organizations that focus on helping their employees to establish a work-family balance try to help by providing opportunities such as flexible work schedules and arrangements, flexible time, workplace day care for children and career break programs.

Studies generally emphasize the effect of flexible working practices on reducing work-family conflict. Hill et al. (2006:1165), who examined the work-life experience of the IBM company in the last 20 years, stated that the company conducted 7 surveys of work and life problems during this period. In the light of the data obtained from these surveys, many initiatives have been put into practice for dependent care, flexibility in when and where work will be done, and solving the work-life needs of employees with management support. Initially, IBM's corporate work and family programs were seen as a way to meet the needs of working mothers. Today, such strategies are seen as a business imperative to attract, motivate and retain the skilled staff and key talent needed to succeed in the marketplace. Now that the hassle of distinguishing job and privacy are known, the employers should ease work-family balance by meeting the demands of their employees as possible and minimizes some of the worries of the employees, such as taking care of their children or the elderly.

WORK-FAMILY BALANCE UNDER THE CHANGING ENVIRONMENTAL CONDITIONS

Work has an important place and role in the life of all people. Of course, the importance of having a regular income cannot be ignored in order to meet the needs and pay the bills and credit card debts in today's world where life is not as simple as it used to be, and where the needs are increasing day by day. On the other hand, employees do not want to be disconnected from life while advancing towards their career goals. However, while trying to establish a work-family balance, on the other hand, connection with “work” is being established in more and more parts of daily life through technology. Working from home has become the new normal for many employees. It's getting harder and harder to separate work and private life. It has become commonplace to constantly check e-mails, have business meetings at the dinner table, and keep working from laptops on the weekends.

Having a good job where he/she can achieve his career goals, being able to spend quality time with his family and ending the day with a good night's sleep! For many employees, it is perhaps an unattainable dream. The pursuit of balance

became such a priority that many people are changing jobs because of this. Microsoft's 2022 Work Trends Report indicates a lack of work-life balance as the cause of more than half of employees leaving (<https://people.accion.com>). More than ever, individuals want to balance their work and personal time.

In recent years, it has been increasingly recognized that not only mothers with young children, but also all employees "have a life outside of work." Workplace flexibility is now seen as an integrative work-life strategy to meet the changing personal needs of both men and women across all life stages. A young unmarried employee can also use flex time apps to do a sporting activity, which is invaluable to him/her because it dissipates the stress and burnout associated with his job. One young mother may request flexible working so that she can spend more time with her preschool children, while another to take care of her elderly parents. A manager preparing for retirement may also want to work part-time to relax by spending more time with his grandchildren. Although the reason for the use of flexible working options in the workplace varies according to gender and life stage, the availability of these options has positive effects on establishing a work-family balance.

Impact of Aging Population

On the other hand, the reality of the aging society is a situation that all the world societies face in the current century. Even now, in many developed countries, the rate of the elderly (65+) population is around 20 percent, and it is increasing day by day. This demographic shift means that more and more workers provide (or will provide) some form of care to an elderly relative. Employees with aged care demands are much less visible and less supported than employees with dependent children. Most policies and programs discussed in work-family balance are aimed at parents with dependent children. At this point, the issue of care for the elderly remains in the background and is ignored. Business managers should be informed that the existence of employees with elderly dependents is an increasingly common reality and that these people have special needs. It should not be forgotten that when organizational support such as emotional support (listening) and concrete solutions for working parents with young children are also provided to employees with elderly family members, their stress levels also decrease.

As the population ages, there is an increase in the number of elderly people in need of care. Most of these people receive some form of care from a family member and this rate is likely to increase. This means we will see more employees needing to take the time to care for elderly parents. Offering flexible working

hours will keep these part-time "caregivers" working and prevent the loss of workforce.

Moreover, with a longer life expectancy, some people who have retired may want to work again for reasons such as insufficient income. However, this work does not have to be in a traditional role of 8 hours a day, 5 days a week. Rather than seeing this as a problem, recruiters should evaluate the experience of older employees and use them to fill vacancies. Reduced working hours or remote working can be good options, and by offering it recruiters and employers will be able to take advantage of the years of experience and talent that demographics have to offer.

Impact of Technological Developments and COVID-19 Pandemic

Advances in technology, which initially changed the way employees do their jobs, have now begun to change the shape and duration of the workday. Previously, a work-related phone call could also be made while at home, but it was more difficult to take work home because it was often not possible to access things like work-related files. Unfortunately, technology is not always in favor of work-life balance. Continuing to check business e-mails or trying to finish a report at home was now part of people's daily routine, which meant many people's works overflowed to home. People can now be reached and receive work-related requests while on vacation, on weekends, or while doing an activity with their family. This situation seems to have led to the idea that "if the work interferes with your private (family/life) area outside of work, why not vice versa" (<https://www.bbc.com>). It can be thought that working remotely will make it easier to establish a work-family balance. However, remote working also brings its own challenges. Working outside of the office means distraction as well as difficulty in multitasking and keeping up with deadlines. This is bad news, both for productivity and for keeping work and private life separate.

Almost overnight, after the coronavirus pandemic, homes became places for work, school, dining, entertainment and even sports. It is obvious that there are some advantages of turning houses into offices (e.g., businesses save on expenses such as travel and food, employees get rid of the time spent in traffic and the stress it causes, while also being able to do housework, etc.). However, engaging in more than one activity in the same area makes it difficult for a person to distinguish between work and leisure, and to transition from home life to work, from work life to home.

During the COVID-19 pandemic, many people around the world have been forced to work remotely. Initially, there was some expectation that the possibility of working from home was a positive factor that would improve work-life

balance. However, negative trends have also emerged over time, as employees are only a call or message away from the employer. Since many institutions and individuals were not ready for this sudden change, many mistakes were made, which brought the issue of work-life balance back to the agenda as a more important issue.

The definition of work-life balance has changed significantly in the last few years as a result of the disappearance of working hours in remote/hybrid working, which became widespread during the Covid-19 pandemic. This change meant that employees' personal lives were intertwined with their work lives in an unprecedented way, as well as allowing workers to be physically where they wanted to be and with greater flexibility. As a result, instead of defining work-life balance as a balance between personal and professional pursuits, employees began to adopt a kind of *work-life integration* that acknowledges the inextricability of the two and tries to keep the relationship between the two healthy.

CONCLUSION

Although research has conclusively shown that overwork is not good for employees or companies, in practice it is not easy to overcome unhealthy work habits and achieve a more sustainable work-life balance (Lupu and Ruiz-Castro, 2021). Work-life balance is the degree to which people can reduce or at least manage the conflict between their work and private lives. A healthy work-life balance means that an employee can maintain a harmonious relationship between the work and the private life. It requires a conscious management of time and energy to meet both professional and individual commitments while prioritizing the individual's personal care and well-being. In an ideal working life, an employee should be able to devote enough time to the things that await him as a human being, to his friends and family, or to be engaged in a hobby after work.

After the Covid-19 pandemic, the definition of work-life balance has changed significantly in the last few years, especially with the integration of remote and hybrid working, the disappearance of working hours and the increase of remote working. This change meant that employees' personal lives were intertwined with their work lives in an unprecedented way, as well as allowing workers to be physically wherever they wanted and with greater flexibility. While flexible work schedules are still an important practice in maintaining the work-life balance of employees, what individuals see as work-life balance has expanded and employees are beginning to demand a healthy work environment where open dialogue with employers is possible. As a result, instead of defining work-life balance as a balance between personal and professional pursuits, employees

began to adopt a kind of work-life integration that acknowledges the inextricability of the two and tries to keep the relationship between the two healthy. In other words, efforts to establish a "work-life balance", which has been one of the main issues of working life and business administrations for more than a century, seem to be evolving towards the view of "having a holistic well-being" of the employee.

Maintaining a healthy work-life balance is important not only for the health and social relationships of employees, but also for achieving business goals as it improves their productivity and ultimately performance. If employees do not see work as a chore, they will work harder, make fewer mistakes, and be more productive. Every organization prefers individuals who are completely focused on their work instead of work-family concerns. Individuals who can find and maintain a healthy work-life balance improve their ability to concentrate on their tasks, focus on their work better, and their awareness increase.

Businesses that promote work-life balance have now become very attractive. The cost to businesses of high employee turnover is now known by everyone. With that in mind, focusing on employees' work-life balance will help both retain their current workforce and be a sought-after business for new hires.

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Chapter 3

DEMATEL-ANP-SWOT Analysis of Regional University, Industry and Government Cooperation Initiative for Hatay Province¹

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ABSTRACT

SWOT analysis is a fundamental tool for strategic management, but there is a need to improve the capabilities of the analysis and the effectiveness of its application. Quantification of the analysis is the preferred approach to overcome the shortcomings of the analysis. Analytic Hierarchy Process (AHP) and Analytic Network Process (ANP) are the two most preferred methods for quantification studies. Each method has some limitations and constraints for practical use. Both methods require an initial knowledge of the structure of the relationships between the criteria/factors of the decision problem. Unfortunately, this is not possible in most real-world applications. One approach is to use hybridization of methods to overcome the limitations and increase applicability. The main objective of the DEMATEL method is to uncover causal relationships between the components of the problem at hand. Therefore, a hybrid DEMATEL ANP analysis is the most appropriate approach for SWOT analysis. In this study, a hybrid DEMATEL ANP SWOT analysis is proposed to improve the ANP method used in quantifying SWOT analysis. In the application study, the analysis is proposed as an aid to the efforts of the provincial committee, which is expected to develop local strategies and actions for university-industry-government cooperation initiatives. The findings suggest that the effective use of hybrid methods in strategic managerial decision-making can be of significant benefit when it comes to initiatives that require broad participation.

Keywords: SWOT, ANP, DEMATEL, University-Industry-Government relations, Decision analysis

INTRODUCTION

Technology has become the most important driver of prosperity and wealth in today's world economic order. However, the increasing pace of technological change hinders sustainability. Therefore, maintaining and creating competitiveness in this field requires planned efforts and long term investment strategies in innovation and R&D. This is a burdensome endeavor for developing countries as resources are more limited than in developed countries. Hence, public and private initiatives need to be purposefully encouraged, guided and coordinated. To this end, university, industry and government cooperation and interaction are the most prominent elements in strategy development worldwide. These strategies generally concentrate on increasing the role of universities in regional economic development, encouraging government role in innovation, and increasing cooperation between businesses and with universities. As a result, new organizations such as technology transfer offices at universities, government research laboratories and angel networks and venture capital have emerged around the world to financially support entrepreneurship and new technology-based businesses (Elkowitz, 2008). Universities play a critical role in such efforts. The literature, illustrates the importance of this role by describing the different aspects and evolution of the role of universities (e.g. Mohrman, et al., 2008; Feinblatt, 2008; Puukka & Marmolejo, 2008; Chatterton & Goddard, 2000; Goddard, 1999; OECD, 1998) towards this end.

Like most developing counties, Turkiye has been struggling to overcome the "middle income trap" for some time. In order to break this cycle and introduce a new paradigm, important policies, strategies and regulations have been introduced over the years to promote university-industry collaboration. Thus, ensuring regional economic development through enhancing the innovation and R&D capacity of universities and businesses. One of the latest example of these effort is a regional cooperation initiative. Turkish Ministry of Science, Industry and Technology has launched an initiative for each of the 81 provinces to take into account regional economic development differences in university-industry collaboration. A steering committee has been established under the leadership of the governor of each province. Committees are composed of representatives of relevant NGOs, government agencies and universities in the province and guide the implementation of mechanisms that promote university-industry-government interaction in the provinces. While basic strategies and actions have been planned for the initiative at the national level, specific circumstances of each province require specific strategies and actions to be developed by each provincial committee. In order to assess these conditions and capabilities of the

province, it was necessary to first apply the Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis, a primary analysis used in strategic management methods, at the regional level. For strategy formulation and development, the key analysis is the SWOT analysis.

In this study, to improve the capabilities of SWOT analysis a hybrid method of Decision Making Trial and Evaluation Laboratory (DEMATEL), and Analytical Network Process (ANP) was applied to SWOT analysis in better assist in the development of strategic and tactical action plans for steering committees to enhance university, industry, and government interactions.

The following sections of the chapter provide a brief introduction to SWOT analysis in general and its quantification methods and their limitations. Then, an alternative SWOT quantification method, DEMATEL-ANP is explained, followed by the application procedure of the method in SWOT analysis. Next, the application of the proposed method is presented within the framework of Hatay's regional university-industry-government collaboration initiative. Finally, findings of the study were discussed and implication of the proposed methodology are presented.

SWOT ANALYSIS

SWOT analysis, evaluating an organization's strengths, weaknesses, opportunities, and threats, is the most preferred approach for analyzing circumstances in the strategic management process.

SWOT analysis is vital aid tool in the decision making process and is often used to analyze an organization's internal and external environment. Strengths are the intrinsic qualities that an organization possesses in achieving its goals, whereas weaknesses are the internal components that hinder the organization's efforts. Opportunities are external environmental conditions initiate activities for organizations. In contrast, threats are obstacles that prevent the organization's efforts to accomplish its goal (Benzaghta, et al., 2021). Using SWOT analysis, the organization can identify its strengths, weaknesses, opportunities and threats and build strategies using its strengths, strengthen its weaknesses and take advantage of its opportunities or use them to generate remedies against threats.

The magnitude of each factor's influence on the proposed action or strategy is not measured in conventional SWOT analysis. In short, SWOT analysis does not provide a tool that can define the relative importance of factors or the ability to analytically assess the suitability of decision alternatives based on these factors. Although the factors are fully specified in the analysis, they are often described concisely and very broadly.

As Yüksel and Dağdeviren (2007) put it “the result of SWOT analysis is usually only a listing or an incomplete qualitative review of internal and external factors”. Therefore, SWOT analysis cannot fully capture the complexities of the situation and cannot adequately assist strategic decision-making.

Quantified SWOT Analysis Techniques

When applied correctly, SWOT analysis is invaluable for strategy development. Nevertheless, in most cases, SWOT analysis provides an imprecise and superficial list of internal and external factors (Chang & Huang, 2006). Several quantitative methods such as Analytic Hierarchy Process (AHP) and Analytic Network Process (ANP) have been introduced in the literature to improve capabilities and application efficiency of SWOT analysis.

AHP based SWOT analysis was proposed, to quantify the weight of SWOT factors. This model has been tested in numerous studies (e.g. Yuan, et al., 2012; Kahraman et al., 2007; Shinno, et al., 2006; Kurttila, et al., 2000). Fuzzy versions of AHP has also been employed in SWOT analysis (e.g. Zaerpour et al., 2008). Although the AHP method has limitations, it is widely used in many different situations. The basic assumption in the AHP method requires that the factors have a hierarchical structure and that there is no relationship between them. Although factor weights of interconnections depend on the cases, in most situations there are clear indications that SWOT factors are not mutually independent. This is a significant disadvantage for the analysis.

In response to this inadequacy of AHP, *ANP based SWOT analysis* was used to take the possible relations among factors into account in SWOT analysis. There are various studies employing standard ANP method (e.g. Živković, et al., 2015; Shakoor Shahabi, et al., 2014; Catron, et al., 2013; Sevkli et al., 2012; Yüksel & Dağdeviren, 2007) and fuzzy ANP methods (e.g. Arsić, Nikolić, & Živković, 2017; Arshadi-Khamseh & Fazayeli, 2013) to quantify SWOT analysis. A drawback of the ANP method is its intricate nature in practice, which limits its practical application in general. In contrast, studies show that the use of the Decision Making Trial and Evaluation Laboratory (DEMATEL) method in combination with ANP improves multi-purpose applicability of the method. Thus it constitutes a promising alternative for the quantification of SWOT analysis.

METHODS

DEMATEL method

The DEMATEL method was created to understand and solve complex real world problems (Gabus & Fontela,1973). The purpose of DEMATEL is to uncover direct or indirect causal dependencies between system components. In the DEMATEL method, direct and indirect causal relationships and their impact strength are obtained through matrix calculations. Cause and effect dependency is the main distinction of this method.

In recent years, the hybridization of various methods to overcome the limiting assumptions such as criteria independence is a common solution in decision analysis. Various hybrid techniques of DEMATEL and ANP have been used in a significant number of studies (e.g. Govindan & Chaudhuri, 2016; Ortíz, et al., 2015; Tadić, et al., 2014; Liu, et al., 2012; Chen, et al., 2011; Yang, et al., 2008; Tzeng, et al., 2007).

DEMATEL and ANP Hybrid Techniques

There are various uses of DEMATEL method in ANP in the literature. According to Gölcük, and Baykasoğlu (2016), there are four different types of DEMATEL and ANP hybrid techniques according to their application in ANP stages. There are three basic stages in the ANP method: network relationship of components; determination of dependencies through pairwise comparisons and the construction of the weighted supermatrix. In the first group of application, the DEMATEL method deals only with the network relationship map. In the second group of application, DEMATEL deals with internal dependencies, which are part of the dependencies. In the third category the DEMATEL method is used for weight calculation of groups and network relationship construction. In the last group of applications, the DEMATEL method is adopted for all three stages of ANP method. Compare to the first three hybrid applications, the last method reduces the implementation difficulties of the ANP method (Chen et al., 2011). Due to its applicability advantage, the DEMATEL method was used in all three stages of the ANP method in this study.

Overview of DEMATEL Method

There are four main steps in DEMATEL method application. Steps of the method are as follows (Lee, Li, Yen, & Huang, 2010):

In the first stage variables are defined for the study and a measuring scale is constructed. Different measuring scales are used in various studies. For this study 5-point measuring scale (Kim, 2006) is used for evaluations.

In the second step based on the pairwise evaluations the direct-relation matrix A is established as follows:

$$A = \begin{bmatrix} 0 & a_{12} & \dots & a_{1n} \\ a_{21} & 0 & \dots & a_{2n} \\ \vdots & \vdots & \ddots & \vdots \\ a_{n1} & a_{n2} & \dots & 0 \end{bmatrix} \quad [1]$$

In the third step, normalized direct-relation matrix X employing the normalization factor s given in Equation 2 (Tzeng, Chiang, & Li, 2007) is calculated.

$$X = s \times A \quad [2]$$

$$s = \text{Min} \left[\frac{1}{\text{Max}_{1 \leq i \leq n} \left(\sum_{j=1}^n a_{ij} \right)}, \frac{1}{\text{Max}_{1 \leq j \leq n} \left(\sum_{i=1}^n a_{ij} \right)} \right] \quad [3]$$

In the fourth step: direct and indirect relation matrix, known as total relation matrix T (Huang et al., 2007) is calculated as follows:

$$T = \lim_{k \rightarrow \infty} (X + X^2 + \dots + X^k) = X(I - X)^{-1} \quad [4]$$

Overview of The Hybrid DEMATEL-ANP Method

The Steps of the hybrid DEMATEL-ANP method are as follows (Gölcük, & Baykasoğlu, 2016; Liu et al., 2012; Chen et al., 2011)

Step 1: Construct Network Relationship Map (NRM) of the ANP using DEMATEL. The total relation matrix for all the criteria is denoted by T_c as follows:

$$T_C = \begin{matrix} & \begin{matrix} D_1 & D_j & D_n \\ c_{11} \dots c_{1m} & \dots & c_{jn} \dots c_{jn} & \dots & c_{n1} \dots c_{nn} \end{matrix} \\ \begin{matrix} D_1 \\ \vdots \\ D_i \\ \vdots \\ D_n \end{matrix} & \begin{bmatrix} T_C^{11} & \dots & T_C^{1j} & \dots & T_C^{1n} \\ \vdots & & \vdots & & \vdots \\ T_C^{i1} & \dots & T_C^{ij} & \dots & T_C^{in} \\ \vdots & & \vdots & & \vdots \\ T_C^{n1} & \dots & T_C^{nj} & \dots & T_C^{nn} \end{bmatrix} \end{matrix} \quad [5]$$

Step 2: Calculate normalized total relation matrix T_C^α for criteria as follows:

$$T_C^\alpha = \begin{matrix} & \begin{matrix} D_1 & D_j & D_n \\ c_{11} \dots c_{1n} & c_{j1} \dots c_{jn} & c_{n1} \dots c_{nn} \end{matrix} \\ \begin{matrix} D_1 \\ \vdots \\ D_i \\ \vdots \\ D_n \end{matrix} & \begin{bmatrix} T_C^{\alpha 11} & \dots & T_C^{\alpha 1j} & \dots & T_C^{\alpha 1n} \\ \vdots & & \vdots & & \vdots \\ T_C^{\alpha i1} & \dots & T_C^{\alpha ij} & \dots & T_C^{\alpha in} \\ \vdots & & \vdots & & \vdots \\ T_C^{\alpha n1} & \dots & T_C^{\alpha nj} & \dots & T_C^{\alpha nn} \end{bmatrix} \end{matrix}$$

[6]

Step 3: Create the unweighted supermatrix W by taking the transposition of each block in the normalized total relation matrix:

$$W = (T_C^\alpha)' = \begin{matrix} & \begin{matrix} C_1 & C_k & C_n \\ c_{11} \dots c_{1n} & c_{k1} \dots c_{kn} & c_{n1} \dots c_{nn} \end{matrix} \\ \begin{matrix} C_1 \\ \vdots \\ C_i \\ \vdots \\ C_n \end{matrix} & \begin{bmatrix} W_{11} & \dots & W_{1j} & \dots & W_{1n} \\ \vdots & & \vdots & & \vdots \\ W_{i1} & \dots & W_{ij} & \dots & W_{in} \\ \vdots & & \vdots & & \vdots \\ W_{n1} & \dots & W_{nj} & \dots & W_{nn} \end{bmatrix} \end{matrix}$$

[7]

where $W_{ij} = (T_C^{\alpha ji})'$, $i = 1, 2, \dots, n$, $j = 1, 2, \dots, n$.

Step 4: Weight the unweighted supermatrix using the normalized total relation matrix for clusters using DEMATEL, which is denoted by T_D^α using equations [8]-[10]:

$$T_D^\alpha = \begin{bmatrix} t_D^{11} & \dots & t_D^{1j} & \dots & t_D^{1n} \\ \vdots & & \vdots & & \vdots \\ t_D^{i1} & \dots & t_D^{ij} & \dots & t_D^{in} \\ \vdots & & \vdots & & \vdots \\ t_D^{n1} & \dots & t_D^{nj} & \dots & t_D^{nn} \end{bmatrix}$$

[8]

$$\sum_{j=1}^n t^{ij} = t^i, \quad i = 1, 2, \dots, n.$$

[9]

$$\mathbf{T}_D^\alpha = \begin{bmatrix} t_{11}/t_1 & \cdots & t_{1j}/t_1 & \cdots & t_{1n}/t_1 \\ \vdots & & \vdots & & \vdots \\ t_{i1}/t_i & \cdots & t_{ij}/t_i & \cdots & t_{in}/t_i \\ \vdots & & \vdots & & \vdots \\ t_{n1}/t_n & \cdots & t_{nj}/t_n & \cdots & t_{nn}/t_n \end{bmatrix} \tag{10}$$

Step 5: Calculate the overall priorities with the limiting process method as follows:

$$\mathbf{W}^\alpha = \mathbf{T}_D^\alpha \mathbf{W} = \begin{bmatrix} t_D^{\alpha 11} \times W^{11} & \cdots & t_D^{\alpha i1} \times W^{i1} & \cdots & t_D^{\alpha n1} \times W^{n1} \\ \vdots & & \vdots & & \vdots \\ t_D^{\alpha 1j} \times W^{1j} & \cdots & t_D^{\alpha ij} \times W^{ij} & \cdots & t_D^{\alpha nj} \times W^{nj} \\ \vdots & & \vdots & & \vdots \\ t_D^{\alpha 1n} \times W^{1n} & \cdots & t_D^{\alpha in} \times W^{in} & \cdots & t_D^{\alpha nn} \times W^{nn} \end{bmatrix} \tag{11}$$

$$\lim_{h \rightarrow \infty} (\mathbf{W}^\alpha)^h \tag{12}$$

APPLICATION STUDY

For the application of the hybrid DEMATEL and ANP SWOT analysis, the university-industry-government cooperation initiative was selected for Hatay province. The SWOT analysis was conducted for the decisions of the provincial steering committee established to guide the development of appropriate strategic and tactical action plans for the province. Table 1 shows the resulting SWOT factors and sub factors for Hatay province. The hybrid DEMATEL-ANP method analysis was applied using these SWOT factors.

Table 1: SWOT factors for the Hatay Province

SWOT factors / sub-factors				
Internal Factors	Strengths (S)	Collaboration mechanism (S1)	The presence of a mechanism to facilitate businesses to collaborate in research studies.	
		Research infrastructure (S2)	The strength of the certain areas of university research infrastructure in Hatay province.	
		Political commitment (S3)	Strong political commitment to the development and implementation of university and industry cooperation mechanisms.	
	Weaknesses (W)	Lack of institutional structure (W1)	The absence of a sustainable institutional structure between the university and industry.	
		Unknown expertise (W2)	Faculty members' Fields of expertise are unknown by the industry.	
		Few experienced manufacturing businesses (W3)	The number of businesses with sufficient experience in project oriented manufacturing is very limited.	
		Lack of qualified personnel in SMEs (W4)	There is a lack of qualified personnel in SMEs.	
		Few experienced faculty members (W5)	Small number of faculty members with application experience to respond to the problems of the industry.	
	External Factors	Opportunities (O)	New R&D Law and reform package (O1)	Mechanisms put into action encouraging and fostering collaborations with the introduction of R & D Law and reform package.
			Efforts of umbrella organizations (O2)	The spread of the efforts of umbrella organizations in creating awareness and capacity building for collaborations.
Threats (T)		Organized Industrial Zone infrastructure (O3)	The city's Organized Industrial Zone infrastructure continues to strengthen with new projects.	
		Lack of universities' policies (T1)	Universities' policies of University-industry collaboration has not yet been fully formed.	
		Lack of collaborative culture (T2)	The lack of collaborative culture in the industry in the province.	
		Geopolitical risk of the province (T3)	The high geopolitical risks for the province negatively affect the investment and growth initiatives.	
Unable to attract highly qualified academic staff (T4)		Unable to attract highly qualified academic staff for the universities in the province.		

To collect data, a questionnaire was developed to compare paired results on the impact and importance of factors and sub factors. For this purpose, 5-point scale is used representing the range from “0-no influence” to “5-very high influence”. Using this scale, respondents can indicate the degree of direct influence of each SWOT factors and sub-factors on the other factors and sub-factors.

Data was collected from 8 committee members representing different government departments and experts in their fields. Face to face interviews were conducted with each expert to administer the questionnaire. In order to combine evaluations of the eight experts, the mean scores of their answers were calculated to create a single group evaluation. The analysis was done using group assessment scores.

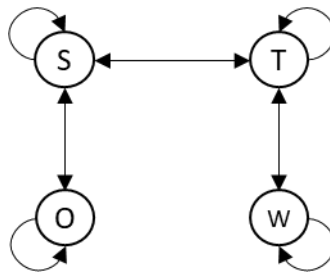


Figure 1: Directed Graph of Factor Relations

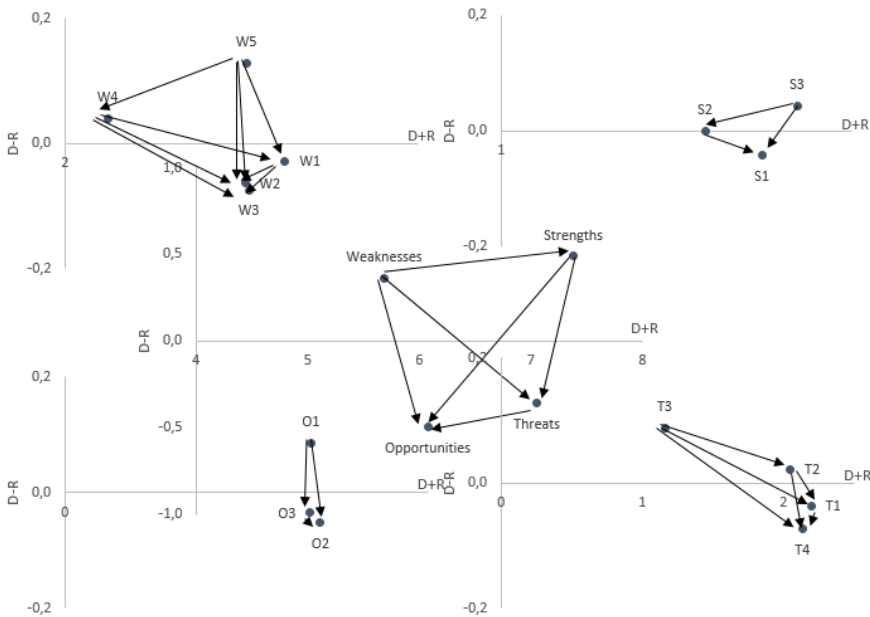


Figure 2: The NRM of Influential Relationships

DEMATEL was first used to draw a relationship diagram for the SWOT factors. Then the hybrid DEMATEL-ANP steps described in the previous section were used to calculate the weights of the factors and rank them accordingly.

Figure 1 shows directed graph of the factor relations that was representing internal and external dependencies. Based on these relationships, evaluation questions were formulated. Table 2 summarizes the overall influence of each factor on the other factors using the sums of row and column values of the total relation matrix. Using table values, (D+R) and (D-R) values were placed on the x and y axes and a visual causal diagram was drawn for each factor, showing which factors are the cause and which are the effect (Figure 2).

Table 2: Total Relations and Overall Influence of Factors

SWOT factors / sub-factors	Row sum (D _i)	Column sum (R _i)	D _i +R _i	D _i -R _i
Strengths (S)	3.935	3.445	7.380	0.490
Collaboration mechanism (S1)	0.427	0.470	0.897	-0.043
Research infrastructure (S2)	0.416	0.416	0.833	0.000
Political commitment (S3)	0.490	0.447	0.938	0.043
Weaknesses (W)	3.024	2.660	5.684	0.365
Lack of institutional structure (W1)	1.235	1.264	2.499	-0.029
Unknown expertise (W2)	1.172	1.236	2.408	-0.064
Few experienced manufacturing businesses (W3)	1.171	1.245	2.416	-0.074
Lack of qualified personnel in SMEs (W4)	1.068	1.028	2.097	0.040
Few experienced faculty members (W5)	1.269	1.141	2.411	0.128
Opportunities (O)	2.789	3.286	6.075	-0.496
New R&D Law and reform package (O1)	0.314	0.228	0.542	0.087
Efforts of umbrella organizations (O2)	0.256	0.308	0.563	-0.052
Organized Industrial Zone infrastructure (O3)	0.253	0.288	0.541	-0.035
Threats (T)	3.347	3.705	7.053	-0.358
Lack of universities' policies (T1)	1.080	1.117	2.197	-0.037
Lack of collaborative culture (T2)	1.035	1.014	2.049	0.021
Geopolitical risk of the province (T3)	0.623	0.535	1.158	0.088
Unable to attract highly qualified academic staff (T4)	1.031	1.103	2.134	-0.073

In Table 3 hybrid DEMATEL-ANP SWOT analysis results were presented. It shows the individual sub-factor and factor weights, both internally and overall and the resulting rankings of importance levels.

Table 3: Weights and Ranking of the SWOT Factors

SWOT factors	Local weights	SWOT sub-factors	Local weights	Global weights	Ranks
Strengths (S)	0.270	Collaboration mechanism (S1)	0.358	0.097	1
		Research infrastructure (S2)	0.315	0.085	4
		Political commitment (S3)	0.328	0.089	3
Weaknesses (W)	0.203	Lack of institutional structure (W1)	0.215	0.044	10
		Unknown expertise (W2)	0.207	0.042	11
		Few experienced manufacturing businesses (W3)	0.205	0.042	12
		Lack of qualified personnel in SMEs (W4)	0.176	0.036	15
		Few experienced faculty members (W5)	0.196	0.040	13
Opportunities (O)	0.251	New R&D Law and reform package (O1)	0.316	0.079	8
		Efforts of umbrella organizations (O2)	0.361	0.091	2
		Organized Industrial Zone infrastructure (O3)	0.323	0.081	7
Threats (T)	0.276	Lack of universities' policies (T1)	0.303	0.084	5
		Lack of collaborative culture (T2)	0.262	0.072	9
		Geopolitical risk of the province (T3)	0.137	0.038	14
		Unable to attract highly qualified academic staff (T4)	0.299	0.082	6

Findings

The findings of the analysis can provide some invaluable insights that allow the committee to develop strategic actions based on the sub-factors that most influence other sub-factors.

As it can be seen in Table 2, “Strengths (S)” factor (7.380) is the first in the index of strength of total influence given and received. “Threats (T)” is the second, “Weaknesses (W)” is the last.

Among the sub-factors “Few experienced faculty members (W5)” has the greatest direct impact on others (0.128) according to (D-R) score; whereas “Few experienced manufacturing businesses (W3)” (0.073) and “Unable to attract highly qualified academic staff (T4)” (0.074) are the sub-factors most easily influenced by other sub-factors.

Figure 2, showing the Influential Relationships in NRM, clearly illustrates the role of each factor. Accordingly, it is clear that weaknesses affect all SWOT dimensions. Among the weaknesses, “W5” has a significant impact on all sub-factors. This shows that any attempt to eliminate only weakness “W5” will have a positive impact on all weaknesses and threats and contribute significantly to the exploitation of opportunities. Given the objectives of this project, this finding suggests that the benefits of enrichment and capacity building of university academic staff are realistic and feasible.

Furthermore, the analysis shows that 3 of the top 5 belong to the "Strengths" factor, one to the "Opportunities" factor and one to the "Threats" factor according to the ranking of the sub-factors. Based on these results, the committee can build strategies and action plans on its strengths, capitalize on opportunities and use them effectively against threats.

RESULTS AND DISCUSSION

The effective use of hybrid methods in strategic management will be of significant benefit when it comes to initiatives that require broad participation and involve ambitious goals, as in the case of the implementation study.

One of the criticisms of ANP is that it involves steps that are too complex to be applied in practice and that it involves pairwise comparisons that are difficult to understand. The DEMATEL method improves on ANP in terms of these difficulties: network relationship structuring of criteria, handling difficult pairwise comparison questions of interdependencies and weighting the unweighted supermatrix with unequal effects. Since the DEMATEL method depends on cause and effect relationships, it is much more practical to create a direct relation matrix.

Furthermore, DEMATEL-ANP overcomes the impractical assumption of clusters of equal importance. Secondly, the degree of influence between clusters is used to weight the unweighted supermatrix, resulting in a weighted supermatrix.

Although the method proposed in this study for the quantification of SWOT analysis provides considerable ease of implementation and yields clear and comparable results suitable for practical use compared to similar methods, the complexity and expertise required for such methods in general is still a barrier to their widespread use.

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Chapter 4

3D Printing Technology from an Industry 4, Digital Twin, Sustainability Perspective

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ABSTRACT

Technological developments, the discovery of new materials, the development of different production techniques require the development of today's production processes. Technological advances and inventions put pressure on production sectors. Prints also create turning points and revolutions in production. It is important for businesses to have the potential to respond to innovations day by day. Thus, enterprises have to make a great effort, which creates a strong competitive environment. In this environment, manufacturers need innovative products. On the other hand, businesses need to consider some values such as cost, efficiency, effectiveness and sustainability. Firms follow a number of innovations in order to respond to these expectations. Especially in recent years, it has been benefiting from technologies such as artificial intelligence, augmented reality, cloud technology, 3D printing. These technologies have come to the fore especially with the Industry 4.0 revolution and the new industrial period has pushed businesses to use these technologies.

Keywords: 3D Printing, Industry 4.0, Digital Twin, Sustainability.

INTRODUCTION

One of the most important tools of Industry 4.0 is 3D printing technology (Jandyal et al., 2021; Kantaros et al., 2021). 3D printing has an important role in the success of the Industry 4.0 process. Three-dimensional printing technology is important in the development of industrial products and provides opportunities to revolutionize the production processes of many industries. Three-dimensional printing is the process of combining materials, layer by layer, of three-dimensionally designed models. It is also referred to as additive manufacturing because it accumulates materials in layers. Due to the important opportunities provided by this technology, it is seen as one of the leading technologies today and in the future. While 3D printing was used a lot in the past for the purpose of obtaining product prototypes, it has now become a technology that provides functionality in production in many ways (Saade et al., 2020). The use of 3D printers is increasing day by day in today's industry. In some industries, this technology is used to develop products, while in some industries it is used to support traditional production systems. It is also stated that 3D printing is a production system with its own production area. Ultimately, the process that starts with the design of the product continues with the production, and as a result, the desired final product is obtained.

In today's industrial era, 3D printing technology is widely used by innovative businesses in various fields such as transportation, construction, aviation, health, textile, food. The fact that 3D printing has the potential to be used in many different branches of the industry comes to the fore as a technology that attracts more attention from manufacturers. 3D printing has excellent flexibility for many areas of manufacturing. In this respect, it meets one of the expectations of Industry 4.0. It is promising for the future as it has great potential in traditional production methods. The usage areas of technology are growing day by day. However, it should be stated that this technology needs to be further developed when compared to the use of materials in traditional production methods.

1. 3D PRINTER TECHNOLOGY AND INDUSTRY 4.0

3D printing technology offers many opportunities to innovative businesses in the new industrial era. In this technology, it is highly relied upon to print the product designed by the designers exactly by 3D printers without human intervention. It is ensured that products are created in easier production conditions without the need for expensive equipment. In this process, it provides great convenience for today's and future industry especially with the realization of production without the need for additional processes. On the other hand, there is a need to produce complex designs in many industries. Three-dimensional

printing is a revolutionary technology in various industries by allowing complex designs to be produced. It is an important opportunity provided by these technologies in producing complex parts with high precision and accuracy. Parts with complex geometries have gained the power to be made using layer-by-layer manufacturing processes (Kichloo et al., 2021). This technology can be used in the manufacture of large and complex structural designs and load-bearing parts with low volume ratios, especially in sectors such as aerospace (Lu et al., 2015).

The demand for customized products is greatly increasing in the Industry 4.0 process. 3D printing technology has the potential to produce customized products. It should also be stated that with this potential, it is an extremely flexible production method. Both manufacturers and customers have started to participate in the production process to offer joint solutions with the development of information technologies. This makes it easier to design and manufacture many unique products. Enhanced superiority control is allowed by involving customers in the process with a more flexible and accessible solution (Singh et al., 2017). In addition, it is important to easily make changes on the existing product in order to easily evaluate the designs in line with customer requests and to produce the ideal product.

In addition to its possibilities such as freedom of design, customization and rapid prototyping in 3D printing, it facilitates the operation of large volume parts in the production process. It attracts great attention with the flexibility it provides in many industries such as aviation and automotive. An important advantage of 3D printing technology to businesses is the error rate in production. Since there is little human intervention in the use of printing technology, it is likely that there will be a decrease in the number of errors. It is seen that one of the important goals of Industry 4.0 is to reduce the error to a minimum level, and 3D printer technology allows this, and it is seen that working with common goals.

One of the important issues to be considered in the production of products with 3D printing technology for many materials with different properties and complex geometries is quality and reliability. It is a fundamental element that the products meet the standards and produce high quality products just like in traditional production methods. The process starts with the design of the model, production takes place and touch-ups are made if needed in 3D printing technology. In this process, there is no need for processes such as forging, shaping, casting, which are encountered in traditional production to meet the expected standards. It is relatively easy to keep quality under control when any component is produced on printers. Thus, printing technology enables products to be designed and produced quickly. On the other hand, it can be stated that

three-dimensional printing technology attracts attention in many respects due to the successful product printing resolutions (Bao, 2022).

3D printing technology has the opportunity to provide advantages such as customization, prototyping, and the ability to produce products in complex geometries at low cost in a very short time. However, it is not easy to easily comment on the cost issue. It cannot be said that this technology provides a cost opportunity for many product groups. Although there have been developments about this situation in recent years, it is also known that it is costly in many respects. More innovation is needed to lower the price of 3D printing technology (Iftekar et al., 2023). However, the economic opportunities that this technology will provide in product prototype, product customization and product design processes should not be neglected. Although it is known that Industry 4.0 systems bring large investments in many respects, they also have economic returns in many respects, as in 3D printers. While Industry 4.0 is a system that offers economic returns for businesses in the long run, the same is true for 3D printers, which are a part of this system.

Three-dimensional printing technology is one of the trending technologies in robot production in recent years. Robot technology is one of the important tools of Industry 4.0. Along with the opportunities it provides for the new industrial era, 3D printing technology is also a support for the use of other technologies. The high precision, accuracy and reliability of 3D printing for printing highly complex parts is making it an important choice in robot manufacturing (Malik et al., 2022). This technology seems to be helpful especially in the production of robots made of soft materials.

It is necessary to provide a holistic control and communication between the technologies in the Industry 4.0 system. This unity is important because their technologies in the Industry 4.0 process are digital. It is known that 3D printing technology is used together with technologies such as internet of things and cloud technology, especially in smart factories. The combined use of 3D printing technology and digital twin technology has recently begun to increase. The digital twin provides a versatile process in 3D printing, with the ability to create digital representations of every asset or process within the manufacturing system.

2. 3D PRINTER TECHNOLOGY AND THE DIGITAL TWIN

Despite the many opportunities provided by 3D printer technology in today's competitive environment, it is more needed to be developed. For example, manufacturers using 3D printers may need trial and error many times to produce the products they want. Undoubtedly, it is more possible for this technology to reduce the number of operations compared to traditional production methods.

Digital twin technology can provide a solution to overcome the long and costly trial and error process in production in today's industry (Zhang et al., 2020). Not only that, digital twin technology is important to overcome many problems.

Digital twin technology is used in many ways to better understand, analyze and improve a manufactured product and its process (Kantaros et al., 2021). The concept of a digital twin is the creation of a real and dynamic digital copy of a physical entity or process. The purpose of this technology is to collect secure data that can drive simulations and make accurate calculations at any time (Zhang et al., 2020). The digital twin records the past and present behavior of a physical object in real-time in a digital copy and embeds all kinds of real-time data and information throughout its lifetime.

The digital twin can sometimes be a product, or it can be a large manufacturing system itself. In order to talk about digital twin technology, there must be a physical object, a digital copy, and a connection that will enable sharing between them. First, a digital twin prototype of a physical product is created, the product is designed, and then the real and virtual object are integrated. The digital twin of an asset includes many time-dependent data such as simulation data, sensor data, supply chain data, as well as computer-aided design. The digital twin is formed by adding many data such as simulation, experimental tests, production data of 3D printers to the computer-aided 3D model.

The use of digital twin technology together with 3D printers is an innovative approach. There are many opportunities that a true digital representation of the object will provide. One of them is that digital twin technology has the potential to accelerate the product design process by using 3D printer technology. Product designers can make countless trials to reach the most accurate product design in order to meet the expectations from the product. It is a necessity to create a product prototype in order to realize production in 3D printers. The number of trials for accurate product design up to the product prototype process can also be troublesome for 3D printers, one of the important technologies of Industry 4.0. At this point, the use of 3D printers and digital twin technology together can create a very advantageous situation in production times by reducing trial and error steps in order to reach the right product design. This also affects the shortening of the supply chain process (Sasson and Johnson, 2016).

The digital twin technology has started to become a technology that is used more and more together with technologies such as big data, sensors, artificial intelligence, internet of things, which are important tools of Industry 4.0. The Internet of Things (IoT) can be seen as a necessity for a digital twin, as it can provide communication between objects with a wireless connection. The internet of things makes digital twin technology more accessible at an affordable cost.

The IoT has the power to connect everything over an integrated network, mostly through sensors. Sensors are important to digital twin technology. As a result of the sensors being embedded in the objects, the incoming data of the physical object in the process is constantly updated in its digital copy. Big data is created due to all the data entries that such a large system will handle. Analyzing these data with the help of artificial intelligence can increase the dominance of the enterprises in the production process.

In 3D printing technology, quality can also be a concern for manufacturers in some cases. Comprehensive tests may be needed to prevent quality defects in 3D printing technology. In such a case, the cost opportunity provided by the printing technology may disappear. However, solutions are sought in digitalizing industries. The quality parameters are directly evaluated with the real data flow provided by the digital twin technology. In other words, the use of 3D printer technology together with the digital twin will also eliminate the quality concern in the products to be produced. Chhetri et al. (2017) revealed that the use of digital twin ensures the surface quality and dimensional accuracy of the object produced in 3D printers with the data it receives continuously.

One of the concerns in 3D printing technology is that the materials used in the production process can sometimes deform. In such a deterioration, trial and error processes are needed for the decision to be given to the product with the most suitable material content. Repeating the production process many times will require the manufacturer to cover the same costs again. The use of digital twin technology in 3D printing can eliminate this problem. With the digital twin technology, it can be determined whether there will be deformation, and if so, in which places. The use of digital twin technology can help determine whether and where there will be deformation in the product. Thus, there will be no need for too many repeated trial and error methods in the process. The reason for this is the simulation technique that digital twin technology will provide.

The use of 3D printing technology together with the digital twin can provide predictions about a number of parameters that will affect production. The digital twin will give the ability to adjust various parameters of the 3D printer, such as temperature settings, cooling rates, solidification rates, etc. (Knapp et al., 2017). In other words, transactions will take place more accurately when the digital twin is supported by experimental data. At this point, it is an expected situation within the Industry 4.0 process to prefer an experimental approach instead of the trial and error method. More optimal realization of many parameters such as process step, cost, time spent, energy consumption will be possible with the combination of the two technologies.

Traceability becomes easier with the use of real-time data in digital twin technology. The focus of this technology is the recording of all product development and production processes in a digital system. In this way, it is important to be able to follow the behavior of a physical object in the process depending on time and to reach real data. Being able to access real-time data of the product or process creates important opportunities in many respects. Since all steps of a product's production process are recorded, it will not be necessary to start the whole process from the beginning if a possible change is needed. Interfering with the necessary step of the process and revising it will make the process steps extremely easy. Interfering with the necessary step of the process and revising it will make the process steps extremely easy. When the flexibility of the three-dimensional printer technology and the convenience offered by the digital twin are combined, the production value will increase.

Digital twin technology supports the detection of possible errors more easily and quickly by monitoring the 3D printing process. The use of digital twin technology often foresees a potential problem and allows it to be intervened and eliminated. Digital twin technology helps to predict and eliminate problems such as temperature distribution between layers, thermo-mechanics in printing. In cases where a problem in the production process cannot be prevented with digital twin technology, it becomes easier to act quickly by intervening early. Real-time detection of product defects will reduce unsuccessful prints. This will also affect the production process in a more optimal way. Simulation data accessed by digital twin technology will help solve problems such as focus melting in 3D printing.

Another benefit of the digital twin is that it has the power to facilitate some tasks in the supply chain. A manufacturer may need a spare part that it cannot reach urgently. It would be beneficial to use a digital twin with 3D printer technology in the production of such parts. Digital twin technology can be easily exploited by having the design file of a product to be printed on 3D printers. In this way, when the manufacturer needs these parts even after many years, the production will be carried out without losing its originality. On the other hand, businesses may need a part that is no longer produced in the process. Since it is no longer possible to supply that part from the manufacturers, businesses are having difficulties in various aspects. In some cases, this may not meet the expected quality and may lead to the end of the life of the actual products. When a spare part is needed, manufacturers or users have to reach the supplier of that part. In such a case, if the business could create a digital copy of that product, it would be more possible to reach it. On the other hand, even if businesses can find the spare part, sometimes they may not reach it when they need it. For a business that has a digital copy, it will be easier to produce this product with 3D printer

technology. It will be a great opportunity for a business to produce a digitally existing product in a short time, especially with 3D printer technology.

So far, the possibilities of three-dimensional printer technology and its connection in the industry 4.0 process have been mentioned. In recent years, the opportunities that will be provided by the use of three-dimensional printer technology together with other technologies in the Industry 4.0 period, such as digital twin technology, are examined especially from the perspective of sustainability. Manufacturers have had to give importance to sustainability indicators as much as traditional performance indicators. It has been accepted as a sustainable technology due to the production possibilities offered by 3D printer technology.

3. INTRODUCTION TO 3D PRINTER TECHNOLOGY AND SUSTAINABILITY

It can be stated that the opportunities that three-dimensional printer technology will provide are related to sustainability in many ways. Manufacturers have started to use 3D printer technology in order to provide a simpler, more environmentally friendly and economical opportunity. It is known to offer more sustainable solutions in many ways compared to traditional production methods.

As mentioned first in 3D printer technology, the reduction of time spent in new product design is an important advantage. This will create benefits in terms of total production time, as it will enable the business to reach the final product it wants in a shorter time. This time saved will allow the business to perform a different transaction that will add value to the product. Any action that will affect product design time or production time is critical for businesses. It is often seen as one of the key performance criteria of the business. Producing the final product in a shorter time will indirectly contribute to the business economically. This is an advantage in terms of economic sustainability, which is one of the important parameters of sustainability.

An important relationship between sustainability and printing technology is related to the amount of material consumption. This affects both economic and environmental sustainability. On the other hand, it is possible to examine the use of materials both in terms of materials consumed in primary production and in terms of waste that may occur in production. Due to the layer-by-layer approach of 3D printing technology, there is a significant difference in the amount of material used, unlike traditional production methods. When the production of the same product with two different techniques is evaluated, one has the processes of chipping the large material and the other has the processes of continuous addition

of the material. This affects the amount of material and creates an opportunity to prevent waste.

The amount of waste resulting from the shaping of materials in traditional production is serious. 3D printing focuses on reducing waste both in product design and development, which provides a great advantage by avoiding the use of unnecessary materials (Malik et al., 2022). If the same object is produced with both 3D printers and traditional production methods, there will be a large variation in waste (Bhalla et al., 2022). Although the zero waste principle is applied in 3D printing technology, this is not always possible. Support structures used in production may not be reused. This causes materials to be separated as waste. However, when compared to traditional production, there is a great reduction in the amount of waste.

Önceki bölümde bahsedildiği gibi 3 boyutlu yazıcılarda ürünlerin neredeyse el değmeden üretilmesi olası hataların önüne geçecektir. Compared to the errors encountered in traditional manufacturing, less additional processing will be required because 3D printers reduce human intervention. This will create an opportunity both in terms of economy and time. At this point, it is seen that 3D printer technology and sustainability are closely related. When a faulty product occurs in traditional production, it is necessary to produce a new product to replace this product. In such a case, the same effort will have to be given again. As a result of 3D printer technology reducing the error rate in production, it will eliminate the unnecessary consumption of both the materials used and other natural resources needed in the production process.

Reuse of materials used in production processes is important in a sustainable production system. 3D printers allow manufacturers to use recycled materials. This technology focuses on the development of environmentally friendly materials and the implementation of circular economy models (Iftekar et al., 2023). Recycling and reusing objects produced by 3D printing, which has completed its life-cycle, will provide a significant resource efficiency to the enterprise. Some 3D printers can break down some materials and turn them back into raw materials. In particular, filament is produced by recycling plastic materials, which provides the opportunity to reuse the material in 3D printer technology.

The production processes, which are carried out without harming the ecological balance, are important because the 3D printer technology is environmentally friendly. It is seen in many studies that 3D printer technology reduces gas emission and energy consumption (Nyika et al., 2021). Opportunities provided by 3D printer technology such as reuse of used materials, need for fewer processing steps, less resource consumption, less faulty production directly affect

the energy consumption of the enterprise. As mentioned before, production errors are more common in traditional production systems due to the greater involvement of labor power. Production errors have been greatly reduced with 3D printing being a digital technology. For this reason, similar energy sources will be needed for a product to be reproduced instead of faulty products. It can be expected that the energy to be spent with 3D printing technology will remain at more acceptable levels. In this case, 3D printing technology will contribute to the economic and ecological sustainability of the business. On the other hand, considering that energy consumption rates affect gas emissions, environmental pollution will also be affected. Due to the limited energy consumption in 3D printing, greenhouse gas emissions will also remain at lower rates and create a positive situation in terms of environmental sustainability.

Businesses are mostly concerned with the economic dimension of sustainability. As the 3D printing technology has been described so far, it is obvious that the benefit provided by parameters such as resource consumption, processing time and energy consumption will also benefit the business economically. In the first stage, obtaining the product prototype in 3D printers more easily and faster will also greatly reduce product development costs. 3D printer technology has an important role in both today's and future industries with the economic and environmental sustainability advantage it will provide.

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Chapter 5

Students' Attitudes towards Distance Education during Post-Earthquake in Turkish Higher Education

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ABSTRACT

The aim of this study is to present the university students' attitudes towards the implementation of distance education offered after the Kahramanmaraş-centred earthquake disaster and display the vital role of education delivery in higher education during temporary school closures. For this purpose, semi-structured interviews as a qualitative data collection instrument were used and the findings collected from the data were presented by using content analysis. The findings of the study revealed that students were generally satisfied with the facilities of the university, access to the system and attitudes of faculty members in the distance education process. However, they were not content with the exams in terms of unfairness, cheating and short exam duration. The students also had many difficulties in the implementation of distance education and most of them wished to return to face-to-face education. The study displayed that distance education was a good alternative in case of emergency situations but face-to-face education provided self-discipline, more interaction and facility for practice.

Keywords: Distance education, higher education, attitude towards online learning, emergency remote learning

INTRODUCTION

Distance education highly depended on the preference of the learner before the COVID 19 pandemic. However it started to be implemented as compulsory at all levels of education with the pandemic because of the rapid change to distance education and it was called as Emergency Remote Teaching (ERT) (Üstündağ, Solmaz & Özcan, 2022) which may be accepted as a branch of distance education (Bozkurt et al., 2020 as cited in Sarier & Uysal, 2022). ERT is defined as “temporary shift of instructional delivery to an alternate delivery mode due to crisis circumstances” (Hodges, Moore, Lockee, Trust & Bond, 2020). Due to the Kahramanmaraş-centred earthquake disaster, Higher Education Council (YÖK) in Turkey announced that the spring semester of the 2022-2023 academic year will be completed through distance education (Makas, 2023 as cited in Yamamoto & Altun, 2023). In line with the decisions taken after the earthquake disaster, the learning and teaching environment has compulsory changed and this situation has different impacts for the students and the teachers in the process. Students are the most effected part of this alteration.

Undoubtedly, exploration of students’ attitudes towards distance education process after the earthquake can be decisive in interpreting distance education in higher education. However, in order to highlight potential effects of the emergency education on Turkish higher education the current research investigates the limitations and the possibilities of the distance education carried out at a state university settled in one of the provinces affected by the Kahramanmaraş-centred earthquake in Turkey, based on the university students’ attitudes towards the emergency distance education. In other words, the following research questions were asked to understand the opportunities and challenges of distance learning in higher education after the earthquake:

RQ1: What are university students’ attitudes towards the facilities offered by university in distance education?

RQ2: What are university students’ attitudes towards the faculty members in distance education?

RQ3: What are university students’ attitudes towards exams in distance education?

RQ4: What are university students’ attitudes towards access in distance education?

RQ5: What are university students’ attitudes towards distance education and face-to-face education?

CONCEPTUAL FRAMEWORK

As distance education has been popular in case of the emergency situations, much research has focused on implementation of distance education, students' opinions about distance education process, the challenges and facilities offered by the universities in higher education and mixed findings have been reported (Üstündağ, Solmaz & Özcan, 2022; Zouiri & Kinani, 2022; Arslan & Yılmaz, 2022; Agbanu, Sonyo & Ahiase, 2018; Yazgan, 2022; Al-Yamani & Jabali, 2021; Okuyan, Akgül & Kerkez, 2023; Yılmaz, 2022; Karadag, Su & Ergin-Kocaturk, 2021; Jung & Vranceanu, 2020). In distance education there are various factors influencing the learners' adaptation to distance learning such as lack of interaction, technological requirements, experience of instructors, planned process and ready-made materials and content (Üstündağ, Solmaz & Özcan, 2022). Arslan (2021) stated that problems with support services are the most important challenge faced by university students in distance education. Enhancing interaction is the most effective factor for the efficiency of distance education. Moreover, easy access to the system and responding quickly to needs provide students' productivity and satisfaction of the learners.

Al-Yamani and Jabali (2021) analyzed attitudes of faculty members and students towards distance learning carried out after the Corona-19 pandemic in Jordan. The study displayed that students generally had positive views on distance education because distance education is the best way in order to continue education in higher education. Nevertheless, students held negative views on the category of assessment and test as they complained about fraud in exams, exam time and their unfamiliarity with the exam type. The study suggested that it was important to control cheating in exams and take necessary precautions to prevent it in distance education.

Zouiri and Kinani (2022) explored to find out whether 800 learners studying in Morocco were satisfied with the distance education process implemented during the COVID-19 pandemic. The results of the study showed that the participants' dissatisfaction with the distance learning concerning the teaching way of the courses and lack of basic computer skills. However, they were satisfied with teaching methods, the interactivity and duration of the courses. The study suggested that it was important to take learners' needs into consideration while planning and implementing courses through distance education.

Arslan and Yılmaz (2022) aimed to examine the students' satisfaction with distance learning experiences during the Covid-19 pandemic. The findings revealed that such factors as instructor and student communication, reachability of the instructors and the attendance to the course were the contributors to

enhance the students' satisfaction with distance education. Besides, personal relevance and authentic learning, instructor support and student autonomy and active learning had an important influence on the participants' satisfaction. It was vital in higher education institutions to continue distance education at certain rates.

Agbanu, Sonyo and Ahiase (2018) investigated the agents affecting learners' satisfaction in the programmes implemented by distance education in Ghana. The agents were consisted of the factors as instructor student interaction, course evaluation, administrative support services and instructor performance. The findings revealed that the students were satisfied with the interaction between them and the instructors as the instructors gave information about students' progress gave necessary feedback on their studies and they encouraged students to take part in the course discussions actively. Concerning the factor of course evaluation, the participants reported their satisfaction with the fairness of testing, the course syllabus and the practicality of the material use. In terms of instructor's performance, the student satisfaction was found to be in instructor's clear presentation of the course and overall effectiveness of instructor. The study also displayed overall satisfaction of the participants with the administrative support services at the distance education.

Yazgan (2022) investigated limitations and possibilities of distance education implemented during the COVID-19 according to the university students' distance education experiences and their attitudes towards distance education in Turkey. The study demonstrated that lecturer-student and student-student interactions weakened in distance education period. Specifically, it was stated that the interaction between the student and lecturer changed as the students felt shy while asking questions and talking about their opinions. The students also met difficulties in receiving adequate feedback from the instructor and sincerity of the relations.

Okuyan, Akgül and Kerkez (2023) explored students' attitudes towards distance education in the field of health sciences. The results of the study revealed that students preferred face-to-face education especially in practice-oriented departments rather than distance education as they believed that they received insufficient information in the application part of the courses. They also had technical problems like internet access in distance education. It was suggested that while universities were planning their distance education processes, their students should determine their level of access to the internet and technical equipment and provide the necessary support. Furthermore, applied courses should be given through face-to-face education.

Yılmaz (2022) investigated students' satisfaction with various LMS system used in distance education such as Google classroom and Moodle and compare it to face-to-face education at a state university in Turkey. The findings of the study regarding the comparison between distance and face-to-face education revealed that participants would like to return to face-to-face education and they were not content with distance education. In detail, they met problems in accessing the internet and did not comprehend the subjects adequately. They also did not prefer online tests instead they wanted homework assignments in the LMS system. They wished to have more interaction during live courses and complained about previous video recordings.

Karadag, Su and Ergin-Kocaturk (2021) examined students' satisfaction with the distance education implemented at various Turkish universities during the pandemic. The results of the study indicated that students were not satisfied enough with distance education process. Universities in Turkey were not successful in managing this process during the pandemic. Among the problems, there were lack of guidance and failure to respond to students' problems on time. Additionally, delay in adaptation of instructors, difficulty in accessing internet and devices and inadequate infrastructure of universities, delay were other drawbacks of distance education process implemented at the universities. The study showed that universities seemed to be unprepared for this process and did not meet the criteria determined by Turkish Council of Higher Education.

Jung and Vranceanu (2020) sought to understand whether university students in France and Korea were content with the implementation of distance education after the pandemic. Most of French students selected face-to-face education rather than online teaching while Korean students' satisfaction with online teaching was high. The study indicated that distance education was a good choice in emergency situations but it was not preferred when compared to face-to-face education. That was because there was concentration problems and lack of social interaction in online teaching.

METHODOLOGY

Research design

The qualitative case study approach was used in the present study. There are various kinds of case studies as explanatory, descriptive and exploratory (Yin, 2003 as cited in Sarier & Uysal, 2022). The descriptive case study was used for the aim of this research.

Participants

The study population consisted of students of a state university located in the province of Turkey, which was affected by the earthquake disaster. Their number is twenty-four students in various university majors such as computer engineering, software engineering, electric-electronic engineering, performing arts, music, visual communication, tourist guiding, cooking, construction technology etc. The application was carried out at the end of the second semester of the academic year (2022/2023), which was five months after the earthquake.

Data collection instruments

Semi-structured interviews were conducted in order to better understand university students' attitudes towards distance education. The data were gathered through a semi-structured interview form with interview questions. There were five open-ended questions in the interview form targeting to comprehend the students' attitudes towards distance education process after the earthquake disaster. While forming the questions the factors taken place in the study by Arslan (2021) was benefitted for the aim of the research. During the preparation phase of the questions, the questions were evaluated by two experts. The interview form was consisted of five questions which were also a version of the research questions of the study as in the following:

1. What do you think about the facilities offered by the University in distance education?
2. What do you think about the attitudes of the faculty members in distance education?
3. What do you think about exams in distance education?
4. What do you think about access in distance education?
5. What do you think about distance education?
6. What do you think about face-to-face education?

Data collection and analysis

In order to conduct the research, an invitation form including an informed consent form was sent through Google Forms to students who were willing to participate in the study. They were asked to answer the questions in the form after giving their consent. In the consent form it was stated that their participation into the study was totally voluntary, the interview would be kept confidential and would not be used for any other purposes with anybody. The interviews were held with twenty-four students from different departments of the university where the study was carried out.

The interviews were transcribed and evaluated by the method of the content analysis. Content analysis is used to describe, analyze or interpret the content of the data in detail (Privitera & Ahlgrim Delzell, 2019 as cited in Dere & Akkaya, 2022). After all the transcripts were read and notes were taken to evaluate, codes were determined. Themes were created according to the research questions of the study. For internal validity of the study the detailed information about data analysis, collecting and interpreting processes were given in detail. The findings gathered from the data were evaluated along with the results of the previous studies mentioned in the literature section and differences and similarities were displayed for external validity of the research. Additionally, in order to provide internal reliability of the analysis direct quotations were taken from participants' explanations and frequencies (f) of the themes were used in the findings. The students' responses to the questions were received in writing without any intervention for external reliability of the study. Every student participated the study was numbered as P1, P2, P3, etc. while giving their statements in citations.

FINDINGS

Students' attitudes towards the facilities offered by the university in distance education

Satisfaction with the facilities offered by the university has five themes: No problem, sufficient material, technical support, failure in deciding to open summer school and hybrid education and extension of academic calendar (see Table 1).

Table 1. Students' attitudes towards facilities offered by the university

Question	Theme	f
What do you think about the facilities offered by the University in distance education?	No problem	16
	Sufficient material	3
	Technical support	1
	Failure in deciding summer school and hybrid education	3
	Extension of academic calendar	1

Themes of (a) no problem, (b) sufficient material and (c) technical support are made under the title of satisfaction with the facilities offered by the university in distance education. Specifically, in the context of satisfaction with the facilities offered by the university in distance education, three students stated that the university offered sufficient material during the distance education process as follows: "Courses were adequate in terms of resources" (P4). Besides, one student stated that they received adequate technical support: "I think that both the support team and the staff in distance education are prepared to meet our needs" (P11). Moreover, sixteen students stated that they did not have any difficulty in this regard.

The participants also stated their dissatisfaction with the facilities offered by the university in varying themes. Themes of (a) failure in deciding to open summer school and start hybrid education and (b) extension of academic calendar were made under the title of dissatisfaction with the facilities offered by university in distance education. Three students stated that the university did not take necessary decisions about opening summer school or starting hybrid education urgently: "Hybrid education decision could be taken according to the wishes of the students living in the city. I think our university remained passive in this respect" (P1). "I think our school is not solution oriented although it tries its best unfortunately there is no practical solution" (P5). One student stated that the academic calendar was extended due to the earthquake, which caused some problems as follows: "I couldn't keep up with the dates of transfer and summer school applications of other universities because the academic calendar shifted

due to the earthquake. My university did not even give any responses to the requests from the students to open a summer school” (P2).

Students’ attitudes towards the faculty members in distance education

Satisfaction with the attitudes of faculty members in distance education includes seven themes: No problem, clear explanation, immediate response to the demands, expert in use of technology, sufficient help for access the system, lack of communication and use of previous video recordings (see Table 2).

Table 2. Students’ attitudes towards faculty members

Question	Theme	f
What do you think about attitudes of the faculty members in distance education?	No problem	11
	Clear explanation	2
	Immediate response to the demands	2
	Expert in use of technology	1
	Sufficient help for access the system	1
	Lack of communication	4
	Use of previous video recordings	3

The participants explained their opinions about the attitudes of their faculty members towards them positively in the distance education process as themes of (a) no problem, (b) clear explanation, (c) immediate response to the demands, (d) expert in use of technology and (e) sufficient help for access to the system were made under the title of positive views about faculty members. One participant stated that the instructors helped them in accessing the system: “When I told my instructors that I could not enter the system, they contacted me quickly and helped me enter the system.” (P3). Two participants stated that the instructors responded their demands quickly: “They helped us in every subject that we did not understand through email or the LMS system.” (P6). “For example, when I told about the problems I had to my instructors they helped me right away through text messages” (P12). One participant stated that the instructors were qualified with technological skills: “In the ... course, our instructor uses technology very effectively in the distance education process. This allows us to see examples by coding and screen sharing during the lesson.” (P7). Two students explained that the instructors had clear explanation: “Faculty members provided all kinds of help and explanations when necessary, their lectures can be easily understood” (P8). Eleven students stated that they did not have any problems with their instructors.

The participants also explained their negative opinions about the attitudes of their faculty members towards them in the distance education process as themes of (a) lack of communication and (b) use of previous video recordings were made under the title of negative views about faculty members. Four participants stated that they had difficulty with communicating his instructor: “When I wanted to participate in congress on engineering during the distance education process, I had to get the signature of the head of the department, but I could not receive any answers from my instructors so that I did not have the opportunity to attend such events”. (P2). “Although I am satisfied with some of the teachers some teachers do not look at the e-mails sent in any way. We cannot ask what we want to learn” (P9). “Unfortunately, some of our teachers gave difficult assignments in practice that I did not know and because they assumed that the majority of the class knew about the subject, they were content to tell a rough draft without going into details.” (P5). Three students stated that they were not satisfied with the use of previously recorded videos in the distance education: “Negative situations such as having videos of the past years in the system bothered me. I think that some courses in the field of engineering should definitely be done face to face, or the videos should be renewed as some of our teachers do” (P3). “I am dissatisfied with them because the video recordings which are posted should be up-to-date, however, it is clear that they were recorded two or three years ago.” (P2). “I think some lecturers may have re-uploaded the videos recorded during the pandemic to the system. I am not sure but I can understand from the examples given in some videos. The fact that the lessons and examples are not up-to-date may have caused dissatisfaction. Even if there are no online lessons, the videos that are posted should be up-to-date, but the ... lesson videos were already uploaded into the system clearly two or three years ago” (P1).

Students’ attitudes towards exams in distance education

Satisfaction with exams carried out in distance education includes nine themes: No problem, easiness, student-friendly, time saving, unfair, short exam duration, technical problems, cheating and lack of suitable exam condition (see Table 3).

Table 3. Students’ attitudes towards exams

Question	Theme	f
What do you think about exams in distance education?	No problem	6
	Easiness	4
	Student-friendly	1
	Time saving	1
	Unfair	6
	Short exam duration	3
	Technical problems	1
	Cheating	1
	Lack of suitable exam condition	1

The participants explained they were satisfied with the online exams implemented during distance education process as themes of (a) no problem, (b) easiness, (c) student-friendly and (d) time saving were made under the title of positive views about online exams. One participant stated that online exams were student-friendly as follows: “I think that online exams are student-friendly and quite sufficient exams in terms of difficulty and content” (P11). One participant stated that they were time saving for the students: “Online exams allowed students to save time. The transportation problem was eliminated for me and the stress of finding transportation and crowded transportation was eliminated.” (P8). Four students stated that online exams were easy to pass: “Online exams were easy” (P22). “The questions were clear and open” (P20). “Although they are not very instructive, it is a good advantage to pass the class” (P19). Six students stated that they did not have any problems with the exams: “It is the “best method at the moment” (P20). “It was the most appropriate method to measure achievement according to the circumstances in which we are” (P4).

However, most of the participants stated they were not content with the online exams during the distance education process and themes of (a) unfair, (b) lack of suitable exam conditions, (c) short exam duration, (d) technical problems and (e) cheating were made under the title of negative views of online exams. Six participants stated that online exams were not fair for all the students as follows: “I do not think that online exams measure success hundred per cent accurately and fairly” (P1). “I definitely don't think they are fair. Face to face exams are always

better. Class groups can be created and questions can be adapted to different groups by changing the some units of the questions” (P7). “The exams were challenging in some branches as they should be in others. ... exams were like in normal education, this is a negative situation because the exam was difficult for me” (P3). “I hope everyone gets right grade as they deserve if they pass the exam” (P10). One participant stated that the students do not share the same exam conditions: “We don't all live in the same conditions. I don't have a workspace of my own and I'm an earthquake victim. I have hard time during the exams” (P2). Three students stated that the online exams had short duration: “It would be better if we had the opportunity to check our responses to the questions again” (P6). “Exam durations are very short. I find it very difficult to respond to the classical questions. Since we don't have enough time in the exam, I have to pass the questions quickly” (P9). One participant stated that the students could have technical and cheating problems during online exams: “Technical problems such as internet connection and cheating can occur during the online exams” (P7).

Students' attitudes towards accessibility in distance education

Students' views on accessibility in distance education include four themes: No problem, ease of access, ease of communication and difficulty with access to the system (see Table 4).

Table 4. Students' attitudes towards accessibility in distance education

Question	Theme	f
What do you think about access in distance education?	No problem	11
	Ease of access	4
	Ease of communication	1
	Difficulty with access the system	8

Concerning access in the distance education process, themes of (a) no problem, (b) ease of access the courses and (c) ease of communication were made under the title of satisfaction with access in the distance education process. Four participants stated their satisfaction with the access in distance education as follows: “I had no problems in accessing the lessons on my own, because I left the earthquake zone in the first week” (P3). “I could log into the system whenever I wanted and had no difficulties” (P6). “I immediately saw the necessary help in the problems I had and the support team immediately helped with the accesses” (P12). “I can access to the internet because the university provided free internet for me” (P24). One student stated that he could communicate easily in distance education: “I think it is

successful for getting information about our courses and exams” (P11). Eleven participants stated that they did not meet any difficulties in accessing the system.

Nevertheless, eight participants stated that they were not content with the access in the distance education process and theme of (a) difficulty with access to the system were made under the title of negative views of access in distance education. Eight students stated that they met difficulty in accessing the LMS system used for the purpose of delivering distance education: “We have faced many difficulties during this process. For instance, I could not enter the distance education system with my newly created password” (P5). “There were moments when I could not get access distance education. On the other hand, when my password was changed from the system, then I solved my problem” (P1). “At the beginning of the term, it was so bad that I couldn't even log in with the password I just set, but later on, they found a solution” (P5). “I met difficulties with communication and access in times of internet shortage” (P19).

Students’ attitudes towards distance education

Satisfaction with distance education includes fifteen themes: Wish to continue distance education, efficiency in time, watching video recordings repeatedly, ease of transportation, following courses at any time, lack of crowded and closed classroom, comfort in schedule, no peer pressure, inequity, lack of interaction, difficulty in internet access, inefficiency of recorded courses, unhealthy, isolation and lack of guidance (see Table 5).

Table 5. Students’ attitudes towards distance education

Question	Theme
What do you think about distance education?	Wish to continue distance education
	Efficiency in time
	Watching video recordings repeatedly
	Ease of transportation
	Following courses at any time and place
	Lack of crowded and closed classroom
	Comfort in schedule
	No peer pressure
	Inequity
	Lack of interaction
	Difficulty in internet access
	Inefficiency of recorded courses
	Unhealthy
	Isolation
	Lack of guidance

Regarding the students' views on distance education, themes of (a) wish to continue distance education, (b) efficiency in time, (c) watching video recordings repeatedly, (d) ease of transportation, (e) following courses at any time and place, (f) no peer pressure, (g) lack of crowded and closed classes and (h) comfort in schedule were made under the title of positive views about distance education. Two participants stated that distance education provided them to use time efficiently as follows: "The only positive aspect of distance education was that it allowed us to spend the time we spend in transportation to our school more efficiently" (P1). "I think distance education is better for my department as I have more time to study my courses" (P12). Two participants stated that distance education gave them opportunity to watch video recordings whenever they wanted: "During the online courses, I had no difficulty in communicating with our instructors about the points that were not understood about the course, and since the material was presented in the form of uploading the videos, it was more useful and understandable for me since it was possible to watch the videos many times" (P6). "Our questions were answered by sending an e-mail to the course teacher when something was not understood in the lecture notes or when an explanation was requested. Distance education has been beneficial in terms of watching the loaded videos whenever and wherever desired" (P16). Two students stated that distance education provided ease of transportation and one student reported elimination of peer pressure, being far from crowded and closed classroom environment and comfort in scheduling during the process: "Distance education eliminates many problems from the lives of students compared to face-to-face education such as transportation problems, peer pressure, closed and crowded classroom environment. Moreover, distance education provides more accessible course materials and resources and comfort in scheduling. It offers everything that can be learned in face-to-face education so I prefer it rather than face-to-face education" (P8). Two students expressed that they could follow the courses at any time and place: "I am very satisfied with the opportunities offered by the university in distance education. Thanks to the online courses, I can follow my lessons whenever and wherever I want. Thus, I get rid of time loss such as spending time on travelling and I can study more efficiently" (P7). Four students stated that they wish to continue their learning through distance education: "I can learn better in distance education rather than in face-to-face education because distance education provides everything that can be learned in face-to-face education and it eliminates difficulties I have during learning" (P8).

On the contrary, themes of (a) inequity, (b) lack of interaction, (c) difficulty in internet access, (d) inefficiency of recorded courses, (e) unhealthy, (f)

isolation and (g) lack of guidance were made under the title of negative views about distance education. Two students stated inequity in distance education as follows: “We all deserve equality in education but right now none of us take the course and exam under the same conditions in distance education. I continue my distance education in really difficult conditions. That's why I prefer face-to-face education” (P2). One student stated difficulty with internet connection: “I think distance education is a challenging form of education for those who have insufficient internet access and technological tools” (P10). Two students stated inefficiency of recorded videos: “The videos and materials used in distance education certainly could not affect my education positively.” (P1). “The pre-recording of the videos did not help me to solve the problems in distance education. I could not receive immediate feedback in distance education as it was in face-to-face education” (P3). One student stated that distance education was not healthy for them: “It was a very tiring period for me who is always at the computer. I both had to listen to the courses and do the homework from the computer. I often spent too much time on the screen. It's not good for my health to be constantly involved with this device that emits radiation every minute.” (P5). Two students stated lack of interaction: “Due to distance education, there was no interaction and lessons are no longer fun, which created an isolated learning environment” (P5). One student stated that he could not feel himself as a student: “Since I could not define myself as a student or as a person, I had identity confusion and could not focus on my lessons. I believe I would be more successful if it was face to face education” (P3). One student stated lack of guidance: “I cannot ask what I want to learn about or do what I want to in distance education. We sometimes find it difficult to understand some courses and need to have guidance” (P9).

Students’ attitudes towards face-to-face education

Satisfaction with face-to-face education includes six themes: Wish to return face-to-face education, sufficient interaction, self-discipline, laboratory and practice facilities, efficiency in content and exam and structured learning environment (see Table 6).

Table 6. Students’ attitudes towards face-to-face education

Question	Theme	f
What do you think about face-to-face education?	Wish to return face-to-face education	11
	Sufficient interaction	5
	Self-discipline	4
	Laboratory and practice facilities	2
	Efficiency in content and exam	1
	Structured learning environment	1

In terms of students’ views on face-to-face education, themes of (a) wish to return face-to-face education, (b) sufficient interaction, (c) self-discipline, (d) laboratory and practice facilities, (e) efficiency in content and exam and (f) structured learning environment were made under the title of positive views about face-to-face education. Four students stated that face-to-face education helped students be more disciplined as follows: “In face-to-face education, the obligation to attend the class provides discipline which enables me to study more efficiently” (P1). “I definitely think that face-to-face education is more beneficial. I am more planned and disciplined in face-to-face education and this promotes studying more” (P10). Five students stated sufficient interaction: “...in face-to-face education, we listen to the lessons live, ask questions about the subjects that come to mind, I interact with my friends and instructor. We can understand the lessons easily and lessons become more understandable” (P9). “We interact more easily with our faculty members in face-to-face education” (P7). “In face-to-face education, I could ask any questions that I cannot understand during the class time in advance” (P3). One student stated: “I think face-to-face education is more efficient for course content and exams” (P18). One student stated that face-to-face education provided more structured learning environment: “I could not do any study plans in distance education as there was not a structured learning environment. While I was learning and practising what I learnt regularly from week to week in face-to-face education, there were backlogs during this period (distance education), so I had to study by memorizing for my exams” (P3). Two students stated that face-to-face education provided facilities in laboratory and practice courses: “Courses including laboratory and practice can only be more effective in face-to-face education” (P7). Eleven students clearly stated that they wished to return to face-to-face education: “I

demand that our school be able to provide face-to-face education upon request, because I think that face-to-face education is the only way for efficient and healthy education. I am of the opinion that our school is currently qualified to meet this demand” (P1). “We all deserve equality in education. In online education, none of us take that course and exam under the same conditions. I continue my distance education in really difficult conditions. That's why I prefer face-to-face education” (P2).

CONCLUSION

Higher education institutions were closed in 10 cities for a while in Turkey and distance education was implemented within weeks following the earthquake disaster. This study was carried out in order to understand the effect of distance education on students in higher education, predominantly focusing on students' attitudes towards the implementation of distance education along with the suggestions for the future of it.

Research results reveal that students' satisfaction with the facilities offered by the university during distance education is above average and developed into the themes of sufficient material, following courses at any time and place and technical support. Similarly, Agbanu et al. (2018) acknowledge that the students were content with the practicality of the material use offered by the administrative support service of the institution. Arslan (2021) stated that students had the biggest problems in support services, which showed inconsistency with the results of the current research. However, many students complain about lack of making decisions by the university administration as not taking necessary decisions for the sake of their students. They think that university should take active role and act immediately at the time of emergency such as deciding to open summer school or implementation of hybrid education. In fact, university should take students' opinions into consideration as Okuyan et al. (2023) and Zouiri and Kinani (2022) state that students should be consulted while universities are making plans about the implementation of distance education.

The study indicates that students' satisfaction with the faculty members during the distance education process is at average level and includes sufficient help for access to the system, immediate response to the demands, expert in use of technology and clear explanation. It is seen that most of the students are satisfied with their instructors as they think that they are skilful in using technology, which is a very important factor for students' adaptation to online learning as indicated by Üstündağ et al. (2022). On the contrary, students stated that they are not content with their instructors as they cannot communicate with them adequately and use previously recorded videos. This finding is not in line with previous research by

Agbanu et al. (2018) and Arslan and Yılmaz (2022), which displayed that students were satisfied with reachability of their faculty members. Lack of interaction between student-instructor is often accepted as one of the challenges met in distance education. The reasons behind this are explained as student-instructor interaction weakens during the implementation of distance education as shown by some studies by Yazgan (2022), students would like to have more interaction during the live courses in other study by Yılmaz (2022) and lack of guidance by Karadag et. al. (2021).

Views on students' satisfaction with exams conducted during the distance education process are at low level and include student-friendly and time saving, however students disagree with the idea that online exams are fair because each student has different conditions during distance education period. This finding is not consistent with the study by Agbanu et al. (2018), which displays that students find testing in distance education fair. Due to the earthquake, students declare that they do not have suitable environment while taking the exams. Besides, they complain about technical problems they have during the exams as internet access, short exam period and cheating. Cheating is one of the sources including students' dissatisfaction with online exams as Al-Yamani and Jabali (2021) state that controlling cheating in online exams and finding ways to decrease cheating are important in distance education.

In the study, it is stated that students' satisfaction with access in distance education is at average level and includes convenience in accessing the courses and difficulty with access to the system. Students who are satisfied with access the system are those who have internet connection or access. For instance, one student states that he does not meet any problems in accessing the internet because he moves the city where the earthquake takes place immediately. However, more than half of the students state that they all meet difficulties in accessing the internet, which is the most important requirement for successful distance education experience (Üstündağ et al., 2022) and the most important factor that enhancing students' satisfaction with distance education (Arslan, 2021).

The results of the study display opportunities offered by distance education as efficiency in time, watch video recordings repeatedly, ease of transportation, no peer pressure, being far from crowded and closed classroom environment and comfort in schedule. It seems from the students' views that students find distance education more comfortable in terms of flexibility in program, time and place, which are prerequisites for implementing distance education. Additionally, they assume that being far from closed and crowded environment is one of the advantages of distance education. This may be due to the fear of the earthquake or the pandemic which students experienced previously. One of the interesting finding

from the students' view comes from the student who states that he does not feel peer pressure in distance education, which is the point needed to be explored. Nevertheless, students are not satisfied with distance education on a large scale regarding inequity, internet access problems, use of previously recorded courses, lack of guidance, lack of interaction, lack of feedback and feeling of isolation. In detail, students do not think that they are equal in distance education in terms of the conditions and accessibility of internet because every student has their own living conditions. They want new video recordings as they already mention in the subtheme of discontent with the instructors. Students repeatedly explain their demand for new video recordings since they take distance education asynchronous. Perhaps, it is better to implement distance education synchronous so that they can participate the courses live and ask questions about the subjects they do not understand. Another recurrent theme students state that they have inadequate interaction and feedback from their instructors, the results of which are different from those by Zouiri and Kinani (2022), Arslan and Yılmaz (2022) and Agbanu et al. (2018).

Concerning students' content with face-to-face education it is grouped under the subthemes of self-discipline, sufficient interaction (Jung & Vranceanu, 2020; Yılmaz, 2022), immediate feedback, effective use of materials and laboratory and practice facilities that face-to-face education provides (Okuyan, Akgül & Kerkez, 2023). In the study it is seen that students often remark self discipline and sufficient interaction as the most beneficial side of face-to-face education. Moreover, students do not mention about any disadvantages of face-to-face education. This may be related with focusing more on learning through online and wishing to return to in-class education as it is seen that distance education process has revealed the importance of face-to-face education.

The research results reveal that students usually prefer face-to-face education when compared to distance education during post-earthquake period. Although distance education is a good opportunity to be applied in terms of emergency conditions, which supported by the studies by Jung and Vranceanu (2020) and Yılmaz (2022) and to continue learning and teaching in higher education (Al-Yamani & Jabali, 2021) it should be improved in terms of both technologically and in content. While doing this, it is important to take students' needs and suggestions into account in order to have better implementation of distance education.

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Chapter 6

The Impact of Interest Rate Spread and Stock Prices on Economic Growth and Inflation in Turkey: Evidence from NARDL Analysis

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ABSTRACT

The aim of this study is to find the asymmetric effect of interest rate spread and stock prices on industrial production and inflation in Turkey by using the nonlinear ARDL model. The monthly data is used for the period between 2010 and 2021. Empirical results suggest that using NARDL results, an increase in spread lowers industrial production in Turkey in the long run. The long-run asymmetric effect of spread and stock prices seems to be insignificant. The positive and negative shocks from spread and stock prices have the same effect on industrial production. However, when looking at the short-run results, negative shocks from spread seem to be insignificant. Positive shocks from stock prices appear to be significant at the level and at the different lags. Similarly, NARDL asymmetric results suggest that there is evidence for asymmetric shocks for both spread and stock prices to industrial production. NARDL findings also suggest that no evidence of the long-run asymmetric effect of spread and stock prices on inflation. The short-run estimated coefficient of the positive shock of spread is insignificant to inflation, but a negative shock decreases inflation.

Jel Codes: C10, E20, E31, E43, G12

Keywords: Economic growth, term structure of interest rate, inflation, stock prices, NARDL model

INTRODUCTION

Many studies have been carried out on the maturity structure of the interest rate in the academic field. The main purpose of these studies is to estimate the effect of the maturity structure of the interest rate on basic economic variables, the outlook in future economic activities (for example, activities such as growth, inflation, unemployment) and inflation. While many studies are being done on developed countries, developing economies are also in place. The maturity structure of the interest rate, or as it is sometimes called the interest rate spread or yield curve, is defined as the difference between the 10-year government bond rate and the 3-month treasury bill rate (Bernanke, 1990). The literature considers these two types of securities and takes a variety of securities with different maturities, including both government and private securities.

A negative yield curve indicates that the expected economic activities in the future should decrease accordingly. Because when the deviation between long and short-term interest narrows, the spread between the two causes the yield curve to fall downward and becomes negative. This condition will indicate that economic activity will slow down in the future. Estrella and Hardouvelis (1991) suggest that a downward yield curve guesses a fall in prospected future interest rates. They argue that the expected future interest rates will be low as the future economic growth will be weak. In contribution to this, Estrella et al. (2003) expressed in their study that central banks use short-term interest rates and can direct the targeted yield curve to achieve the targets of monetary policies. According to the authors, if central banks increase short-term interest rates and members of the market assume this policy to be active in lowering inflation in the long run, then long-term interest rates have to increase at lesser levels.

To predict whether there will be a recession in the economy in the future, besides the yield curve, several studies suggest that stock prices are also a leading indicator for the relevant parties to predict which way an economy is going (Ferrara and Marsilli, 2013; Harvey, 1989; Aylward and Glen, 2000;). If both variables, interest rate spread, and stock prices, have the power to predict future economic activities, then both variables can be expected to be closely related. Economic theories imply that asset prices are forward-looking. Because, when investors or fund owners buy stocks of companies, they want to estimate the future cash flows of these companies. Since the cash flows have an impact on profitability. As investors take into account the future activities of the firms, they want to have an idea of what the general economy is in or what may happen in the future. If there is a thought of a deterioration in the general economic situation in the future, for example, the possibility of a recession, then there will be an escape from the stocks and the stock markets will fall due to the fear that

companies will suffer from this negative situation. Therefore, in general, stock market indices enter a downward trend before economies shrink or a recession occurs. Or vice versa, if there is a view that there will be a recovery in the general economic situation in the future, this time stocks are bought, and an upward movement is seen in the stock markets before the economy recovers.

For example, when looking at the linkage between stock prices, investment, and gross national product level, Barro (1990) suggest that the previous price movement of stock prices is important in explaining the variation in investment level and output. Even, one of the earliest papers that investigated the drivers of stock market prices is the work of Chen et al., (1986). Using economic state variables, for instance, industrial production, inflation, risk premium, interest rate spread, consumption, and oil prices, the authors found interest rate spread as being a significant on asset prices beside other variables except for consumption variable which was found to be insignificant. Similarly, Zhou (1997) explains that regarding the previous findings, stock returns are negatively correlated with short-run interest rates due to the negative effect of inflation. However, this relation becomes positive between stock prices and long-term interest rates is due to the positive correlation between nominal returns and inflation. As the long-term bond rates are greater than short-term bill rates, the interest rate spread will be positive and upward slope. Hence, the yield curve and stock returns are positively correlated.

The connection between the yield curve and inflation has also taken much attention in research. Estrella and Mishkin (1997), in their research, found that interest rate spread has a predictive accuracy in estimating inflation for the longer term but the forecasting power is low in the short term. The theory is based on Fisher equation of real interest rate and expected inflation. Thus, Estrella and Mishkin (1997) build the following equation by assuming that expectations are rational and therefore the expected inflation will vary from actual inflation rates by some degree of noise.

$$\pi_t^m - \pi_t^n = \alpha_{m,n} + \beta_{m,n}[i_t^m - i_t^n] + n_t^{m,n} \quad (1)$$

In equation (1), Estrella and Mishkin (1997) defines π and i as the inflation rate and interest rate respectively from time t to $t+m$, and α indicates the average difference between the equivalent real rates, and finally, n shows the noise term. The authors claim that according to this equation, inflation can be forecasted using yield curve if all the input in this calculation is correct. On the other hand, Jacques (1995) suggests that the predictive and forecasting power of interest rate spread for inflation seems to be weak as the two variables demonstrate markedly

distinct time-series properties. The conclusions of Telatar et. al. (2003) also suggest that the yield curve is weak in explaining future inflation for the Turkish economy, particularly at a longer time horizon.

When we look at the Turkish sample since there are very few studies examining the relationship between these variables, the objective of this paper is to examine the behavior and relationships of interest rate spread, stock prices, industrial production, and inflation over time in the Turkish case, using the latest updated data and Nonlinear autoregressive distributed lag (NARDL) model to see if there are any asymmetric effects of interest rate spread and stock prices on industrial production and inflation in Turkey.

The layout of this study will continue as follows. The next part will be the literature review, then the data and methodological section will be introduced, and finally, the findings of the study will be evaluated.

1. Literature Review

Bernanke (1990), when employing a regression based univariate and multivariate comparison and using the interest rate spread relating commercial bond rate and T-Bill, he found that this spread appears to be better at estimating economic activities. The author further notes that the reason why the effect of spread is weak in the 1980s and afterward is because of the FED's policy of interest rates and replaceability between money market means as a result of financial innovations. In a similar manner, Estrella and Hardouvelis (1991), find that a positive, i.e. an upward slope of the yield curve linked with economic activities. The information in the yield curve affects lagged inflation data.

In their work, Estrella and Mishkin (1997) discovered in their study that monetary policy acts a crucial role in determining interest rate spread. This paper uses spread to predict future economic output and inflation rates in the US and main European countries for instance Germany, the UK, France, and Italy, and previous findings are analogous for these countries. The term structure of interest rate can foresee the real economic activities and a one-year period for the US and predict two years period for European countries. Apart from the spread, the author also found that other monetary mechanisms have effects on future economic activities and inflation rates. However, the degree of variation changes for each European country.

Ivanova et. al. (2000) use a variety of interest rate spread to forecast the German inflation rate and the business cycle. The authors prefer to use a two-regime Markov-switch model to see the effect of dynamic behavior as the economic situation changes over time. Their finding indicates that the term structure of interest rate, bank spread, and call rate spread are favorable

predictors. For instance, within the investigated period, till 1970s, bank spread found to be weak in explaining business cycle in Germany.

On the Turkish side regarding the linkage between the inflation and interest rate spread, Şahinbeyoğlu and Yalçın (2000) examined if there is any effect of spread on inflation in Turkey. The authors conclude that there is a negative relation between the spread and inflation in Turkey. The authors further claim that interest rate spread curve in Turkey is not stable overtime. Similarly, Omay (2008) in his research, to estimate future inflation and real economic activity in Turkey, employs a nonlinear econometric approach. The authors found a non-stable condition for interest rate spread, economic activity, and inflation and conclude that there is a negative relation between the spread, economic activities, and inflation in Turkey.

To find the association between stock prices and economic growth in Turkey, Başdaş, and Soyaş (2010) use the Toda-Yamamoto granger causality test. Their findings suggest that there is a causality from stock prices to real economic growth in Turkey for the period of 1997 and 2008 when using monthly data. And further, when adding interest rate to the estimation system, again the causality from stock prices appears to be positive. The authors also claim that this relationship weakens after the financial crisis of 2008.

Almost all of the above papers have assessed the relationship between the interest rate spread, economic activity, and inflation. However, it is useful to briefly mention the studies examining the relationship between the interest rate spread and the predictability of stock prices. For instance, one of the earliest papers that investigated this relationship is the study of Barro (1990). The author claims that the stock market is more powerful than the Tobin-q measurement in terms of predicting investment or GDP for Canada and the US. Similarly, Aylward and Glen (2000) looked at 23 countries to see if asset prices are leading indicators for future economic activities. Their findings suggest that while stock prices have the force to predict GDP or consumption level for some countries, this predictability weakens for some countries.

By using Mixed Data Sampling (MIDAS)-based modeling methodology, Ferrara and Marsilli (2013) employ exogenous variables to predict quarterly Gross Domestic Product. The authors' conclusions suggest that stock prices are helpful in explaining the precision of GDP estimates by comparison with a survey. However, the authors further claim that the information contained by oil prices and term spread seems to be weak.

DATA AND METHODOLOGY

To study the relationship between interest rate spread, stock prices, industrial production, and inflation, monthly data were collected from the Turkish central bank's database. The data start from 2010:02 to 2021:11. Spread data is taken from the variation between 10-year Turkish government bonds interest rates and 3-month Turkish T-bills interest rates. To measure inflation, CPI (Consumer price index) is used. BIST100 index values representing Turkish stocks will also be denoted as stock prices. As there is no monthly GDP data to measure economic growth, industrial production data will be used instead as a proxy.

As can be seen in Figure 1 below, there are continuous upward increases in stock prices and the consumer price index. On the other hand, when we look at Turkey's yield curve, a continuous decrease is observed from 2010 to 2018 and even declines to negative values in some periods. In the post-2018 period, the yield curve has increased from a negative value to a positive value indicating an upward slope.

Figure 1: Graphical representation of the variables.

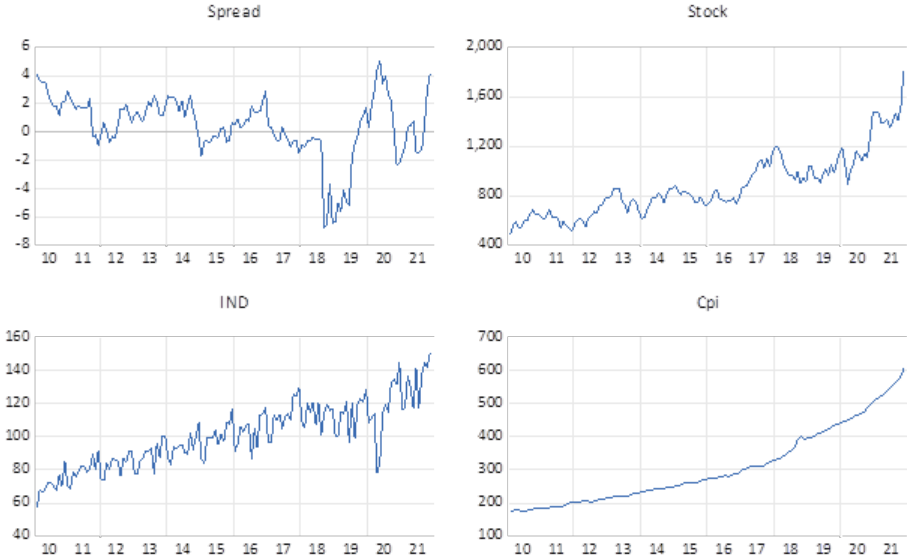


Table 1: Descriptive Statistics

Indicator	Spread	Stock	Cpi	Ind
Mean	0.478670	887.2885	309.7485	100.7158
Median	0.700000	822.4953	274.2700	99.88000
Maximum	5.019000	1857.650	686.9500	150.6500
Minimum	-6.793000	497.0549	176.1900	57.51000
Std. Dev.	2.209838	264.8436	117.4671	19.52539
Skewness	-1.129786	1.133153	0.918901	0.231349
Kurtosis	4.969784	4.332453	2.934863	2.484058
Jarque-Bera	53.53989	41.18147	20.14964	2.841686
Probability	0.000000	0.000000	0.000042	0.241510
Observations	142	142	142	142

Table 1 indicates that SPREAD has an average value of 0.47, which means that the average yield curve is positive most of the time. However, from the figure above it should be noted that during the investigation period, it is in a downward trend in the largest part of the time. The distribution of data is also given in skewness measure which shows that SPREAD data is skewed to the left, i.e. negative. The minimum and maximum values for stock prices are 497 points and 887 respectively. Whereas the CPI index has a minimum value of approximately 176 points and a maximum value of 686. STOCK prices and the CPI index show significantly positive skewness and reject the hypothesis of normality. However, the industrial production series seems to be normally distributed.

Before deciding which econometric model to use, it is necessary to look at the behavior of the variables and decide their integration level and choose the best time series model accordingly. Hence, Augmented Dickey-Fuller (ADF) (1979), Phillips-Perron (PP) (1988), and Kwiatkowski- Philips- Schmidt- Shin (KPSS) (1990) unit tests were employed to examine whether the variables contain unit root or not. While ADF and PP unit root tests' null hypothesis implies no stationarity, KPSS suggests a null hypothesis as being stationary for the variable in interest.

Some mixed results have been obtained regarding the spread variable. Although all three-unit root tests give complex results at the level, this variable becomes stationary when their first difference form is taken. According to the unit root test results in Table 2, the stock prices, industrial production level, and cpi variables become stationary when first-order differences are taken. To put it briefly, it is concluded that all variables are I(1). However, as the spread

variable’s order integration may be I(0) or I(1), it is best to use the cointegration technique of the Nonlinear autoregressive distributed lag (NARDL) model can be applied to see the relationship between the variables taken asymmetric dynamic into account.

Table 2: Unit Test Results

Variable Test		Constant		Constant and Trend	
		Level	First Difference	Level	First Difference
SPREAD	ADF	-3.0503**	-11.7456***	-2.9040	-11.7628***
	PP	-3.1834**	-11.7874***	-2.9840	-11.8085***
	KPSS	0.3832*	0.11521***	0.0871***	0.03953***
STOCK	ADF	0.6444	-11.2618***	-1.1808	-11.3988***
	PP	1.5464	-11.3150***	-0.9453	-11.7774***
	KPSS	1.3325	0.29272***	0.16529**	0.12541**
IND	ADF	0.0496	-4.81200***	-8.9769***	-4.80397***
	PP	-2.9694**	-44.694***	-8.9378***	-44.2114***
	KPSS	1.4746	0.16463***	0.0956*	0.15805**
CPI	ADF	5.3816	-1.2101	3.3313	-3.1395*
	PP	8.0897	-5.3255***	3.2614	-7.2295***
	KPSS	1.3084	1.26013***	0.3714	0.2228***

***, **, and * represent 1%, 5%, and 10% significance level respectively.

The model

This study uses a recently developed NARDL model which was proposed by Shin et. al. (2014). The authors utilize this model to introduce positive and negative asymmetric shocks of explanatory variables through short and long-run nonlinearity. This model is based on a simple OLS model and an extension of the ARDL method.

By using NARDL method, the positive and negative shocks of interest rate spread and stock prices on industrial production and inflation will be estimated by the following asymmetric long-run regression equations. In NARDL model the independent variables for asymmetric effects in the long and the short term should be broken down into positive and negative sub-variables (Schorderet, 2001)

$$Spread^+ = \sum_{i=1}^t \Delta Spread_i^+ = \sum_{i=1}^t \max (\Delta Spread_i, 0) \tag{2}$$

$$Spread^- = \sum_{i=1}^t \Delta Spread_i^- = \sum_{i=1}^t \min (\Delta Spread_i, 0) \tag{3}$$

$$Stock^+ = \sum_{i=1}^t \Delta Stock_i^+ = \sum_{i=1}^t \max (\Delta Stock_i, 0) \tag{4}$$

$$Stock^- = \sum_{i=1}^t \Delta Stock_i^- = \sum_{i=1}^t \min(\Delta Stock_i, 0) \quad (5)$$

Where, $Spread_i^+$ and $Spread_i^-$; $Stock_i^+$ and $Stock_i^-$ are partial sums of positive and negative asymmetric changes in uncertainty.

After specifying the equations of asymmetric shocks above, a NARDL model can be created by combining these equations into the ARDL model. Since, the impact of two variables on another two variables will be analyzed, two model will be constructed for both industrial production and inflation.

Model 1: For industrial production as dependent variable:

$$\begin{aligned} \Delta IND_t = & \alpha_0 + \gamma_1 \Delta IND_{t-1} + \gamma_2 \Delta SPREAD_{t-1}^+ + \gamma_3 \Delta SPREAD_{t-1}^- + \\ & \gamma_4 \Delta STOCK_{t-1}^+ + \gamma_5 \Delta STOCK_{t-1}^- + \theta_1 IND_{t-1} + \theta_2 SPREAD_{t-1}^+ + \\ & \theta_3 SPREAD_{t-1}^- + \theta_4 STOCK_{t-1}^+ + \theta_5 STOCK_{t-1}^- + \varepsilon_t \end{aligned} \quad (6)$$

Model 2: For inflation as dependent variable:

$$\begin{aligned} \Delta INF_t = & \alpha_0 + \gamma_1 \Delta INF_{t-1} + \gamma_2 \Delta SPREAD_{t-1}^+ + \gamma_3 \Delta SPREAD_{t-1}^- + \\ & \gamma_4 \Delta STOCK_{t-1}^+ + \gamma_5 \Delta STOCK_{t-1}^- + \theta_1 INF_{t-1} + \theta_2 SPREAD_{t-1}^+ + \\ & \theta_3 SPREAD_{t-1}^- + \theta_4 STOCK_{t-1}^+ + \theta_5 STOCK_{t-1}^- + \varepsilon_t \end{aligned} \quad (7)$$

Before going to discover the asymmetric shocks of spread and stock prices, it is best to check the long run cointegration between the variables by using ARDL model. To do that, two models will be built again as industrial production and inflation being dependent variables. First the long-run linkage between industrial production, spread, and stock prices will be given. Next, the long-run relation between inflation, spread and stock prices will be introduced by using ARDL form.

The basic estimated linear model for industrial production is:

$$IND_t = \alpha_0 + \beta_1 IND_{t-1} + \beta_2 SPREAD_t + \beta_3 STOCK_t + u_t$$

F-bound test results imply that there is a long-run cointegration involving industrial production, spread, and stock prices with the value of 7.9061 which is greater than the critical upper bound value set by Pesaran et. al. (2001). Table 3 implies that in the long run, spread seems to be irrelevant on industrial production but stock prices is statistically significant and affecting industrial production positively.

Following, when looking at error correction term (ECT) from ARDL analysis, the ECT term is negative (-0.5112) and statistically significant. This outcome

reveals that in the long run these variables may deviate from each other, but overtime long run equilibrium will be achieved without losing their relationship.

Table 3: ARDL long-run estimation results

Industrial Production			Inflation		
Variable	Coefficient	St. Error	Variable	Coefficient	St. Error
C	45.05096***	6.288643	C	-5.916904***	1.162884
SPREAD	-1.03545	0.754470	SPREAD	0.086118	0.142925
STOCK	0.065297***	0.006901	STOCK	0.010233***	0.001303

***, **, and * represent 1%, 5%, and 10% significance level correspondingly.

In the next step, to find the long run association between inflation, spread, and stock prices, the following model will be used in ARDL model.

$$INF_t = \alpha_0 + \beta_1 INF_{t-1} + \beta_2 SPREAD_t + \beta_3 STOCK_t + u_t$$

Similarly, the ARDL model results propose that there is a long run association amongst inflation, spread, and stock prices with F-bound test value of 11.7867 which is greater than the critical values and indicating long run relation between the variables. Like the previous results of industrial production, again spread seems to be insignificant in affecting inflation. On the other hand, stock prices once more is significant and positively related to inflation. The adjustment coefficient also suggest that the long run equilibrium exist.

Table 4: Asymmetric effects of spread/stock on industrial production and inflation.

Spread and Stock Prices					
ΔIND			ΔINF		
Variable	Coefficient	St. Error	Variable	Coefficient	St. Error
C	51.49223***	7.662853	C	-3.255314**	1.256791
IND(-1)	-0.673754***	0.104082	INF(-1)	-0.193020	0.164901
SPREAD ⁺	-1.497850**	0.718030	SPREAD ⁺ (-1)	-0.421886	0.428749
SPREAD ⁻ (-1)	0.309677	0.632125	SPREAD ⁻ (-1)	0.863290**	0.407720
STOCK ⁺ (-1)	0.024783**	0.009877	STOCK ⁺ (-1)	0.021689***	0.006194
STOCK ⁻ (-1)	-0.015081	0.015544	STOCK ⁻ (-1)	0.004828	0.008932
D(IND(-1))	-0.151709*	0.084796	D(SPREAD ⁺)	0.193508	0.865568
D(SPREAD ⁻)	-0.400042	1.104960	D(SPREAD ⁺ (-1))	0.900539	0.904947
D(SPREAD ⁻ (-1))	2.005718*	1.114602	D(SPREAD ⁻)	-1.977919***	0.636355
D(STOCK ⁺)	0.059724***	0.022588	D(SPREAD ⁻ (-2))	1.375718**	0.664680
D(STOCK ⁺ (-1))	-0.006388	0.025748	D(STOCK ⁺)	-0.004193	0.012550
D(STOCK ⁺ (-2))	-0.080410***	0.024833	D(STOCK ⁺ (-1))	0.062571	0.013911
D(STOCK ⁻)	-0.066427**	0.028669	D(STOCK ⁻)	-0.007711	0.016365
D(STOCK ⁻ (-1))	0.054092*	0.030200	D(STOCK ⁻ (-1))	-0.036940**	0.017255
D(STOCK ⁻ (-2))	0.131134***	0.030517	D(STOCK ⁻ (-2))	0.027013*	0.015017
ECT	-0.673754***	0.094189	ECT	-0.193020***	0.045180
F Bound Test	8.194893***		F Bound Test	2.920373**	
W_{LR} (Spread) [0.423243] (0.5153)			W_{LR} (Spread) [1.403014] (0.2362)		
W_{LR} (Stock) [1.706306] (0.1915)			W_{LR} (Stock) [0.833568] (0.3660)		
W_{SR} (Spread) [12.62149] (0.0004)			W_{SR} (Spread) [3.997015] (0.0456)		
W_{SR} (Stock) [44.87362] (0.0000)			W_{SR} (Stock) [6.050731] (0.0139)		

Notes: In the table, IND, INF, SPREAD, and STOCK represent industrial production, inflation, interest rate spread, and stock prices respectively. ***, **, and * represent 1%, 5%, and 10% significance level respectively. F bound test indicates the critical values set by Paseran-Shin-Smith. W_{LR} and W_{SR} show the Wald test results for long- and short- run asymmetry correspondingly. Numbers in () are p-values, in [] are χ^2 values.

NARDL Results for industrial production.

Now, to see the asymmetry effects of spread and stock prices on industrial production and inflation, NARDL method will be run. Having incorporated the partial sums of positive and negative asymmetric changes of independent variables, spread, and stock, into ARDL model, short and long-run form of the NARDL model results are shown above in Table 4.

Table 4 reveals the nonlinear effect of spread and stock prices on industrial production. In the long run, an increase in spread lowers industrial production in

Turkey. The results seem to be contradicting to the literature. For instance, Bernanke (1990); Estrella and Hardouvelis (1991), and Estrella and Mishkin (1997) found that interest rate spread is positively correlated with economic growth. On the other hand, this result is in line with what Omay (2008) found for the Turkish case. However, to interpret the asymmetric effects of the independent variables, Wald test should be taken to see if there is an asymmetric effect of spread and stock prices the calculation will be derived from Table 4.

The long-run asymmetric effect of spread and stock prices seems to be insignificant according to Wald test results. The null hypothesis of symmetric effect is accepted which means that there is no asymmetric effect from the spread and stock prices. The positive and negative shocks from spread and stock prices have the same effect on industrial production.

However, when looking at the short-run results, negative shocks from spread seem to be insignificant. Positive shocks from stock prices appear to be significant at the level and at the different lags. For example, a positive shock from stock has a positive relation with industrial production. This outcome is against the finding of Başdaş and Soytas (2010) who suggested that there is a weak association between stock prices and economic growth in Turkey. In contrast, one and two lags of positive shocks of stock prices have a negative relation with industrial production and are statistically significant in the short run. Similarly, NARDL asymmetric results suggest that there is evidence for asymmetric shocks for both spread and stock prices to industrial production.

NARDL Results for inflation

In this part, the same procedures which are applied to the dependent variable, industrial production, will be used for the other dependent variable, inflation. That is, to examine the long-run relation between inflation, interest rate spread, and stock prices and then to explore the asymmetric effect using NARDL results. The bound test of NARDL for inflation is in the inconclusive territory at a 5% significance level. It is hard to conclude that the independent variables, spread, and stock, are jointly influencing inflation in the long run. It should be noted that the linear ARDL model suggested that interest rate spread and stock prices have long run relation with inflation in Turkey. it can be concluded that the non-linearity linkage may not be exist between these three variables as NARDL results are inconclusive.

Long-run results from Table 4 reveal that one lag positive impact of spread is negative but insignificant. However, one lag negative shock of spread increases inflation. This result contradicts the finding of Şahinbeyoğlu and Yalçın (2000) who found that there is negative relation between interest rate spread and future

inflation in Turkey. In contrast, a positive shock of one lag in stock prices is positively correlated and increases inflation in Turkey.

When looking at short-run results from Table 4, the short-run estimated coefficient of the positive shock of spread is insignificant on inflation, but a negative shock decreases inflation. The results are in line with long-run outcomes. However, according to Wald test statistics, the asymmetric shocks of spread and stock prices appear to be insignificant in the long run for inflation in Turkey. In the short run, asymmetric effects exist for inflation from the explanatory variables as in the case of industrial production level.

CONCLUSION

This study investigated the relation between interest rate spread, stock prices, industrial production, and inflation in Turkey to see non-linear relationship by using nonlinear ARDL model.

Empirical analysis consists of two parts. First, the industrial production index was made the dependent variable and its relationship between the spread and share prices was assessed, and then the inflation was made the dependent variable and its relationship between the spread and stock prices was analyzed. While the linear ARDL model found the existence of long run relation between industrial production, spread and stock prices, only stock prices found to be statistically significant and affecting industrial production positively. NARDL results suggest that an increase in spread lowers industrial production in Turkey in the long run. The long-run asymmetric effect of spread and stock prices seems to be insignificant according to Wald test results. The positive and negative shocks from spread and stock prices have the same effect on industrial production. However, when looking at the short-run results, negative shocks from spread seem to be insignificant. Positive shocks from stock prices appear to be significant at the level and at the different lags. Similarly, NARDL asymmetric results suggest that there is evidence for asymmetric shocks for both spread and stock prices to industrial production.

When inflation become dependent variable in the analysis, the classical ARDL model findings indicate that there is a long run association between interest rate spread, stock prices, and inflation. However, again spread is found to be insignificant in explaining inflation and stock prices has the positive relation with inflation in the long run. On the other hand, the bound test of NARDL for inflation is in the inconclusive territory. It is hard to conclude that the independent variables, spread, and stock, are jointly influencing inflation in the long run. It should be noted that the linear ARDL model suggested that interest rate spread, and stock prices have long run relation with inflation in Turkey. it can be

concluded that the non-linearity linkage may not exist between these three variables as NARDL results are inconclusive. NARDL findings also suggest that no evidence of long run asymmetric effect of stock prices on inflation. The short-run estimated coefficient of the positive shock of spread is insignificant on inflation, but a negative shock decreases inflation.

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Chapter 7

The Place and Importance of Qualitative Research in the Professional Development of Social Work

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ABSTRACT

Objective: In the content of this study, it is aimed to examine and evaluate firstly the nature and content of qualitative research, then the place of qualitative research in social work education, and finally the similarities between qualitative research and social work practice.

Method: A compilation (review) study has been conducted using the literature on social work and qualitative research method.

Conclusion: The similarities between social work discipline and qualitative research method in terms of the basis of knowledge, skills and values are emphasized. These similarities are classified as “goal similarity”, “method similarity”, “similarity regarding the use of different data types”, “similarity in terms of the ethical principles” and “similarity in terms of the position and role of the practitioner”. There is a perfecting and empowering interaction between both study/work fields. In this context, the exploratory and interpretative features of the qualitative research method in the social work education, research, and intervention are important for professional development.

Keywords: Social work, qualitative research, social work education, ethical values.

INTRODUCTION

Social work discipline has a unique system of knowledge which interacts with the intellectual accumulation of contemporary social sciences, as well as its own value system and application ability. The professional dimension of the discipline brings with it a special sensitivity for the problem areas which concern social work and for the populations it serves. This situation requires that each case be handled within its own merits and that the unique and flexible forms of intervention should be developed for each case. Both academicians and social workers, who work with disadvantaged social groups and for their rights, must have a deep and multi-dimensional perspective for the development, humanization, and implementation of social policies.

The qualitative research has important similarities with the social work practice because of its semi-structured format and phenomenological dimension. These similarities become apparent when the goals, methods, ethical principles of practitioners are taken into account.

The social work practice focuses on the needs and powers while analyzing and coping with problems and aims to know individuals and social structures strengths while understanding the needs of them. Besides the social work practice tries to discover relative realities of cases and assuming clients' self-determination rights which interests intervention process. According the oppinions, social work practice and qualitative research has similarities because of both them are explorative, critical and interpretivist.

There are certain techniques used by experts and tools that make these techniques possible in the social work intervention process. These techniques-in-depth interviews with individuals and groups, participation and monitoring, note-taking and document review, evaluation of experiences, cultural analysis, discourse analysis, and etc.-are important topics for social work practice and qualitative research process. At this point, the techniques seem to be important for social work education.

There is an affinity between qualitative research methods and social work profession with respect to the emphasis on the ethical values. The scientific and moral values, which a qualitative researcher supposed to have, are similar to those of a social worker toward its client, institution, colleagues and society.

Furthermore, this study aims to make visible is the roles and responsibilities of the researcher/social worker in the fields. Both of these practicers has active positions in which provided by principles of profession. In addition, the intellectual, technical and cultural competencies that determine the success of the studies carried out within the social work profession and qualitative research method have clear similarities.

Consequently, It is important to understand the contributions of qualitative research knowledge to social work education and practice.

THE NATURE OF QUALITATIVE RESEARCH

Although it may seem like the research method of recent years, the history of qualitative research goes back a long time. When the roots of qualitative thinking are examined, Aristotle's and Galilean's views on the philosophy of science come to mind. It is also possible to find traces of qualitative thinking in Cartesian philosophy. At this point, *Vico*, who states through questioning and interpreting that there is not a single reality, the actions are unlimited and will differ according to the changing situation, forms the basis for the importance of descriptive and subjective thinking.

Qualitative thinking has its roots in Hermeneutics as well. It can be considered as all efforts made to lay the foundations of scientific interpretation that will serve especially for the interpretation of texts. In this sense, it is defined as “the art of understanding”. Because, like everything created by humans, texts always contain subjective meanings. It is about feelings. If these feelings are not revealed through in-depth analysis, the studies will hinder the revealing of their “true meaning”, which will remain only as external actions.

In this context, the tendency to seek qualitative information in social sciences and the abandonment of using the quantitative approach alone are observed. The criticisms that emerge primarily in sociology (Hopf & Weingarten 1979; Lamnek 1988; Spöhring 1989) and educational sciences (Zedler & Moser 1983) state that scales, tests, survey questions and research conducted with standardized tools do not give people a voice. The widespread view that such studies cannot be reduced only to options has gained importance.

In addition, the individual life story analyzes (Bromley, 1986; Denzin 1989), the interpretative paradigm being the predominant thought instead of the normative paradigm (Rainbow & Sullivan 1979), and the feminism studies that argue that women's experiences are subjective and important (Harding 1987) have been effective in qualitative thinking being important in different branches of science.

It is difficult for the authors to define the content of qualitative research. Because the nature of qualitative research requires the change and updating within itself. Based on this, Denzin and Lincoln (1994, 2000, 2005, 2011) improved their definitions and revised them over time. They point out that the emphasis of their definitions and the nature of qualitative research have constantly changed from social construction, to interpretivism, and on to social justice (Creswell 2013).

In this context, Creswell (2013: 44) defines the qualitative research below, which includes all approaches. He mentions the importance of natural setting, researcher, multiple methods, reasoning, participant interpretation, pattern, reflectivity, and holistic explanation in qualitative research.

Qualitative research begins with assumptions and the use of interpretive/theoretical frameworks that inform the study of research problems addressing the meaning individuals or groups ascribe to a social or human problem. To study this problem, qualitative researchers use an emerging qualitative approach to inquiry, the collection of data in a natural setting sensitive to the people and places under study, and data analysis that is both inductive and deductive and establishes patterns or themes. The final written report or presentation includes the voices of participants, the reflexivity of the researcher, a complex description and interpretation of the problem, and its contribution to the literature or a call for change (Creswell 2013:44).

In this context, when the foundations of qualitative thinking are examined, these foundations can be grouped into five items (Mayring 1996).

1. The topic of human sciences is always the subject. The subjects that are the target of research questions should be the starting point and the basis of the research.

While the starting point should be the subject in most studies, the hypotheses, variables, measurement tools, and methods come to the fore. Therefore, within the context of the nature of qualitative research, it is important that the subject of the research is the focus.

2. When doing any kind of analysis, first of all, a clear and comprehensive description should be made. The phenomenon researched in its nature should be described, explained and defined.

3. The phenomenon studied in human sciences is not always clear. It is always open to interpretation. In this context, every human related topic is linked to the subjective orientation, interests and needs of the human being. This situation covers the research topics as well as the research process. Each action or discourse performed by a human being, or each material used within the scope of research will cause different interpretations for each researcher. Because as much as the subject of the research, the people conducting the research have their own subjectivity.

4. In human sciences, phenomena should be examined in their own environment (setting). Rather than the cases which are dealt with in the laboratory setting in quantitative research, qualitative research requires inquiry and examination to be conducted in the environment (setting) where the subjects (cases) feel comfortable and are like themselves.

5. In qualitative research, generalizations of the research results are not made automatically. The generalization of each subject is unique and subjective.

As a result, the features of qualitative research can be classified as follows;

- It is carried out in the natural setting of the participants to ensure good interaction.
- While creating data, the researcher is at the forefront.
- It includes the use of multiple methods.
- It combines inductive and deductive processes.
- The participants' perspectives, comments, and multiple subjective opinions are focused.
- It contains a pattern that is determined and evolved over time, rather than a pre-structured pattern.
- It is reflective and interpretive.
- Ultimately, it presents a holistic and complex picture.

Based on the characteristics of qualitative research, it would be appropriate to inform about the purpose of qualitative research.

What is qualitative research done for?

Qualitative research is used to discover a problem or a topic. It is done in order to examine variables that cannot be easily measured in the content of this discovery and to reveal the suppressed voices. Especially women's studies pursue this purpose.

Qualitative research is also conducted to bring a detailed perspective to an existing complex issue. In this sense, qualitative research is carried out when it is proposed to empower the participants by ensuring their stories are told, and to bring the power relationship to an equal level.

Qualitative research is conducted to examine the participants' specified problems, in what context and situation they address. In addition, it is carried out to monitor quantitative research, to explain causal theory and mechanisms of connections. Also, qualitative research can be used to develop a theory. Along with developing theory, qualitative research method is used when quantitative measurement and statistical analysis do not fit the problem. Especially, examining the reflections of human interactions in the causality cycle is carried out by qualitative research method.

As can be seen, qualitative research can be conducted with the aim of revealing "meaning" and "experience" and making it visible, "creating a story", "empowering", "forming a theory", "questioning causality".

Different methods are used in qualitative research to achieve the stated goals. These are dealt with in another title.

What are the data generation methods of qualitative research?

In response to this question, Kumbetoğlu (2008) lists the data collection methods used in qualitative research as follows:

- In-depth interviews are grouped as structured, semi-structured, unstructured;
- Focus group interviews;
- Observation is grouped as attended and non-attended;
- Written, audio-visual documents (Social examination reports are also included in this group.) are included in the document review;
- Other data.

When it comes to make a general evaluation in this section where the nature, purpose and data collection methods of qualitative research are tried to be explained (Creswell 2013), the researcher should be meticulous when conducting qualitative research and should use different data generation techniques. In addition to including the basic features of qualitative research, the research should also encompass different types of approaches. Especially when starting qualitative research, the research should be started with a single concept or focus. Data generation, analysis and reporting processes should be carried out in accordance with the rules of qualitative research, respecting ethical rules. By using abstraction types in the analysis of the data, it should be written in a way to attract the reader.

In addition to the knowledge of qualitative research, another important issue is the examination of the relationship between qualitative research and social work education. Because qualitative research knowledge, skills and experience have the quality of strengthening the social work knowledge-skills and value focuses.

The place of qualitative research in social work education

With the institutionalization of the social work profession, social work education has been structured as formal. Since then, research knowledge has taken its place in the education as a social work skill. In the 19th century, home visits to families who were distributed social aid in the UK and the USA had an important effect on the development of the social work profession. Home visits, previously made by volunteers, necessitated the development of certain standards in social examination processes. For this purpose, the organization named “The Charity Organization Society” (COS) was established in London in 1869. This association helped to increase efficiency and effectiveness by eliminating the lack of coordination between the poverty law and charitable

organizations. In addition to making evaluations and reporting in the field of social work, COS was also a pioneer in the social work training of women who worked voluntarily. In this context, it is considered as the first formation and effort of institutionalization in the field of social work. (Denney 1998; cited in Artan 2011).

With the development of social work education and the standardization of social examination, social work practice has acquired a professional identity beyond being voluntary philanthropic activities. This new orientation, expressed as “scientific philanthropy” (Thyer 2010), has characterized the education and practice of the social work profession by emphasizing the importance of scientific research.

Everitt, Hardiker, Littlewood, and Mullender (1992) argue that intellectual work and research are essential in order to strive for human welfare, justice and equality, which are the aim of social welfare professionals, and to reveal the structures and mechanisms that produce and maintain inequality. Thyer (2010) suggests that especially since the 1970s, social workers have developed an impressive set of quantitative and qualitative methods to help them monitor and evaluate practices, make needs assessments, and develop practice guidelines based on empirical knowledge. He points out that parallel to these developments, social workers have also developed a certain understanding of ethical issues related to research and evaluation. In this context, it is stated that, in recent years, social workers have greatly strengthened their understanding of technical issues related to research design, sampling, validity, reliability, measurement, tool development, data analysis, and the implementation of research findings, which should be supported by a strong ethical understanding.

In this respect, along with the professionalization that has occurred as a result of the institutionalization of the social work profession, it is required to carry out evidence-based, systematic practices and research. In this context, although quantitative research has a dominant role, qualitative research has also gained a place in social work literature. In this study, we aim to show how the nature and methods of social work and those of qualitative research overlap and complement each other.

Similarities between qualitative research and social work discipline

Qualitative research method and social work discipline overlap in many different ways. It is possible to examine these similarities and overlaps in the following focuses: “goal similarity”, “method similarity”, “similarity in terms of the use of different data types”, “similarity in terms of ethical principles”, and “similarity in terms of the position and role of the practitioner”.

Goal similarity

Rubin and Babbie (2016) state that social work research aims to provide practical information that social workers require to solve the problems they face. In this context, it is mentioned that social work research, like social work practice, is an effort which is empathic, has the focus on problem-solving and includes the implementation. However, the importance of social work practitioners' understanding on social work research methods in order to distinguish the studies which create a change from the studies which do not have an impact is emphasized. This understanding should begin with a focus on the goals of social work research. Social work research is often carried out to inquiry a topic and to explore an unknown area. This goal occurs when a researcher examines a new area of interest, when the topic of study is relatively new and has not been studied, or when a researcher tries to test the feasibility of conducting a more careful study, or when he/she proposes to enhance the methods to be used in a study (Rubin & Babbie 2016). An in-depth exploration about the field of study enables the social worker to develop the practices which are beneficial for the client and reveals the subjective needs of the client. This goal, which is important for both areas, focuses on the process. In this way, the researcher enters the natural setting and touches the topic of study, feels it, lives with it and observes it (such as individual behavior, family, group, mediation and/or community) (Strauss & Corbin 1998; cited in Thyer 2010). These experiences affect the subjectivity of the results of the research for qualitative researchers and the development of appropriate intervention plans of social workers.

Among the reasons for the use of qualitative research in social work, Thyer (2010) lists the following items: (a) Exploring a topic or phenomenon, which is actually little known; (b) pursuing or working on a sensitive and emotionally deep topic; (c) capturing the so-called lived experience from the perspectives of those who experienced it and creating meaning from it; (d) monitoring the effectiveness of programs and interventions; (e) reaching a deadlock over data collection, interpretation of data, and/or the findings; (f) giving a "voice" to a group and combining the social activism with the research.

As can be seen, both qualitative research method and social work discipline include an "in-depth" examination regarding the solution of a "problem / focus / issue". They make an effort to explain the human-related, non-categorical and unpredictable (unforeseeable) causality in this identified issue.

They also aim to "empower" the participants / clients who are lost (ignored) within the large groups and given only in numbers, and to "make them visible".

In this context, the social worker is in an effort for change to realize the human rights and social justice.

Method similarity

There are methodological similarities between the qualitative research, which defines the reality that it aims to explore as a subjective fiction, and the social work discipline that tries to understand the structure and needs of the problem area where it works.

Both fields of study/work deal with information in a systematic structure and carry out its intervention within a theoretical framework. Qualitative research includes different techniques and approaches according to the nature of the field of study and the population. Social work discipline also performed its application in a multi-dimensional and inclusive theoretical framework for the clients of the problem area.

In other words, we can consider the social work research as a social practice. How we understand it as a social practice will largely depend on the perspectives we prefer. In this context, D'Cruz & Jones (2004) provide us with examples of the differences which may occur between liberal and radical perspectives. When viewed through a liberal lens, the social role of the researcher can be understood as the role of an independent researcher who follows certain codes of conduct and professionally validated techniques to generate new knowledge, and that then this knowledge can be made available to others (policy makers, practitioners, industries, communities) to act or not to act as they see fit. When we review the research with a radical lens, it is stated that the researcher can be considered as a social actor involved in the reproduction and/or transformation of existing social exclusion or inclusion, domination or oppression relations. In this context, they argue that both the processes and outcomes of knowledge generation will be accepted and evaluated as a contribution to social change.

Tutty et al. (1996; as cited in Thyer 2010) suggest that social work research develops based on “facts” and works with a perspective which does not require defined questions and hypotheses. In this process, the research moves logically from a particular point of view to a set of questions, hypotheses, or theory.

As stated above, it can be said that there is a similarity between the social work research and the qualitative research in terms of including the goal-oriented method and “systematic thinking”, respectively. D'Cruz & Jones (2004) emphasize that while conducting the qualitative research, we are interested in a series of information resulting from our interaction with books, journals, files, databases, participants, colleagues, agencies, etc. They point out

that the orderly production and processing of knowledge requires an intellectual discipline from us, which expands our daily capacity to do just that. While mentioning that an important aspect of this intellectual discipline is related to critical thinking, they emphasize that this is also valid for the social work research and practice.

Research-oriented practice is about the analytical evaluation of social needs and resources and the development, implementation and evaluation of strategies to meet this need. It is not limited by the organizational or professional boundaries (Everitt, Hardiker, Littlewood, & Mullender 1992). However, the cyclicity of the process is also in question; the process can be renewed according to the conditions (situations), it can be returned to the beginning, the rules can be redefined.

In this context, the qualitative research method has important contributions in the social work education. These contributions are related to the principles of development of the knowledge base of social work discipline. First of all, the theory-based practice has an important place in both the professional discipline and the research method. While qualitative research attempts to discover the knowledge of the “reality (fact)” to which it is directed within the framework of a determined theory, the social work discipline plans its interventions according to appropriate approaches. In this context, they follow an inductive process. On the other hand, flexibility is in the foreground for both fields of study. Instead of rules and sharp boundaries, they work in the light of semi-structured models and interpretable principles. Another concept that brings qualitative research and social work discipline closer is self-reflexivity. Rubin & Babbie (2016) point out that qualitative research skills allow social workers to transfer their observational skills and enable them to narrate their field experiences and subjective experiences of their clients with their own internal interpretations. The subjective experiences of the researcher / practitioner towards the research field or topic, and his/her internal contributions to the evaluation make him/her an active part of the process by moving away from instrumentality. The social worker, as a subject of the process, has a role that methodically evaluates and reproduces knowledge in both identities. Therefore, the researcher / practitioner is expected to have intellectual discipline and critical thinking skills.

Similarity in terms of the use of different data types

Another area in which the qualitative research method has similarities with the social work discipline is the use of different types of data. Thyre (2010) states that qualitative social work research uses different data generation

techniques to obtain information embedded from written, verbal, and observational data.

Social workers examine their clients in depth about a problem they are dealing with, use different data generation methods together, and write their report regarding the information they obtain from data sources. The technique of generating data for social workers includes primarily “in-depth” interviews, observations, examining necessary documents, and obtaining information from different sources in the natural settings of their clients. In line with the information obtained from different sources, the social worker records this information with a “social examination report” and determines the plan of the professional intervention. In this way, he/she tries to obtain the most valid, reliable and accurate information by filtering the situation (environment) of his/her client from different data sources.

Social workers primarily evaluate the clients within their environment (neighborhood). They do not only get information from a single source, they inquiry many sources about their clients. Social workers, who are primarily competent in conducting in-depth interviews, examine the people, records and documents related to the issue in detail, and write their reports by synthesizing these sources, and make the intervention plan after multiple process evaluation. Similarly, the fact that qualitative researchers use different sources related to the topic they deal with in the research process is a point that strengthens their study.

In qualitative research, a researcher tries to use different data generation methods together to examine the problem he/she deals with. He/she examines his/her participants in their own environment, strives not to form a power relationship, to establish an equal relationship and to ensure that the participant has confidence in himself/herself. He/she uses different data generation methods together to secure that the obtained data is valid and reliable.

The methods used by social workers include working with the individual, group work, and working with the community. For this reason, they tend to use the interview and focus group methods, which are also encompassed in qualitative research. This is the strength of social workers.

When the similarities in terms of the use of different types of data are examined, the knowledge and skills of working with individuals and groups obtained through social work training facilitates the application of data collection techniques used in qualitative research method. In addition, the data acquisition methods used are complementary to each other. Using different data acquisition techniques together when generating the data is a similarity which strengthens both the professional skills and the research skills.

Similarity in terms of ethical principles

Ethical principles are important for qualitative research method and social work discipline, both of which focus on human experience. When their ethical principles are examined, they work within certain protective and regulatory principles such as not harming the working population groups, respecting and protecting their rights.

One of the first steps in ethical principles in social science research was taken with the 1964 Helsinki Declaration of Human Rights (WMA Declaration of Helsinki - Ethical Principles for Medical Research Involving Human Subjects). It consists of principles including;

- Ethical responsibility belongs to the individual researcher.
- Research participants, especially students, should not be pushed into mental depression for personal gain.
- Informed consent is recommended or required for research participants.
- Regarding the privacy, confidentiality or anonymity should be recognized.
- Participants should not be forced or humiliated.
- A research method suitable for the problem should be adopted.
- Results that are not appropriate for the participants should be excluded from the research.
- The institution (sponsor) supporting the research should be identified.
- Details of the research design regarding the findings should be released.
- All interpretations of the findings should be consistent with the data.
- The highest procedural standards should be used and the accuracy should be strived.
- Confidential (secret) research should not be conducted.
- The unintended side effects of the research should be anticipated and these should be considered in the publication of the findings.

“The Ethical Issues Checklist”, which Patton (2002) state that it should be taken into account in qualitative research, consists of the followings: explaining the purpose of the research and the methods to be used; promises (commitments) and their reciprocity; risk assessment; privacy (confidentiality); data access and ownership; informing the individuals and groups from whom data will be collected and obtaining their consent; the mental and spiritual health of the interviewer; advise/counseling (who will be your advisor on ethical issues); data collection boundaries (limits); legal provisions and expectations versus ethical behavior.

While conducting social work research, certain guidelines and regulatory principles that guide the field of practice of the profession are applied. The followings can be listed in this context: NASW (2017) Code of Ethics, voluntary participation, information and consent forms, principle of non-harm to the participant, principle of anonymity and confidentiality, principle of transparency towards participants, and analysis and reporting studies.

In the context of the voluntary participation principle, individuals should not be forced to participate in the research and the volunteering of the participants should be written and their consent should be obtained with information and consent forms. In the context of the principle of non-harm to the participant, it implies anticipating dangers/risks and taking precautions within the scope of the research process and the publication of the results. Within the scope of anonymity and confidentiality principle, it covers the protection of the privacy of each participant's information. The principle of transparency towards the participants, on the other hand, includes informing the participants about the process from the beginning to the end of the research and involving them in the process if necessary. Analysis and reporting studies also express the responsibility to write and publish the results of the study without harming the participants, respecting their rights and confidentiality.

Both the participant in qualitative research and the client in social work have the *right to self-determination*. *Volunteerism / obtaining consent / informed consent* are essential for both focuses (fields). Both focuses respect the privacy and confidentiality of both the participant and the client. It is necessary to *establish equal relations* and *pay attention to the relationship between force/pressure and power* in both focal points. For both parties, the *high interest of the participant / client* is at the forefront. Both sides are aware of the *subjectivity* of the participant / client. The purpose of the examination and research is not to generalize, but to reveal the *difference* of the participant / client.

Similarity in terms of practitioner's position and role

Researcher in qualitative research and social worker in social work discipline have an effective position and role. This effectiveness requires the practitioner to be in focus. The practitioner's knowledge, worldview, preferred approach and experiences will affect the process and outcome of the study performed by him/her. Therefore, the position and role of the practitioner are important for both areas. The importance of this self-reflexivity should be emphasized in the studies.

For both areas, the practitioner contributes to the change process and experiences this change himself/herself. In this context, he/she has cultural competence and background knowledge. These competencies bring along empathic skills and self-reflexivity.

The social worker or the researcher, who is the subject of the practice, is both the changer and the changing of the process which is performed by him/her. No social worker or researcher can remain (stay) the same over time after starting to work or research on the group that he/she deals with.

Each practitioner (social worker/researcher) is expected to have cultural competence, and background knowledge about the group and problem area he works/researches. In the research/work process, it is important for the practitioner to adopt an empathetic stance, to establish relationships on the basis of equality, and to avoid communication which involves power/force and pressure/coercion. During and as a result of the work/research, practitioners are expected to respect the rights of the participants and take an advocacy role to increase their well-being.

Neuman (1994) describes 10 roles that the researcher should use, as follows:
The researcher;

1. Observes ordinary events and everyday activities as they happen in natural settings, in addition to any unusual occurrences;

2. Becomes directly involved with the people being studied and personally experiences the process of daily social life in the field setting;

3. Acquires an insider's point of view while maintaining the analytic perspective or distance of an outsider;

4. Uses a variety of techniques and social skills in a flexible manner as the situation demands;

5. Produces data in the form of extensive written notes as well as diagrams, maps, or pictures to provide very detailed descriptions;

6. Sees events holistically (i.e., as a whole unit, not in pieces) and individually in their social context;

7. Understands and develops empathy for members in a field setting and does not record only "cold" objective facts;

8. Notices both explicit (recognized, conscious, spoken) and tacit (less recognized, implicit, unspoken) aspects of culture;

9. Observes ongoing social processes without imposing an outside point of view;

10. Copes with high levels of personal stress, uncertainty, ethical dilemmas, and ambiguity.

In the context of social work education, the competence stipulated by the Educational Policy and Accreditation Standards of CSWE (Council on Social Work Education) (2015), which recommends that all social work students should have it, is defined as follows:

Competency 4: Engage in Practice-informed Research and Research-informed Practice

Social workers understand quantitative and qualitative research methods and their respective roles in advancing a science of social work and in evaluating their practice. Social workers know the principles of logic, scientific inquiry, and culturally informed and ethical approaches to building knowledge. Social workers understand that evidence that informs practice derives from multi-disciplinary sources and multiple ways of knowing. They also understand the processes for translating research findings into effective practice. Social workers:

- *use practice experience and theory to inform scientific inquiry and research;*
- *apply critical thinking to engage in analysis of quantitative and qualitative research methods and research findings;*
- *use and translate research evidence to inform and improve practice, policy, and service delivery (CSWE, 2015).*

Another area of commonality in the context of the role of the practitioner is cultural competence. Rubin and Babbie (2016) interpret the cultural competence, through which the qualitative research knowledge contributes to social work education, as being aware of and responding appropriately to cultural factors and cultural differences which should influence what we research, how we research, and how we interpret our findings. Accordingly, they point out that culturally competent researchers can consider the migration experience and acculturation as factors that will include them in their research while examining the differences between minority and majority populations.

On the other hand, according to Rubin and Babbie (2016), however, the main reason for using the research is the empathy towards our clients (applicants). They argue that social workers harness social work research because of their empathy towards their clients. They claim that helping clients is attached importance, so the scientific evidence about available services and alternative service offerings is sought. In order to prevent the client from being harmed by improper services, creating a scientific basis for the practices requires the qualitative research knowledge.

Although the subject is a participant (respondent) / client (applicant) for both qualitative research and social work, in fact the social worker or researcher is also an important part of the process himself/herself. The worldview of the researcher or social worker determines the direction of the research / examination. For this reason, both social workers and people who conduct qualitative research should be aware of their own feelings, thoughts and behaviors. They should try to know (be aware of) what they are. Therefore, they should know how to respect differences, empathize with others, and protect human rights and social justice. Because, on both sides, the issues related to the human being, especially the disadvantaged (powerless) human being, are studied more. It is important for both sides to work with the groups that the society calls marginal and to make their voices heard in the context of the advocacy principle. It is important to present the research results on a rights basis in order to reveal the needs of disadvantaged groups such as women, the elderly, the disabled, the homeless, children, young people, patients, immigrants, etc, and to make them visible.

In research-oriented practice and practice-oriented research, the roles of the practitioner are transitional and integral. In this sense, the social work researcher is not only in a passive position as observer and transmitter. The qualitative research method also provides the researcher with the opportunity of critical intervention. In this context, both identity roles have functional and change-oriented similarities for the well-being of the population studied/worked.

CONCLUSION

The mindset which claims that the reality that surrounds human beings from inside and outside is relative and that interpretations and actions are unlimited, has also influenced the transformation of research methods. The roots of qualitative research, which started to come to the fore with the effect of the postmodern perspective on research techniques, date back to a much earlier history, the ancient Greek philosophy of knowledge (epistemology). On the other hand, the science of hermeneutics contains the roots of the qualitative research method, with the emphasis that the discovery of the subjective meanings and emotions contained in the texts will provide the “real meaning” embedded in the text. The paradigm shift (interpretive rather than normative) initially seen in sociology studies in the 20th century has brought with the preference of qualitative research that reveals subjective experiences.

Qualitative research is a research method that strives to reveal the meaning and discover the story embedded in the text. In this context, it has unique goals,

and techniques that enable it to achieve these goals. Instead of options and scales, in-depth interviews, focus group interviews, observation and participation reports, document reviews and other subjective data are used. The operational interplay between the social work profession and the qualitative research method appears in the context of this emphasis on subjectivity. In the 19th century, the need for home visits to the poor and sick people to be made by the educated professionals crystallize the research knowledge, skills and ethics as a professional competence.

The services provided in the field of human welfare and social justice require intellectual work in the context of need systems and intervention models. Exploratory tools beyond normative research techniques are required to access information and to transform such information into services. The social work profession makes use of the exploration of the interpretative and subjective reality level of qualitative research from the individual (micro) dimension to the social (macro) dimension in the interviews with its clients.

The similarities at this level strengthen the common points between the social work profession and the qualitative research method. The relationship we classify as “goal similarity”, “method similarity”, “similarity in terms of the use of different data types”, “similarity in terms of the ethical principles” and “similarity in terms of the position and role of the practitioner” in this study also reveals the empowering role of qualitative research knowledge in the social work education.

Social workers need in-depth and solution-oriented knowledge on the population groups and problem areas they deal with in order to develop appropriate intervention plans. In this context, the purpose of obtaining solution- and process-oriented empathic knowledge, revealing exploratory knowledge based on observation and subjective experiences includes the direct similarities with qualitative research processes.

In addition, the reporting and documentation techniques that social workers use to collect data incorporate the critical and systematic thinking principles of qualitative research. There is a method similarity that makes it possible for them to discover the system in which the individuals live. It is important for researchers and social workers to choose the right theory or approach to create an intellectual framework during the research or study period. The meaning embedded in the data obtained turns into practical knowledge after this intellectual effort.

This method similarity also includes commonality in terms of benefiting from different data collection tools. Qualitative researchers make use of techniques such as group work, individual in-depth interviews, observations,

and document inquiry during the field study process. Social workers follow a similar process while performing their professional work. Different data collection techniques are used to understand the system surrounding the individual at the point of systematically exploring individual problems.

The system of ethical rules that social workers should pay attention to while performing their professional work has important similarities with the rules that stand out for qualitative researchers. Emphasizing the importance of privacy, consent, the right to self-determination, avoiding pressure (force) and power, and establishing equal relations, this ethical system has a regulatory and protective significance in both areas.

Another factor that brings qualitative researchers and social workers together at the same point is their position in the problem area. The social worker as a change agent and the qualitative researcher as an explorer become a part of the process that creates the subjective reality in which they approach. In this context, cultural competence, empathy skills and principled stance have an important place in both research/work fields. Both research/work fields pursue their professional studies considering that they are a part and observer of live experiences instead of dull phenomena.

When all these similarities are taken into account, it is seen that qualitative research knowledge has an important place in the professional development of social workers. Qualitative research knowledge provides opportunities to develop and strengthen the competencies of social workers, both at the undergraduate and postgraduate level and within the experience-based professional development process. In order to improve these opportunities, it is essential to disseminate the teaching of qualitative research knowledge, skills and ethical values in social work education, to increase qualitative method-oriented studies in social work research and to ensure integration between knowledge and skills in this context.

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Chapter 8

Turkish People's Responses to COVID-19 Outbreak: Psychological Health in Student and Non-Student Populations

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ABSTRACT

This study aimed to investigate the level of anxiety and stress and some related factors in the university students and non-student population from the beginning of the COVID-19 pandemic in Turkey. We used a sample of 1356 participants, including 515 (38.0%) university students and 841 (62.0%) non-students recruited between 31 March and 19 April 2020. Frequency analysis, Chi-square (χ^2) test and multiple linear regression analysis were used. The results showed relatively high anxiety and stress symptoms in the student and non-student groups during the COVID-19 pandemic in Turkey. The results also showed students had considerably higher scores in every indicator of stress compared to non-students. Although participants generally use formal information sources, we found that students used and found formal information sources more sufficient and reliable than non-students while it was the same about the informal information sources for non-students. High levels of perceived reliability of formal information sources, being female and having chronic illnesses were risk factors for various aspects of both groups' mental health. Additionally, the high level of perceived macro-control in Turkey was a protective factor for high anxiety and stress levels in both groups. These results indicated that the effective use of informal sources by the health authorities was critical. Besides, the information given through the health authorities should keep the balance between the realistic aspect of scientific information and its effects on peoples' state of mental health.

Keywords: COVID-19, perceived macro-control, mental health, anxiety, stress

INTRODUCTION

Coronavirus disease (COVID-19) was first seen on 31 December 2019 in Wuhan city, China, and soon affected the world (World Health Organization, 2020a). The first case in Turkey was reported on 11 March 2020, and according to the official website of the Ministry of Health, there were 288126 total infected people, including people in severe condition and 6951 deaths due to COVID-19 in Turkey as of 11 September 2020 (The Republic of Turkey Ministry of Health, 2020a). To slow down the spread of the pandemic and bring down the death toll, the Turkish government took some measures by implementing limitations to people's mobility and contact as much as possible.

It is stated that COVID-19 may cause some stress reactions by increasing fear and uncertainty due to the high probability of contamination and death and unusual ways of protection such as social distance and isolation (American Psychological Association, 2020; World Health Organization, 2020b). An increasing number of publications throughout the world showed that people were at risk of fear, anxiety, and depression due to the COVID-19 pandemic (e.g., Cao et al., 2020; González-Sanguino et al., 2020; Huang & Zhao, 2020; Li et al., 2020; Liu et al., 2020; Moghanibashi-Mansourieh, 2020; Rajkumar, 2020; Rossi et al., 2020; Yang et al., 2020; Wang et al., 2020a; Wang et al., 2020b). Many risk factors were identified to be associated with mental health during the COVID-19 pandemic. For instance, when compared to males, females were identified to be generally more likely to develop depressive symptoms (Rossi et al., 2020; Wang et al., 2020b), anxiety (Moghanibashi-Mansourieh, 2020; Rossi et al., 2020; Wang et al., 2020a), stress (Rossi et al., 2020; Wang et al., 2020b) and insomnia and adjustment disorder (Rossi et al., 2020). Being a student was also a significant risk factor for exhibiting more depressive symptoms (González-Sanguino et al., 2020; Wang et al., 2020b), anxiety (Wang et al., 2020b) and stress (Wang et al., 2020b) as compared to other age groups or occupational statuses (i.e., 40 years or above or retirement).

As the studies throughout the world continue growing, there are a minimal number of studies from Turkey focusing on the mental health impacts of the COVID-19 pandemic on people (Akdeniz et al., 2020; Evren et al., 2020; Özdin & Bayrak Özdin, 2020; Yıldırım et al., 2020). The most comprehensive of these studies (Özdin & Bayrak Özdin, 2020) was conducted on the general population, and its results showed relatively high levels of depression (23.6%) and anxiety (45.1%). In the light of these studies conducted in Turkey, this study aimed to investigate the level of anxiety and stress in the university students and non-student population in the early stages of the COVID-19 pandemic in Turkey. The study also examined factors (gender, place of

residence, monthly income and chronic illnesses, the sources, sufficiency and reliability of COVID-19 related information and perceived macro control) associated with anxiety and depression in student and non-student groups separately. It focused on these groups due to their different conditions in the face of the pandemic. Firstly, the students' educational process was suddenly halted and regulated via distance education strategies after a period of ambiguity. Secondly, the proportion of the younger population is high in Turkish society (Turkish Statistical Institute, n.d.) making it a significant social group to understand in periods of crises. Students were also found to experience a psychological impact of the outbreak and higher stress levels, anxiety, and depression in other studies (e.g., Wang et al., 2020b). Hence, it is critical to understand the psychological effects of the pandemic on their mental health and how it differs from the non-student population so that the policymakers can make informed decisions to minimize the adverse effects of such a sudden change in people's lives.

This cross-sectional study was conducted with participants living in Turkey at 18 years of age and older. Data was collected via an online survey using convenience sampling techniques. The study was announced via e-mail and social media platforms such as Instagram, Twitter, Facebook and WhatsApp status. A sample of 955 (70.4%) females and 401 (29.6%) males, including university students and non-student adults (N=1356), participated in the study. The student group had a total of 515 (38%) participants, composed of 426 (82.7%) females and 89 (17.3%) males. The non-student group had a total of 841 (62.0%) participants including 529 (62.9%) women and 312 (37.1%) men. Detailed demographic information of the participants is in Table 1.

Table 1. Sociodemographic and clinical features of the participants

	Student % (N)	Non-student % (N)	Total % (N)
Gender			
Female	82.7 (426)	62.9 (529)	70.4 (955)
Male	17.3 (89)	37.1 (312)	29.6 (401)
Total	38.0 (515)	62.0 (841)	100 (1356)
Age			
18-24	97.3 (501)	11.7 (98)	44.2 (599)
25-34	1.9 (10)	23.8 (200)	15.5 (210)
35-54	0.4 (2)	47.6 (400)	29.6 (402)
55-64	0.2 (1)	13.8 (116)	8.6 (117)
65 or above	0.2 (1)	3.2 (27)	2.1 (28)
Place of residence			
Metropolitan center	50.5 (260)	62.5 (526)	58.0 (786)
City center	17.7 (91)	15.9 (134)	16.6 (225)
Town	21.2 (109)	18.7 (157)	19.6 (266)
Village	10.7 (55)	2.9 (24)	5.8 (79)
Monthly income			
0-2.500 TL	33.9 (174)	11.0 (92)	19.7 (266)
2.501-5.000 TL	45.5 (234)	32.1 (269)	37.2 (503)
5.001-10.000 TL	18.3 (94)	41.1 (345)	32.4 (439)
10.001 or above	2.3 (12)	15.9 (133)	10.7 (145)
Chronic illnesses			
Yes	9.7 (50)	19.7 (166)	15.9 (216)
No	90.3 (465)	80.3 (675)	84.2 (1140)

Demographic information included gender, age, place of residence, monthly income, and health risk status defined by the ministry of health. COVID-19 Anxiety Scale, Stress Scale, information on various aspects of COVID-19 and Perceived macro-control of COVID-19 were covered in this study.

COVID-19 Anxiety Scale

Five items were used to measure participants' anxiety about being infected by COVID-19. The items had been created by the researchers on the bases of the studies (e.g., Bults et al., 2011; Wang et al., 2020b) on similar subjects. The items had been rated on a 5-point scale ranging from Strongly disagree (1) to Strongly agree (5). Exploratory factor analysis was used to examine the factor structure of the anxiety scale. The results showed that the scale had a single-factor structure which explained 66.02% of the total variance and eigenvalues was 3.30. Cronbach's alpha coefficient was .86.

Stress Scale

Seven items (e.g., I feel more sad, depressed, and hopeless) were used to measure the stress level of participants during COVID-19. The participants were asked to rate their stress level during the pandemic compared to the period immediately before it on a 5-point scale ranging from Strongly disagree (1) to Strongly agree (5). Exploratory factor analysis was used to examine the factor structure of the stress scale. The results showed that the scale had a single-factor structure which explained 64.46% of the total variance and eigenvalues was 4.51. Cronbach's alpha coefficient was .91.

Aspects of COVID-19 related information

In this part, four sources of COVID-19 related information were identified which included the statements of the minister of health, statements of the ministry of health scientific committee members, the news from social media, and acquaintances. The participants were asked to rate how frequently they used these four sources of information. Besides, they were asked how sufficient and reliable they found the information from these sources. Participants rated all questions on a 5-point scale ranging from Strongly disagree (1) to Strongly agree (5).

Perceived macro-control of COVID-19

Perceived macro-control was measured via two items taken from Çırakoğlu's (2011) study on Influenza A (H1N1) pandemic. These items measure participants' beliefs about the effectiveness of measures taken at national or

international levels. The questions had been rated on a 5-point scale ranging from Strongly disagree (1) to Strongly agree (5).

RESULTS

Psychological state

Anxiety

The level of anxiety about the transmission of the coronavirus was generally high in all participants. However, the data showed that they were more concerned, even fearful, with the possibility of their family members getting coronavirus more than the possibility of getting the disease themselves. It turned out to be especially true for the student group. Their fear about a family member getting the coronavirus was significantly higher than those of non-students. However, the ratio of non-students that worried about the possibility of being infected by the coronavirus was significantly higher than the students with the same worries. The proportion of non-students who stated that they frequently found themselves thinking about coronavirus was also significantly higher than students (see Table 2).

Stress

Nearly half of all the participants stated having all stress indicators such as feelings of sadness, depression, hopelessness, fatigue, lack of enjoyment in life, irregularities in appetite, sleeping and concentration problems, and a generally negative feeling. The students' stress levels were significantly higher than those of non-students in all stress indicators (see Table 2).

Table 2. Levels of anxiety and stress during the COVID-19 outbreak

	Student % (N)	Non- student % (N)	All* % (N)	P Value
Anxiety (Strongly agree/agree)				
I am concerned about the possibility of catching coronavirus.	61.1 (311)	69.1 (558)	66.0 (869)	s
I am concerned about the possibility of a family member catching coronavirus.	89.7 (452)	86.9 (701)	87.9 (1153)	ns
I fear catching the coronavirus.	65.8 (331)	69.2 (552)	67.9 (883)	ns
I fear a family member catching coronavirus.	92.8 (467)	88.5 (716)	90.2 (1183)	s
I frequently find myself thinking about the coronavirus.	40.8 (207)	54.2 (436)	49.0 (643)	s
Stress (Strongly agree/agree)				
I no longer enjoy the things I used to.	53.57 (270)	42.54 (342)	46.79 (612)	s
I feel more sad, depressed and hopeless.	61.23 (308)	46.77 (376)	52.33 (684)	s
I have trouble sleeping or sleep more than usual.	57.31 (290)	36.94 (297)	44.81 (587)	s
I feel more tired or energy loss.	61.55 (309)	41.04 (325)	49.00 (634)	s
I feel less or excessive appetite.	60.73 (300)	37.44 (295)	46.41 (595)	s
I feel bad about myself (such as thinking you have failed or disappointed your family and environment).	38.77 (195)	26.33 (208)	31.17 (403)	s
I have difficulty concentrating (such as reading newspaper or watching television).	49.60 (251)	32.06 (253)	38.92 (504)	s

The sources, sufficiency and reliability of COVID-19 related information and perceived control of COVID-19

Sources of information

The vast majority of respondents stated that they received the information on COVID-19 from the health minister's statements, followed by those of the scientific committee members, social media, and acquaintances. Chi-square test results showed that the percentage of students who obtained information through the minister of health statements was significantly higher than that of non-students. On the other hand, non-students stated that they gathered information through acquaintances more than students (see Table 3).

Sufficiency of the information

Participants stated that they found the scientific committee's explanations most sufficient, followed by those of the minister of health, social media, and acquaintances, respectively. Chi-square test results showed that the proportion of non-students who found the information from the acquaintances sufficient was significantly higher than that of the students. Students stated that they found the statements of the minister of health and members of the scientific committee to be much sufficient than non-students (see Table 3).

Reliability of the information sources

Participants found the scientific committee's statements the most reliable, followed by those of the minister of health, social media, and acquaintances, respectively. The proportion of students relying on the health minister's statements and the scientific committee was significantly higher than that of non-students. The proportion of non-students who found the news on social media, and the information from acquaintances reliable was significantly higher than those of the student group (see Table 3).

Perceived Macro Control

The proportion of respondents indicating that prevention work was adequate in Turkey and the world was low. The proportion of students who thought there was sufficient preventive work in Turkey was significantly higher than non-students (see Table 3).

Table 3. The sources, sufficiency and reliability of COVID-19 related information and perceived macro control of COVID-19

	Student % (N)	Non-student % (N)	All* % (N)	P Value
The sources of information (Strongly agree/agree)				
The minister of health	93.5 (477)	75.1 (586)	82.4 (1063)	s
The scientific committee	77.8 (378)	74.9 (543)	76.1 (921)	ns
Social media	52.3 (257)	55.2 (406)	54.0 (663)	ns
Acquaintances	15.3 (74)	21.9 (146)	19.1 (220)	s
Sufficiency of the information (Strongly agree/agree)				
The minister of health	73.5 (374)	47.9 (380)	57.9 (754)	s
The scientific committee	63.7 (314)	54.6 (408)	58.2 (722)	s
Social media	23.5 (116)	26.3 (190)	25.2 (306)	ns
Acquaintances	5.9 (9)	10.7 (75)	8.8 (104)	s
Reliability of the information sources (Strongly trust/trust)				
The minister of health	74.5 (376)	48.5 (385)	58.6 (761)	s
The scientific committee	71.9 (356)	57.2 (430)	63.0 (786)	s
Social media	13.5 (66)	19.7 (143)	17.2 (209)	s
Acquaintances	6.6 (32)	11.6 (82)	9.5 (114)	s
Perceived macro control (Strongly agree/agree)				
Prevention works in Turkey are adequate.	26.2 (134)	15.9 (131)	19.8 (265)	s
Prevention works in the world are adequate.	9.3 (47)	9.1 (73)	9.2 (120)	ns

Linear regression indicated that being female, having a higher monthly income, using the minister of health as an information source, higher reliability of the scientific committee as an information source, and lower perceived control in Turkey were risk factors for higher anxiety levels in students. Being female, living in urban areas, higher reliability of the scientific committee as an information source, having lower perceived control in Turkey, and higher perceived control in the world were risk factors for higher anxiety for non-students.

The results about stress showed that being female, having a higher monthly income, being in health risk status, lower sufficiency of the information by the scientific committee, higher use of the social media as a source of information, higher reliability of the scientific committee as the information source and lower perceived control in Turkey were risk factors in terms of higher stress levels for students in Turkey. Being female, having a lower monthly income, higher use of social media as a source of information, and being in health risk status were risk factors for higher stress levels for non-students in Turkey (see Table 4).

Table 4. The results of linear regression analysis

		Anxiety		Stress	
		B	t	β	t
Gender	Student	-,19	-4,04***	-.17	-3,68***
	Non-student	-,19	-4,87***	-.19	-4,57***
Place of residence	Student	-.07	-1,46	.03	.70
	Non-student	-.09	-2,35*	.06	1,38
Monthly income	Student	.13	2,85**	.17	3,55***
	Non-student	.04	.93	-.16	-3,85***
Health risk status	Student	.05	1,03	-.14	-2,94**
	Non-student	-.06	-1,53	-.08	-2,02*
Sources of information (the minister of health)	Student	.18	2,93**	-.01	-.13
	Non-student	.10	1,55	.05	.71
Sufficiency of information (the scientific committee)	Student	-.13	-1,56	-.21	-2,56**
	Non-student	-.11	-1,38	-.06	-.79
Reliability of the information source (the scientific committee)	Student	.21	2,70**	.21	2,69**
	Non-student	.19	2,38*	.06	.68
Sources of information (social media)	Student	.11	1,72	.12	1,94*
	Non-student	.05	.87	.12	1,96*
Perceived control in Turkey	Student	-.16	-2,69**	-.13	-2,25*
	Non-student	-.27	-4,83***	-.10	-1,81
Perceived control in the world	Student	.06	1,13	-.03	-.54
	Non-student	.11	2,39*	-.01	-.18

DISCUSSION

This study examined the feelings of anxiety and stress related to the COVID-19 pandemic in student and non-student populations in Turkey and their associated risk factors. The results showed that anxiety and stress symptoms were reasonably high in the general population during the COVID-19 pandemic in Turkey.

The findings showed the participants' general tendency to be more anxious about their families' well-being than themselves, as shown by Akdeniz et al. (2020) and Wang et al. (2020b). This can be explained by the collectivist culture of Turkish society (Kağıtçıbaşı, 2017). This culture encourages altruistic behaviors. Such an altruistic attitude was seen in both groups. Nevertheless, the non-student group was more concerned about transmitting the virus to themselves besides thinking about the COVID-19 more than the students. Since the non-student group had a greater risk of transmitting the disease, it is only natural for them to fear for their well-being even in an altruistic culture. The student group was more fearful about their family members' wellbeing in terms of COVID-19 transmission.

The stress indicators were common among the participants. The student group showed significantly higher scores in terms of every indicator of stress than non-students, which was also the case in other studies (Wang et al., 2020b). This is because of the vagueness in Turkey's educational field during this study's data gathering period, due to the ministry of education and universities' decisions to postpone the beginning of the new semester. The lack of a defined process regarding how distant education would begin added to the existing vagueness, resulting in increased stress in the student group.

The findings mentioned above were consistent with the findings of other studies conducted in Turkey (Akdeniz et al., 2020; Özdin & Özdin, 2020) and other countries (e.g., Moghanibashi-Mansourieh, 2020; Rajkumar, 2020; Rossi et al., 2020; Wang et al., 2020b). The uncertainty about the coronavirus, its highly infectious properties made the population nervous and more stressful (Wang et al., 2020a). Despite the extensive measures, COVID-19 continues spreading in Turkey and the world. American Psychological Association (2020) noted that as the spread continues, the coronavirus's long-term adverse mental health effects will be severe and long-lasting.

The results showed that most participants received COVID-19 related information from the formal and scientific sources, which were the minister of health and the scientific committee. Similarly, the sufficiency and reliability of the information received from these sources were also the highest compared to the news on social media and information received from acquaintances.

Although the participants mostly used formal and scientific sources of information, the perceived sufficiency and reliability of the information from these sources were not found to be as high. This might be related to the fast development of the pandemic and lack of medical information on the disease at the time. Despite the participants' lack of confidence towards the informal sources, their use of social media was quite high. This indicates that authorities should use social media more efficiently during the combat against the COVID-19 pandemic to increase the visibility of the scientific and formal information about it.

Students preferred using formal sources of information (the minister of health and the scientific committee) more and found the information from these sources much sufficient and reliable. On the contrary, non-students preferred acquaintances, which was an informal source of information, more frequently, and found it to be much sufficient. They also thought that the informal sources of information (acquaintances and social media) to be more reliable than the students. This might be due to the higher levels of rational thinking in the student group or the non-student group being more sensitive to the realistic data since they were in the risk group as revealed in the data (See Table 3).

In terms of information sources about the pandemic, the study results generally showed that as the formal information sources' perceived reliability increased, the level of anxiety increased in both groups. This finding indicates the importance of keeping the balance of optimistic views and anxiety-inducing effects of realistic public health warnings (Bavel et al., 2020). Additionally, it is found that using social media as an information source increased the non-student group's stress level, who tended to use informal information sources. This calls for a proactive approach by the authorities. While using mainstream media for providing scientific information, using social media as a milieu for not only giving information but also raising awareness about the misinformation in social media and other unofficial sources can be a viable strategy. Lastly, students tend to have lower stress levels as the sufficiency of information from the scientific committee. Interestingly the same group had higher stress levels as the reliability of the scientific committee increased. This calls for further studies on the subject.

The general perception of the participants towards the adequacy of the prevention works nationwide and worldwide was low. The student group thought that the national prevention efforts were adequate significantly more than non-students. This might be related to the previous finding of this study that the student group preferred using the formal information sources more than the non-students. The results also showed that as perceived macro-control of

pandemic increased, both groups' anxiety and stress levels decreased except the stress levels of non-students. As mentioned earlier, formal information increased the levels of anxiety and stress. Consequently, higher macro-control may decrease anxiety and stress-inducing effects of the realistic formal information sources.

Female gender was a risk factor in terms of both anxiety and stress levels in students and non-students groups, which was shown in other studies (e.g., Moghanibashi-Mansourieh, 2020; Özdin & Özdin, 2020; Rossi et al., 2020; Wang et al., 2020a). This might be related to the fact that women mostly undertake the caregiver role in the family, making them more sensitive to their affairs. This sensitivity might have caused women to be more prone to anxiety (Wang et al., 2020a). Another risk factor was, having a chronic illness in terms of stress in both groups (See Table 4).

There are some limitations to this study. First, a cross-sectional design was used in data gathering, making it hard to get causal inferences and conclusions on the long-term effects. Second, the study was conducted by a voluntary online system under the circumstances making any sampling technique very difficult to apply. Therefore, there is the possibility of selection bias. Third, due to the web-based study design, the sample's representativeness cannot be guaranteed, since it could not reach people without smartphones or computers with an internet connection.

CONCLUSION

In conclusion, relatively high rates of anxiety and stress symptoms were reported in the student and non-student groups during the COVID-19 pandemic in Turkey. Students showed significantly higher scores in terms of every indicator of stress compared to non-students. This calls for a different approach by the policymakers which would decrease the level of stress in terms of educational processes of university students. A well-defined process of transition from conventional education to distant education seems to be a promising policy. Providing more resources to students for adaptation to distant education such as discounts or advantageous installment plans for communication devices for students can be a substantial support for controlling the stress levels of the student population.

All participants mostly used formal information sources, but the students more frequently used formal information sources and found them more sufficient and reliable while it was the same about the informal information sources for non-students. Anxiety and stress were high in different groups using different sources of information. The most efficient way of disseminating the

scientific information to people according to the findings is to use both conventional and social media by the policy-makers while warning people to rely only on the official information in all media platforms. The way of providing official information also seems to be very important. Official information should not be given as is but it should be explained by authorities to help people understand the meaning of the raw numbers for their lives and how they should act accordingly. This can reduce stress and anxiety induced by the formal information sources as shown in the findings. High levels of perceived reliability of formal information sources, being female and having chronic illnesses were risk factors for various aspects of both groups' general mental health. Additionally, Turkey's high level of perceived macro-control was a protective factor for both groups' higher anxiety and stress levels.

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Chapter 9

Null Subjects, Evidentiality, Switch Reference, Indexicality, Logophoricity and The Theory of (Almost) Everything

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ABSTRACT

This paper is an attempt to unite five ostensibly different linguistic phenomena found in several languages. I first show that they are almost identical phenomena from a descriptive point of view with some morphological differences. Then I go on to argue that they are the result of a single co-indexing operator that co-indexes lexical items in various ways depending on the head feature it is associated with. Naturally, such a comprehensive argument requires several idealizations about the phenomena it is trying to account for as well as some assumptions both regarding the phenomena and the syntactic theory. The results are promising, however.

Keywords: Null subjects, evidentiality, switch reference, indexicality, logophoricity

INTRODUCTION

This paper dwells on five linguistic phenomena. These are Null subjects, Evidentiality, Switch reference, Indexicality and Logophoricity (NESIL). Although they are given different names, switch reference, indexicality and logophoricity are descriptively so similar that a particular sentence may be given as the canonical example of any of these phenomena. On the other hand, null subjects and evidentiality are, to the best of my knowledge, never put in the same sack, nor are they grouped together with the other three phenomena. The goal here is to show that there is a possible way to unite them under the same theoretical account using a common syntactic tool. More specifically, I will argue that these phenomena are the result of binding across traditional clause boundary, or A-bar binding with Finer's (1985) terminology, plus an operator that co-indexes thematic and pragmatic arguments in various ways. For this, I will first mention these phenomena at a descriptive level, pointing to their similarities. Then I will lay the theoretical background of binding from a position above CP, a domain that is usually considered as the outer space where no syntactic rule is observed and there is no structure per se. Naturally, I assume structural hierarchy above CP.

NESIL

Switch reference

Switch reference (SR) is probably the most diverse phenomenon of the pack. Such that when one needs to define it, one usually goes with 'canonical SR'. For example;

Canonical SR is an inflectional category of the verb, which indicates whether or not its subject is identical with the subject of some other verb.

(Haiman & Munro 1983: ix)

First thing to notice here is that it spans across (at least) two clauses. (1) is an example from Maricopa, a Yuman language, where different subject (DS) and same subject (SS) are marked by bound morphemes on the non-finite adverbial clause.

- (1) a. *nya-ny-yuu-k* 'ayuu 'rav-k
when-1/2-see-SS s.t. 1-hurt-ASP
'When I saw you, I was sick'
b. *nya-ny-yuu-m* 'ayuu 'rav-k
when-3/l-see-DS s.t. 1-hurt-ASP
'When he saw me, I was sick'

(Gordon 1983: 83)

The phenomenon has been analyzed with two opposing views in mind: SR is a functional act in discourse serving the purpose of tracking a certain element of communication vs. SR is the result of a set of formal relations.¹ The former view argues that SR is a disambiguation strategy in discourse that helps the listener track various kinds of elements (Givon 1983, Roberts 1988). This is backed by the observation that SR can actually track almost anything in a conversation. That is, a dependent morpheme may mark the identity of the subject, object, verb, tense or even modality of two clauses. The latter view, on the other hand, (see for example Finer 1985 and Camacho 2010) argues that SR is formally restricted, that is, it cannot co-index any two lexical items of the same kind. A certain configuration is involved, which points to a syntactic hierarchy. Furthermore, if SR served the purpose of tracking a lexical item or disambiguating the discourse, we would expect it to disappear when not needed. However, SR is found in syntactic contexts where pronouns refer to listener and speaker, which don't need tracking or disambiguation, as in (1). We see here a conflict and an opportunity. The two views above place the account of SR in different components of language. One argues that it takes place in the pragmatic component, and it is purposefully manipulated by the speaker. The other argues that it is a phenomenon of syntax proper. Note that the key difference between the two that calls for completely different accounts is that pragmatic component has no hierarchy while syntax is strictly hierarchic. Therefore, anything pragmatic can be easily and freely manipulated by interlocutors since no configurational rule is to be observed. Anything syntactic, on the other hand, cannot be disregarded by interlocutors. If the lexical items are in the right structural configuration and all conditions are met, it is obligatory. Both, however, have certain potential to shed light on the phenomenon. Thus, a theory that gives hierarchy to (at least some part of) discourse can provide an elegant account.

Null subjects

Null subject is when a finite clause violates Chomsky's (1981) Extended Projection Principle (EPP); that is when the external argument, or subject, of a verb is missing from overt syntax. It is usually associated with rich agreement morphology on verb that signals the phi-features of the missing subject (Taraldsen's generalization) and constitutes a huge literature in syntactic theory. Supposedly, languages are parameterized according to whether they allow null

¹ See van Gijn (2016) for a thorough review of SR literature.

subjects in finite clauses or they strictly observe EPP. (2) is an example of the contrast between English and Turkish.

- (2) a. * \emptyset love cars
b. \emptyset arabaları sev-er-im
car-PL-ACC like-AOR-1SG
'I love cars'

(2) is the first level of parametrization with non-null subject languages on one end and null subject languages on the other. The latter, the one we are interested in, is further parameterized. A particular language may exclusively allow first and second person null subjects while disallowing definite third person null subjects (for example Finnish). Known as partial null subject languages, these languages only allow first and second person and generic third person null subjects. Other null subject languages, known as consistent null subject languages, do allow (in addition to first and second person) definite third person null subjects but do not allow generic third person null subjects (for example Italian and Turkish).²

The description above is not fully accurate, however. In fact, partial null subject languages allow definite third person null subjects under some strict conditions, and consistent null subject languages seem to have similar requirements. Holmberg (2005) reveals that Finnish allows definite null subject when it is controlled by a higher argument in the next clause up. Later, he shows that Italian, a consistent null subject language, requires that third person null subject be controlled by a higher argument that functions as topic (Holmberg 2010). See (3).

- (3) a. Pekka_i väittää [että hän_i/ \emptyset _i/*_j puhuu englantia hyvin]. *Finnish*
Pekka claims that he speaks English well
(Holmberg 2005: 539)

- b. Questa mattina, la mostra e` stata visitata di Gianni. P`iu tardi * \emptyset /egli/lui ha visitato l'universita`. *Italian*

this morning the exhibition was visited by Gianni. Later he/he visited the university

'This morning the exhibition was visited by Gianni. Later he visited the university.'

² See Holmberg (2005, 2010) for theoretical arguments and see Krezk (2013, 2017), Fassi Fehri (2009) and Author (2020) for counter examples from Polish, Arabic and Turkish, respectively.

c. Questa mattina, Gianni ha visitato la mostra. Più tardi \emptyset ha visitato l'università.

this morning Gianni visited the exhibition. Later visited the university

'This morning Gianni visited the exhibition. Later he visited the university.'

(Samek-Lodovici: 31)

(3a) shows that Finnish allows null subjects if the null subject is in an embedded sentence and controlled by the matrix subject. Note that null subject is disallowed in matrix clause in Finnish. (3b) is ungrammatical in Italian since the antecedent of the null subject (Gianni) is not the topic of the previous sentence. The continuing topic salvages the situation in (3c). A similar restriction is noted for Turkish. Third person null subject requires topic continuity. If an object or an indirect object promotes to subject position, it cannot be null since it is different from the topical subject of the previous sentence in discourse (Göksel and Kerslake 2005). However, this is only so for third person. Both partial and consistent null subject languages allow for first and second person null subjects in root clauses. I will start providing a theoretical account of this discrepancy in §3. The gist of this section is that null subject languages require control by an argument (preferably a topic argument) in a higher or preceding sentence for third person while first and second person can be null freely. The only difference, perhaps, is how far the antecedent can be. With consistent null subject languages, it can be in another utterance in discourse. Partial null subject languages, on the other hand, require that it be in the root clause. In other words, consistent null subject languages can have distant controllers/binders while partial null subject languages restrict the domain null subject can be bound in. Either case, it is beyond the CP the null subject is found in.

Indexicality

Indexicals are lexical items that pick their reference in discourse, which can be the speaker, the addressee as well as the time and location of utterance. They may appear in various forms, such as first and second person and deictic adverbs of time and location.³ For example, the first person in (4a) refers to, in other words is bound by, the speaker of the sentence. Furthermore, (4b) shows that such a reference relation is fixed, that is an indexical is always bound by

³ Indexicality is more widespread than mentioned here. For example, tense is the anchoring of utterance time by a dependent morpheme, which makes every tense marker an indexical. Furthermore, some evaluative adjectives and adverbs, such as idiot and clumsily, reflect the speaker's view of a person or eventuality.

the discourse participant that it is intended to be bound by even if another binder intervenes. Looking at such English examples as (4a-b), Kaplan (1989) concludes that no language has a logical operator that shifts the reference of an indexical from a discourse entity (speaker in (4)) to an argument of the sentence, for example to Mary in (4b). Since such an operator does not exist, it is known as the *monster operator*.

- (4) a. SP_i [I_i am a hero]
b. SP_i [Mary thinks [I_i am a hero]]

However, the story above is not completely true, either. Monsters exist, and there *are* languages that shift from discourse to matrix sentence when the indexical is embedded in a finite complement clause under an attitude verb.⁴ Turkish is one of them. The first person null subject, an indexical, in (5) (optionally) shifts to the matrix subject.

- (5) SP_j Ahmet_i [ø_{i/j} çok akıllı-yım] sanıyor
Ahmet very clever-1SG thinks
'Ahmet thinks he is very clever'
'Ahmet thinks I am very clever'

The obvious correlation is noted by Gültekin Şener & Şener (2011) who argue that being null is a prerequisite for an indexical to shift in Turkish:

- (6) Seda [ben sınıf-ta kal-dı-m] san-ıyor.
Seda I class-LOC flunk-PST-1SG believe-PRS
'Seda believes that x flunked.'

Shifted Reading: *

Non-Shifted Reading: ✓

Gültekin Şener & Şener (2011)

Already, we are beginning to see a similarity in the mechanism involved in the binding of first and second person null subjects (indexicals) and definite third person null subject. All person pronouns are variables when they are null, and they need to be bound by a higher argument. The binder is speaker or addressee if the pronoun is first or second person while it is a topic argument if the pronoun is third person (see (3) and (4)). Furthermore, we catch another similarity here. Consistent null subject languages allow null subject to access discourse while partial null subject language have a more restricted area of binding. Similarly, non-shifting languages require that first and second person null subjects be bound by a discourse entity while shifting languages can restrict

⁴ The literature against Kaplan is well-established. The interested reader can read Schelenker (1999, 2003), Anand & Nevins (2004) and Shklovsky & Sudo (2014).

the domain they are bound in. The following sections will be about logophoricity, evidentiality and Speas's (2004) and Speas & Tenny's (2003) theoretical account developed for these phenomena. I will draw on their similarities with null subjects, switch reference and indexicality, offering to treat them uniformly under binding across traditional clause boundary.

Logophoricity

Logophoric pronouns are lexical items that refer to the sentient being whose assertion or state of mind is being reported (Clements 1975), and their distribution is quite similar to indexicals. They require sentience in their binder. Furthermore, the embedded clause they appear in needs to be finite:

(7) Logophoric pronoun and regular pronoun in Donno So

a. Logophoric pronoun in a logophoric domain

Oumar Anta *inyemen* waa be gi
Oumar Anta LOG-ACC seen AUX said
'Oumar_i said that Anta had seen him_i'

b. Regular pronoun in a logophoric domain

Oumar Anta won waa be gi
Oumar Anta pro-ACC seen AUX said
'Oumar_i said that Anta_j had seen him_k'

c. Regular pronoun in a nonlogophoric domain

Anta wo wa Fransi booje go egaa be
Anta 3sg SUBJ France go.fut-3sg COMP heard AUX
'Anta_i heard that she_{i/j} will go to France'

d. Logophoric pronoun in a nonlogophoric domain

*Anta inyeme wa Fransi boojs go egaa be
Anta 3sg SUBJ France go.fut-3sg COMP heard AUX
'Anta_i heard that she_i will go to France'

(Culy 1994: 1056)

The logophoric pronoun in (7a) can only refer to the subject of the main clause, which contrasts the regular pronoun in (7b) that can be co-indexed with a third person discourse entity. We see here the restricted search domain of the logophoric pronoun, similar to shifting and contrasting the regular third person pronoun. Note that the antecedent in this domain has to bear a specific pragmatic role: the one whose utterance or state of mind is being reported. Compare (7a) and (7d). The verb *hear* in (6d) does not introduce a context

where the subject's state of mind is conveyed.⁵ Similarly, first person indexicals specifically target the speaker while second person picks the addressee, two other pragmatic roles. This similarity will be important shortly.

The phenomenon in (7) is pure logophoricity – as coined by Culy (1994) – where there is a dedicated pronoun for logophoric reference. This is not what we are looking for since a specific lexical item may have its own domain to search for an antecedent: Anaphors are bound in a well-defined domain and it is only natural that *inyeme* in (7) has another well-defined domain for binding. However, in several other languages third person pronoun may be used logophorically (mixed logophoricity). According to what Culy (1994) reports, Yoruba, Igbo and Maxakali are some of such languages. The examples in (8) are from Yoruba.

(8) Yoruba independent pronoun

a. Logophoric use (Bamgbose 1966: 107)

ó rì pé òun lówó
he saw say INDEP money
'He saw that he himself had money'

b. Nonlogophoric use (Bamgbose 1966: 38)

òun ló fa kiní yen
INDEP is he pulled thing that
'It was he that caused that thing'

(as reported by Culy 1994: 1058)

Òun is used as a regular pronoun referring to a discourse entity in (8b) while it is used logophorically in (8a) where its search domain is restricted to the main clause. This is basically the same mechanism as indexical shift in §2.3 where first and second persons refer to a discourse entity when they are the matrix subject of the sentence but refer to the matrix subject or indirect object when they appear in a finite complement clause embedded under an attitude verb.

Evidentiality

Some languages are sensitive to the source of information reported by the speaker.⁶ The speaker may take full responsibility for the truth value of the proposition or they may refrain from any such claim. The latter results in various

⁵ Although subject is a sentient being in (6b), Donno So does not register verbs of perception as logophoric domains. See §3 for an account.

⁶ As a matter of fact, the category, or the phrase, has to be universal (Cinque 1999). Whether it is marked or not is a morphological issue while how detailed this marking is a matter of (morphological) variation among languages, which is commonly seen as external to language per se (see Chomsky 2001, 2004, 2005 and many others).

possibilities for the source of information. For one thing, once the speaker is out of the way, almost anything is a candidate: another person, divine revelation, espionage, indirect experience etc.⁷ If a language has morphological marking for at least speaker/non-speaker distinction regarding the source of information, it is said to have an evidential system (still, see footnote 6). Turkish, for example, marks this speaker/non-speaker distinction with *-miş/-Ø* alternation in present tense and with *-miş/-di* alternation in past tense where *-miş* may encode any source of information other than the speaker, and *-Ø* and *-di* encode speaker.

- (9) a. [sp_i] Ali öl-dü;
 Ali die-PST.SP
 ‘Ali died’
 b. [sp] [evid/src_i] Ali öl-müş;
 Ali die-PST.NONSP
 ‘Apparently/They say Ali died’

Again, a lexical item in the sentence needs a reference point, or a binder, in discourse and this point can alternate between two discourse entities. In other words, it can *shift* from one point to another in discourse (9a-b). All we need at this point to say that it shifts from a non-local binder to a local binder is hierarchy between the two. This will be the topic of §3 and §4.

A very brief summary

At this point, a brief summary and visualization will be useful. (10) seems to work with a lot of idealization and generalization.⁸

(10)

<i>Null subject</i>	<i>Indexicality</i>	<i>Evidentiality</i>	<i>Logophoricity</i>	<i>Switch Reference</i>
[NP[_{sbj} _i [_{pro} _i V-TAM-AGR]]]	[SP[_{sbj} _i [_{pro} _i V-TAM-AGR][_{say}]]]	[SP SR _i [[SVO] _i -miş]]	[NP[_{sbj} _i [_{log} _i V-TAM-AGR][_{say}]]]	[NP[_{sbj} _i [_{pro} _i]-SS]]
[NP _i [_{pro} _i V-TAM-AGR]]	[SP _i [_{sbj} [_{pro} _i V-TAM-AGR][_{say}]]]	[SP _i SR[[SVO] _i -di]]	[NP _i [_{sbj} [_{pro} _i V-TAM-AGR][_{say}]]]	[NP _i [_{sbj} [_{pro} _i]-DS]]

⁷ This is not strictly true. As we will see below, human language is highly constrained regarding the source of information.

⁸ Sbj is the matrix subject marking the traditional clause boundary. SP shows the position occupied by speaker or addressee in discourse. I am only marking speaker for brevity. SR is the source of information other than the speaker. NP is the accessible noun in discourse, the topic of the previous sentence. I show TAM-AGR where the specific phenomenon requires finiteness and/or rich agreement. Switch reference examples in the literature indicate no such requirement. *pro* is any NP bound in a higher clause or discourse, a term grossly generalized from null subjects.

The upper row shows the context where a lexical item, or an event in evidentiality, is locally bound while they are non-locally bound in the lower row. There are a few descriptive groups here. First, null subject phenomenon is unique among others in that the alternation spans across languages whereas the rest are intralinguistic. The upper row of null subjects is the case of partial null subject languages requiring local binding and the lower row is consistent null subject languages where *pro* is bound non-locally. Second, consistent null subject languages and evidentiality allow non-local binding with matrix clauses while the rest require subordination. Furthermore, indexicality and logophoricity seem to require subordination under a specific type of main verb, i. e. context providing say, think, see etc. Switch reference is free in this respect. Third, the alternation between local and non-local binding is achieved without morphological marking in null subjects⁹, indexicality and (mixed) logophoricity while evidentiality and switch reference depend on bound morphemes. Note that the former specifically require finiteness while the latter do not.¹⁰ Although we see a pattern in the behaviour of NESIL phenomena, there doesn't seem to be a common syntactic mechanism. That is, some trigger the shift from non-local to local binding with a morpheme while others shift without a marker. Sections 3 and 4 will seek for theoretical account of it.¹¹

A THEORY

As the result of some cumulative effort, we seem to have an understanding of the workings of evidentiality and logophoricity, which I will combine with the rest of the family to offer an account of NESIL. Sells (1987) defines three pragmatic roles a logophoric pronoun may refer to: source, self and pivot. Source is the one reporting the proposition. Self is the one whose state of mind is being reported by source, and pivot is the person from whose physical perspective the report is made. For example, in *Mary wants me to come to John's party*, source is the speaker since they are simply reporting what they know about Mary's wish. Self is Mary since the speaker is reporting Mary's state of mind. Finally, the word *come* indicates that John's perspective is being taken. Since he will be at the party, the physical motion will be towards John, hence the word *come* (Speas 2004: 261). Sells (1987) argues

⁹ Both partial and consistent null subject languages display rich agreement. Therefore, it is safe to say that they achieve different binding relation without further marking. The alternation between null and overt subject languages can be attributed to morphological marking, namely agreement. This would, however, not explain the infamous marginal *pro-drop* languages.

¹⁰ Evidentiality is followed by agreement, showing finiteness. But this should not be confused with what is going on in null subjects, which have a non-finite counterpart, namely PRO.

¹¹ Again, there is a lot of idealization here. For example, some languages license logophoricity in non-embedded environments such as purpose clauses and relative clauses (see Culy 1994:1071-1074). Furthermore, Roberts (1988) argues against subordination requirement for switch reference in Amele. I assume picking the right portion of these phenomena is inevitable and necessary for a first attempt.

that these pragmatic roles are in a hierarchy regarding logophoric binding. If a language allows pivot to act as a logophoric binder, it also allows self and source. However, allowing self as a binder does not mean that particular language allows pivot. Yet it has to allow source. Finally, a language may only allow source as a logophoric binder.

(11) Logophoric binding hierarchy

Source > Self > Pivot

(Sells 1987: 456)

Culy (1994) takes care of the hierarchy governing the main verb in a logophoric context. According to Culy (1994), languages most easily allow logophoric binding when the pronoun is embedded under verbs of speech and with most difficulty when it is embedded under verbs of direct perception.

(13) Culy's matrix verb hierarchy

Speech > thought > knowledge > direct perception

Say > *think* > *know* > *see*

(Culy 1994: 1062)

A language may allow a logophoric pronoun under *say*, but not under *think*, *know* and *see*. But if it allows for it under *think*, it has to allow under *say*, but not necessarily under *know* and *see*. In other words, it starts from left and moves rightward without going back or skipping any member of the hierarchy.

The theoretical centre of our understanding is Speas's (2004) and Speas & Tenny's (2003) interesting work where they show that Sells' and Culy's hierarchies are not pragmatic hierarchies, rather they are rule-governed syntactic hierarchies. This will be the syntax-pragmatics union mentioned in §2.1. Speas (2004) starts by denying the purely pragmatic status of the discourse role source of information in evidentiality. Citing Willet (1988), she argues that out of unlimited possibilities for evidentiality only four are found in world's languages: personal experience, sensory evidence, indirect evidence and hearsay. This hints at a structural constraint on source of information, which in turn suggests that this pragmatic role is somehow configurationally represented in syntax-pragmatics the same way theta-roles are represented (pace Hale & Keyser 1993). The idea becomes even more interesting and robust when combined with the works of Cinque (1999), Sells (1987) and Culy (1994). Speas (2004) offers a correlation between evidentiality and logophoricity. The more the source (speaker) is confident about the truth of the main utterance and

less confident about the truth of the embedded utterance, the more likely the sentence is to present a logophoric context. Therefore, if the main verb is *say* (Mary said [CP]) it is highly likely that the speaker witnessed the act of saying but has no data to verify the truth of what was said by the subject. This is easily a logophoric context where the embedded sentence can have such a pronoun. *See*, however, is the opposite (Mary saw [CP]). Speaker cannot know what the subject actually perceived. So, it is the least likely scenario for logophoric binding. Interestingly, how confident about the proposition the speaker is – how much responsibility they are taking (§2.5) – also ranks the four categories of evidentiality. The most logophoric context where the speaker is least confident about the embedded utterance – that is *say* – corresponds to the evidential category where the speaker has the weakest evidence about the proposition, i.e. hearsay. Speas then matches this hierarchy to Cinque’s (1999) modal domain in IP¹²: speech act > evaluative > evidential > epistemic

(12)

Logophoric context provider	Evidential category	Cinque’s hierarchy
Say	Hearsay	Speech act
Think	Indirect evidence	Evaluative
Know	Direct evidence	Evidential
Saw/heard	Personal experience	Epistemic

(Speas 2004:264)

Finally, Koopman and Sportiche’s (1989) proposal is adopted: A logophoric pronoun must be A’ bound by a Point of View (POV) operator. Note the similarity to the monster operator in indexical shift in §2.3. Speas assumes that this operator is in any one of the specifier positions of Cinque’s four modal projections where the head bears the formal POV feature, and that logophoric context providers subcategorize the modal projection they are matched in (12). This then explains why *say* accepts logophoric pronouns most easily and *see* with most difficulty: If POV operator is as high as Speech Act in a particular language, only *say* creates a logophoric context since only *say* subcategorizes Speech Act (13). If, however, it steps down to Evaluative, both *say* and *think* create a logophoric context (14). *See* is the least likely verb we would expect to find allowing a logophoric context in any language since it requires the POV operator to appear only in epistemic mood phrase. Verbs of perception select for epistemic mood in their complement position (the case in Dunno So in §2.4).

¹² Though obvious, see Speas (2004) and Speas & Tenny (2003) for the rationale.

(13)a. [VP **say** [SAP OP_i [SA_i+POV]_i[EvalP[Evid[Evid [EpisP[Epis [LOG_i.]]]]]]]]]]]

b. *[VP **think** [EvalP [Eval[EvidP [Evid [EpisP [Epis [LOG_i. .]]]]]]]]]

c. *[VP **know** [EvidP [Evid [EpisP [Epis [LOG_i. .]]]]]]]

d. *[VP **perceive** [EpisP [Epis [LOG_i. .]]]]]]]

(14)a.[VP **say** [SAP [SA [EvalP OP_i [Eval_i+POV]_i [EvidP[Evid [EpisP[Epis [LOG_i. .]]]]]]]]]]]

b. [VP **think** [EvalP OP_i [Eval_i+POV]_i [EvidP [Evid [EpisP [Epis [LOG_i. .]]]]]]]]]

c. *[VP **know** [EvidP [Evid [EpisP [Epis [LOG_i. .]]]]]]]

d. *[VP **perceive** [EpisP [Epis [LOG_i. .]]]]]]]

(Speas 2004: 267)

As for Speas's (2004) account of evidentiality, she assumes that Sa, Eval, Evid and Epis each has a pro argument in the spec position. They represent speaker, evaluator, witness and perceiver of the sentence and correspond to Sells's (1987) source, self and pivot. The entire spectrum of evidentiality is then the result of various binding relations between these pro arguments.

(15) a. Witness is bound by Evaluator, and binds Perceiver:

(Speaker is Evaluator, Witness and Perceiver)

[pro_i SAP [pro_i EvalP [pro_i EvidP [pro_i EpisP . . .]]]]]

personal experience

b. Witness is bound by Evaluator, but does not bind Perceiver:

(Speaker is Evaluator and Witness, but someone else is Perceiver)

[pro_i SAP [pro_i EvalP [pro_i EvidP [pro_j EpisP . . .]]]]]

direct evidence

c. Witness is not bound by Evaluator, but binds Perceiver:

(Speaker is Evaluator but someone else is Witness and Perceiver)

[pro_i SAP [pro_i EvalP [pro_j EvidP [pro_j EpisP . . .]]]]]

indirect evidence

d. Witness is bound by Evaluator and controls Perceiver, but

Evaluator is not bound by Speaker

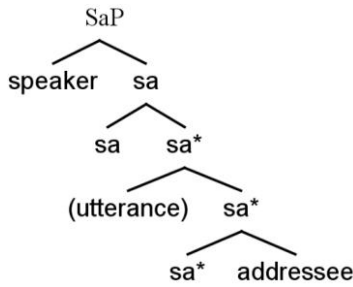
(Someone other than Speaker is Evaluator, Witness and Perceiver)

[pro_i SAP [pro_j EvalP [pro_j EvidP [pro_j EpisP . . .]]]]]

no evidence (hearsay)

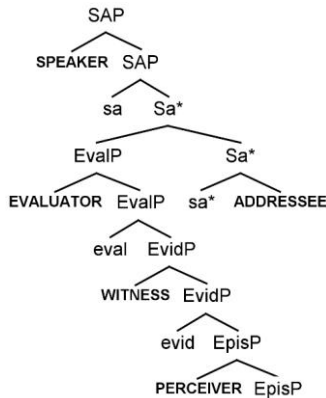
It follows naturally that these heads act like predicates with an argument structure, that is a subject and a complement. Speas & Tenny (2003) take this one step further and argue that SaP is a three-place predicate where addressee is the direct object and utterance (EvalP) is the indirect object. (16) is Speas & Tenny’s original tree while (17) is what it looks like when combined with Speas’s (2004) detailed work.

(16)



(Speas & Tenny 2003: 320)

(17)

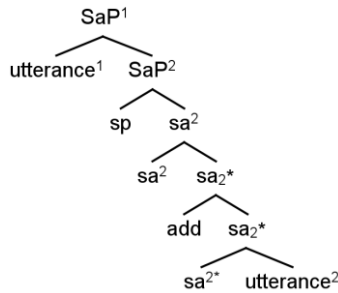


So far, switch reference is the morphologically marked (non)-identity, that is binding, of the subjects of two clauses. Third person null subject is the binding of pro in root clause (partial null subject languages) or in previous sentence (consistent null subject languages). Indexicality is the binding relation between first/second person and a discourse entity, namely speaker and addressee. Logophoricity is the binding of a pronoun by the matrix subject on condition that the subject bears a specific discourse role, and evidentiality is the morphological marking of various binding relations between speaker, evaluator, witness and perceiver, all of which are discourse entities above CP.

A COMBINED THEORY

In Kuram (2020), I offer to account for the definite interpretation of third person null subjects with binding by a higher argument in the SaP preceding the one null subject is found in while 1st and 2nd person null subjects are bound by speaker and addressee acting as the arguments of SaP. See (18) where third person null subject in utterance² is bound by a referential NP in utterance¹ while first and second person null subjects in utterance² are bound by speaker and addressee in SaP², respectively. This is an extension of Holmberg’s (2010) account in (3) where null subject is licensed via A-chain between the matrix and embedded clause and an adaptation of Speas & Tenny’s (2003) syntax-pragmatics union.

(18)

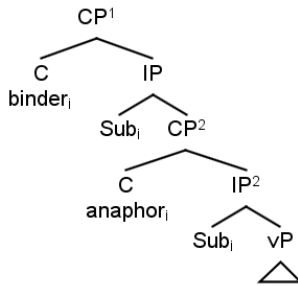


Since Holmberg (2010) discusses definiteness assignment from a topic position in the preceding sentence, he argues this is A-binding. Also note that Speas & Tenny (2003) turn pragmatic roles into syntactic ones by assuming that they are in dedicated and hierarchic positions. They seem to be in argument positions. This carries over to (18) as a mandatory assumption that successive SAPs are arguments of a speech environment, which would result in a binding relation between two arguments (A-binding). However, recall from §3 that Koopman and Sportiche (1989) propose A'-binding of a logophoric pronoun by an operator and that such an operator should be in the spec of SAP, EvalP, EvidP or EpisP (Speas 2004) although SaP is a three-place predicate with an argument structure (16) (Speas & Tenny 2003). Apparently, we need a binding theory that is independent of the A-A' distinction. Below is the version I will be assuming.

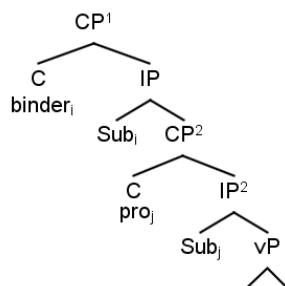
Finer (1985) provides an elegant account of switch reference using Aoun’s (1981) generalized binding theory, which conjectures that there are A' elements – in addition to A elements – that are subject to the principles of binding theory. This allows for A' anaphors and pronominals. That is, an A element can be

bound by an A element or an A' element; an A' element can be bound by an A element or an A' element. Finer (1985) argues that Different Subject (DS) marker is an A' pronominal and Same Subject (SS) marker is an A' anaphor in CP and that the subject of the SS/DS marked clause bears the same index as the marker. If the clause is DS marked, the marker is an A' pronominal free of the A' binder in the higher CP, resulting in different subject interpretation (19b). If, however, it is SS marked, SS marker is an A' anaphor. It is, therefore, bound by an A' element in the higher CP (19a). The subjects of lower and higher clauses are then co-indexed via index transitivity: The A' elements in CPs are coindexed with their subjects. When they are coindexed with each other – due to principle A of generalized binding theory – their subjects are also coindexed with each other.

(19) a.



b.



(simplified and adapted from Finer 1985)

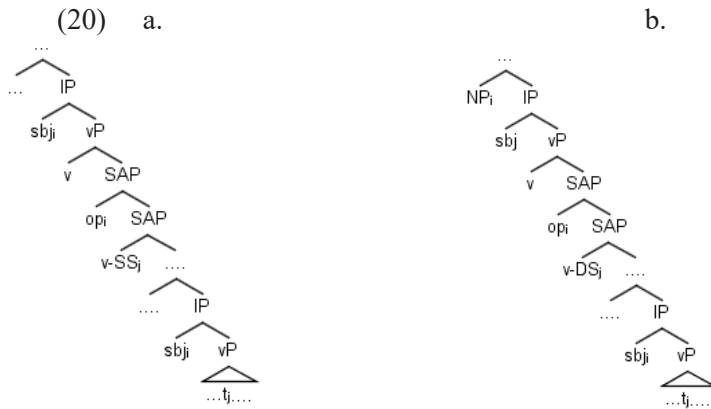
I will assume from now on that binding is free from A/A' distinction. C-command and coindexing is sufficient, and SaPs mutually c-command each other unless one hierarchically c-commands the other, contrasting my assumption in Author (2020). That is, independent utterances mutually c-command each other in a speech environment, allowing for anaphoric and cataphoric reference. Embedding is when a SaP is higher than another SaP.

Note that the switch between anaphor and pronominal in Finer's theory resembles presence or absence of a monster operator in indexicality that results in binding of an indexical by speaker or matrix subject and the TAM marker alternation in evidentiality that results in speaker/non-speaker interpretation in the evidentiality scale. Simplifying and assuming that logophoricity is switch reference with third person, I argue that it is also the result of an operator.¹³ Finally, I assume that the alternation between partial and consistent null subject

¹³ See Özyıldız, Major and Maier (2019) for a similar idea.

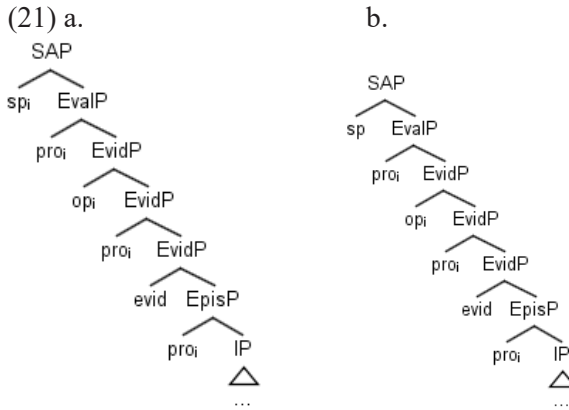
varieties of the null subject parameter results from an operator in partial null subject languages that restrict the binding domain of *pro*. Let us now see how the operator looks in each phenomenon, along with the micro-parameters specific to each one.

Switch reference is the alternation between phrase structures one of which includes the operator that coindexes the embedded subject with the matrix subject. SS marker is linked to an operator that coindexes the *pro* arguments in EvalP, EvidP and EpisP that bind the subject in IP to the closest *c*-commanding NP, matrix subject (20a). DS marker, on the other hand, is linked to an operator that is free from the next *c*-commanding subject (20b). Typologically, SR has a diverse marking system. A particular language may mark SS and DS or either one, leaving the other option to the contrast formed via zero marking (van Gijn 2016). Hence, the representations in (20) are quite coarse. SR can track almost any grammatical function (Stirling 1993), from subject identity to mood identity of two clauses, as long as it is matched to an item serving the same grammatical function (Finer 1985). Furthermore, SR does not require embedding under attitude verbs, even though it allows for it (van Gijn 2016: 15), nor does it have a dedicated head position in the theory the way evidentiality does. For these reasons, I assume the operators are as high as SaP in SR situations.



I will assume Speas' (2004) and Speas & Tenny's (2003) account for **evidentiality** and **logophoricity** (see §3). Evidential markers must be the morphological realizations of the operator with different co-indexing behaviours, parallel to the SS and DS marker in SR. Briefly, the morpheme *-di* in (9a) is the head of an operator that moves as high as EvidP and co-indexes the *pro* argument in Spec, SaP with the *pro* arguments in EvalP, EvidP and

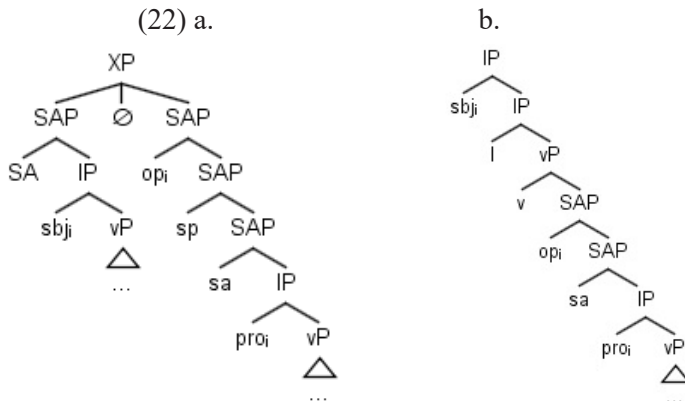
EpisP (21a). -mİş in (9b), on the other hand, excludes the pro in Spec, SaP from the chain, resulting in the interpretation that the speaker does not commit themselves to the truth of the proposition (21b). Different heads in other languages may create various combinations between the pro arguments, resulting in the evidential interpretations documented by Willet (1998).



Indexicality already has a vast literature on the existence of such an operator, which Kaplan (1989) started by claiming that it doesn't exist. Furthermore, the idea developed by Koopman and Sportiche (1989) and used by Speas (2004) for logophoricity is quite similar to the operator in indexicality. That is, the operator resides in the embedded CP (Anand and Nevins 2004 and Shklovsky and Sudo 2014) and shifts the indexical's binding domain (Schlenker 2003) or removes the need for phi identity in order to be bound (Stechow 2002). This allows the matrix subject to function as a potential binder. However, there is a difference between switch reference and evidentiality on one side and indexicality, null subjects and logophoricity on the other: morphological marking. It is relatively easy to devise an operator-based account of the second pack where presence of an abstract operator triggers a restricted binding domain whereas lack of any operator means a wider binding domain, in a sense the default binding of the lexical item specified in the lexicon. This is not so for the first pack, however. As mentioned above, while some SR languages mark either SS or DS, some have dedicated markers for both. Evidentiality is even more complicated. All four types of evidentiality in (15) may have different markers. Therefore, we have to assume that the operator here – when it is available in a particular language – can serve different functions when paired with different head features. That is, there are two phonologically silent heads, in for example Turkish, one that co-indexes the embedded subject with the matrix subject

while the other co-indexes it with speaker. This accounts for why, for example, DS marker occurs if the sole reason SS occurs is to restrict the binding domain of an otherwise pronominal. Morphological realization is independent of co-indexing behaviour.

Finally, **the null subject phenomenon** has a sub-parameter where the null subject can be bound by a matrix subject (partial null subject languages) or a NP in the preceding sentence (consistent null subject languages). The sub-parameter falls into place once we assume that each type of language has the same type of operator (co-indexing operator) with different stretches of binding due to different head features. I hypothesized in Author (2020), that it is a discourse link feature (d-link) in consistent null subject languages that allows pro to be bound by a NP in the previous (c-commanding) SAP while lack of d-link means either it is bound by matrix subject or interpreted generically. That is, a temporally preceding utterance c-commands the following utterance. However, under the current framework discourse of a sentence could be a higher clause as well as a preceding clause. D-link, therefore, does not work here. We still need to differentiate between a temporally preceding utterance and a matrix sentence. The difference between the operators in consistent and partial null subject languages must be that the former can co-index pro with a NP in a SaP mutually c-commanding the operator while the latter cannot. An operator that allows for mutual c-command does not seem an ad hoc solution once we consider Roberts' (1988) objection to Finer (1985) that many languages, Amele in Roberts's paper, can display SR across coordinate clauses.



DISCUSSION

Arguing for a single syntactic operator accounting for null subjects, evidentiality, switch reference, indexicality and logophoricity naturally leads

to a question: Do they co-occur? If all of these phenomena are the result of a single syntactic operator – coindexing operator – we expect them to (i) accumulate in several languages (ii) interact with each other in certain syntactic environments. In this section, I will show that both (i) and (ii) hold. I will demonstrate a case, namely Turkish, where we find all members of NESIL although other languages may have portions of it. In other words, the predictions in (i) and (ii) may not turn out accurate in a wholesale fashion, but there is promising data. However, I will not go into a theoretical account of why some languages only partially demonstrate NESIL.

Turkish is one of the languages that first spring to mind when one is writing about **null subjects** and **evidentiality**. Therefore, I refer the reader to §2.2 and §2.5. I will only discuss how they interact with the other phenomena when they co-occur. Furthermore, §2.3 presents examples of **indexical shift** in Turkish, first noted by Gültekin & Şener (2011) who also noted the biconditional: indexical shift iff null subject.¹⁴ What is novel, however, is that evidentiality interacts with indexical shift in Turkish. More specifically, hearsay evidential -miş in a complement clause forces the reading where the indexical subject obligatorily shifts. Bearing in mind that evidentiality is shifting the source of information from speaker to another entity, this resembles shift together in indexicality where one of the shifters is the evidential marker rather than another indexical. For one thing, if the source of information is non-subject – i.e. shifts from matrix subject Mert – in (23a) the reference of the embedded subject shifts from speaker to matrix subject. This is known as shift together, describing a syntactic domain in which all shifting elements either shift together or none does (Anand & Nevins 2004, Özyıldız 2014). Shift together is usually taken as the evidence that an operator ranges over a domain, affecting the interpretation of all relevant items in that domain. Therefore, the fact that an evidential marker and an indexical shift together suggests strongly that they are bound by the same operator.¹⁵

¹⁴ See Gültekin & Şener (2011) and Shklovsky & Sudo (2014) for what might be called a counter example from Uyghur. Overt subjects can shift in Uyghur. Still, Uyghur has null subjects as well as indexical shift.

¹⁵ Using a different terminology, Sauerland & Schenner (2007) argue that origo – the sentient being reporting the evidence they have – can parametrically *shift* from the actual speaker to matrix subject. According to Sauerland & Schenner (2007), Bulgarian disallows such a shift with embedded evidentials. However, Şener (2011) observes that it is allowed in Turkish. Unfortunately, neither Sauerland & Schenner (2007) nor Şener (2011) provide examples with indexicals in the respective languages. But (23) shows that they do shift together in Turkish.

- (23) a. Mert [Ø Antalya'ya atan-mış-ım] diyor
 Mert Antalya-DAT be.assigned-EVID.PST-1SG says
 'Mert says he was assigned to Antalya, unbeknownst to him'
 b. Mert [Ø Antalya'ya atan-dı-ım] diyor
 Mert Antalya-DAT be.assigned-NON-EVID.PST-1SG says
 'Mert informs me that I/he was assigned to Antalya'

Another example of such a contingency is from Nuu-chah-nulth, a language with a complicated evidential system. In (24a) which has the visual evidential marker *-kuk-*, the speaker processes the visual evidence. However, when the exact same sentence is embedded under an attitude verb (24b) it is the matrix subject that has the visual evidence (Waldie 2012).¹⁶

- (24) a. walyuu-luk-?is Ken
 be.home-VIS.EVID-3.IND Ken
 'It looks like Ken is home.'
 b. wawaa-mit-?is Linda ?in walyuu-luk-Ø Ken
 say-PAST-3.IND Linda COMP be.home-VIS.EVID-3.ABS Ken
 'linda said that it looks like Ken is home'

(Waldie 2012: 153-189)

Switch reference in Turkish is only partially marked. That is, Turkish only marks same subject on a very specific non-finite adjunct clause. *-ıp* is a converbial suffix in Turkish that has varying semantic relations to matrix verb, including manner, temporal precedence and coordination. It can share (or not share) its arguments, including tense, aspect, mood and polarity, with matrix verb, with the exception of subject. In other words, an *-ıp* clause can have same x or different x interpretation, but it obligatorily has same subject interpretation. See the examples in (25).

- (25) a. Ali kazağı [Ø gör-üp] aldı
 Ali jumper-ACC see-ıp bought
 'Ali saw the jumper and bought it'
 b. Ali [kazağı Ø beğen-ıp] gömleği aldı
 Ali jumper-ACC like-ıp shirt-ACC bought
 'Ali liked the jumper but he bought the shirt'
 c. Ben [Ø buraya otur-up] olayları izle-me-di-m

¹⁶ Also see Déchaine et al. (2016) for more on how evidentiality interacts with indexicality in a structured discourse.

I here sit-*ip* incident watch-NEG-PST-1SG
'I didn't simply sit here and watch the incident'
'I sat here I didn't watch the incident'
d.*Ali kazağı beğenip Ahmet (kazağı) aldı
Ali jumper-ACC like-*ip* Ahmet jumper-ACC bought
Int. Ali liked the jumper but Ahmet bought it

(25a,b) show that *-ip* clause may have same object interpretation or it may have an overt object that is different from matrix object. (25c) is ambiguous between two readings where it may have the same or different polarity value with the matrix verb. None of these sentences, however, has a reading in which the two clauses have different subjects. An overt subject in *-ip* clause results in ungrammaticality (25b).¹⁷ Therefore, it is reasonable to assume that Turkish has a switch reference system where null arguments in the SR marked clause are understood to be the same. Polarity can be same or different without any polarity marker on the *-ip* clause, on a par with null arguments. Still, overt and different objects are allowed under *-ip* (25b), with the exception of subject (25d). Hence Turkish is a non-canonical SR language where the sole marker exclusively tracks the subject. To the best of my knowledge, there is no different subject marker in Turkish.

Turkish, along with the regular reflexive *kendi*, has an additional form *kendisi* where the suffix *-si* is the third person singular agreement marker. While *kendi* is subject to the principle A of binding theory, *kendisi* can be bound by distant antecedents. It has clear **logophoric** behaviour in exactly the context we would expect to find it: finite embedded clauses of attitude verbs. Note the example in (26).¹⁸

(26) Ali_i [Can_i kendisi_{i/j}-nden korkuyor] sanıyor
Ali Can log-ABL fears thinks
'Ali thinks Can is scared of him/himself'
(Özbek and Kahraman 2016: 77)

¹⁷ See Göksel and Kerslake (2005) and Bárány and Nikolaeva (2020) for some marginal examples of different subject interpretation with an overt subject. Still, such sentences are quite restricted and they quickly degrade to ungrammaticality when they are minimally altered. In fact, I was only able to produce one single example in addition to Göksel and Kerslake's example.

¹⁸ Also see Özyıldız, Major and Maier (2019) for a theoretical account where indexicality is accounted for with a logophor introducing complementizer *diye*.

CONCLUSION

In this paper, I attempted to unify five linguistic phenomena by introducing an operator to two well-organized theories. Specifically, I take *Finer's* (1985) idea of A' binding and *Speas'* (2004) and *Speas & Tenny's* (2003) syntax-pragmatics union and add to these an operator that manages the A' binding relations of discourse arguments and higher syntactic arguments in various ways due to different head features. The operator can co-index two syntactic or pragmatic arguments. It may appear anywhere between *EvidP* and *SAP*, as suggested by *Speas* (2004) to account for the hierarchy in logophoricity (§3). Regarding the head features, the head can co-index a lower argument with a higher argument (20a), two higher arguments (21a) or it can co-index a lower argument with an argument in a phrase that mutually c-commands the phrase it is found in (22a).

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Chapter 10

An Analysis of the Situation of Women in Türkiye Against the EU in Terms of Social, Economic and Health Indicators: A Statistical Analysis

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ABSTRACT

In addition to being an important and valuable member of the family, women also play an important role in the economic development of countries. In this context, women are effective in solving problems related to women by taking part in decision-making mechanisms in politics as well as qualified labor force. In addition, health investments made for women also improve the development status of the country. In this study, the status of women in Türkiye vis-à-vis the EU in terms of social, economic and health indicators is analyzed using Cluster Analysis, one of the multivariate statistical methods. In this respect, this study differs from other studies in that it reveals the performance of women in terms of social, economic and health variables in Türkiye before becoming a full member of the EU. According to the results of the analysis, Bulgaria and Türkiye are the closest observations and in the second stage, Bulgaria and Türkiye were joined by Romania to form the first cluster. Here, Türkiye, Bulgaria and Romania are similar to each other in terms of the variables analyzed.

INTRODUCTION

The human factor is one of the most important elements in economic development and social progress. In this context, ignoring women, who constitute more than half of the world's population, is a disadvantageous issue in terms of economic development; strengthening the socio-economic status of women is a necessity for development and social progress at the expected level. The social and economic position of women in society is of great importance both as a factor of production and in raising future generations. In fact, strengthening the position of women in society is one of the basic conditions for the economic and social development of societies. In this context, the well-being of women in terms of health, education, economic poverty, etc. positively affects the level of economic development of the country (Yılmaz et al., 2021).

According to Şimşek, there is a mutual interaction between women and development. As economic development accelerates, women's economic and consequently social and social status will be strengthened. On the other hand, the fact that women are stronger both economically and socially and socially will lead to an increase in economic development (Şimşek, 2008:1).

In terms of supporting the economic development and sophistication of countries, increasing women's employment will be a driving force in the economy. For this reason, measures to increase women's employment are being implemented rapidly. The first among these measures is the education factor. The economic efficiency of schooling and educating the female population is high. Especially its social efficiency is more important compared to the male population. According to educational economists, the productivity and therefore the earnings of individuals, whether male or female, increase in direct proportion to their level of education. By providing more educational opportunities to women, a country can reduce poverty and increase productivity, and alleviate the pressure of rapid population growth on economic and social development. Not only is education directly related to employment, with employability increasing as education increases, but education also has a positive impact on economic development, growth and the positive externalities it creates. Women's education, their participation in the labor force and their share in growth are important issues that every developing country should pay attention to in ensuring development. The contribution and importance of women's labor force employment in development in transition economies, which have the status of developing countries, is a discussion that needs to be addressed (Berber and Eser, 2008).

The second factor is poverty. Poverty, and especially women's poverty, is one of the main socio-economic problems in all countries of the world; it is one of the areas frequently mentioned by both academic and political circles and one of the

areas where policies are tried to be developed at national or international level to address the problem in question. Women's poverty is the inability of women to meet their basic needs and rights with their own income. In her study, Boserup tried to determine women's labor in agricultural production by considering the relationship between women's labor and women's labor force together. According to Boserup, women's labor in rural areas is based on labor-intensive production with primitive agricultural tools. The development of technology has reduced women's labor in agricultural production. With industrialization, men migrated from rural to urban areas for work, leaving agricultural production in rural areas back to women's labor (Boserup, 1970:15).

In this study, it is attempted to reveal the situation of Türkiye vis-à-vis the EU in terms of social, economic and health indicators of women. In this context, to the best of our knowledge, there is no empirical application on this issue in both national and international literature. This study differs from other studies in that it reveals the performance of EU candidate Türkiye in terms of social, economic and health variables of women before becoming a full member.

The study consists of literature, methodology, findings and conclusion.

LITERATURE REVIEW

Some of the national and international studies on women are listed below;

Esen (2013), in her study titled "The Situation of Rural Women in the European Union and Türkiye and Project Implementation Examples from Germany", examined the problems faced by women in the fields of employment and education and discussed the factors that negatively affect the socio-economic status of women in rural areas.

Yılmaz, Şimşek and Koca (2021), in their study titled "Investigation of Socio-Economic Status of Women in OECD Countries with Entropy-Aras Integrated Method", analyzed the socio-economic status of women in OECD countries with the Multi-Criteria Decision Making technique. As a result of the analysis, it was determined that the top three countries with the best socio-economic status of women were Iceland, Norway and Sweden, while Hungary and Japan were in the last two places in terms of women's status.

Buz (2009), in his study titled "Women's "Visibility" in the Process of Migration and Urbanization", examined the ways of revealing the visibility of women in the migration process by addressing the issue of women in terms of urbanization within the scope of internal migration process by making use of examples of studies in Türkiye and the world.

Topalhan et al. (2018), "Examining the Effects of Economic and Social Indicators on Women's Life Expectancy", examined the effects of access to employment,

education, health and average income, which are the main determinants of life expectancy, on women's life expectancy using panel data analysis. According to the results of the analysis, it is emphasized that employment and average income have positive effects on life expectancy, while problems in access to health facilities have negative effects.

Bolcan (2006), "The Place of Women in Working Life and Women's Unemployment in Türkiye in the Process of Harmonization with the European Union", examined the employment policies implemented by the European Union in the fight against unemployment and evaluated whether these policies can guide Türkiye's employment policies.

Öztürk and Çetin (2009), in the study titled "Poverty and Women in the World and Türkiye", a research was conducted to examine the poverty of women, one of the disadvantaged groups in poverty, from different perspectives and within the scope of anti-poverty strategies.

Balcı (2017), "Protection or Exclusion? An Evaluation of Certain Regulations Protecting Women in Our Labor Legislation in Terms of Women's Employment and EU Norms", the study examines whether the regulations in the Turkish legal system are actually protective or not by comparing them with the EU legal system.

Küçükşen (2017), "A Qualitative Study on the Perception of Social Exclusion in Syrian Refugee Women", aimed to examine whether Syrian women, who were deeply affected by undesirable situations such as war and migration, were subjected to exclusion in terms of society's thoughts towards them, socio-economic and cultural integration after migrating to Türkiye and the problems they faced in this regard.

Öz and Peri (2019), "Women's Employment in Türkiye and the European Union: A Comparison in the Context of Welfare Regimes", compared women's employment in the EU and Türkiye in terms of welfare regimes. While women's employment in Türkiye is determined to serve as unpaid family workers with the labor force in the agricultural sector, it is determined that the welfare regime with the highest rates of both unemployment and youth unemployment of women in the EU is the Southern European welfare regime.

Rehimli et al. (2008), "Evaluation of Türkiye and OECD Member Countries in terms of Women's Health Indicators", aims to examine the situation of OECD member countries in terms of health level criteria within the scope of women's health, and to reveal possible similarities or differences between them.

Çakır (2008), in her study titled "Women's Exclusion from Working Life in Türkiye", investigated the current situation of women in working life and other areas of social life in Türkiye within the framework of the phenomenon of exclusion from working life, in the light of data from the world and our country.

Tutar and Şahin (2016), "Analysis of Women's Employment in Türkiye's Harmonization Process with the European Union", analyzed the extent to which Türkiye, as a candidate for EU membership, is trying to fulfill the criteria for women's participation in the labor force. As a result, it was determined that women's employment contributes to many areas such as increasing their self-confidence, improving their living standards and contributing to economic development.

METHODS AND FINDINGS

In this study, cluster analysis, which is one of the multivariate statistical methods frequently used in the literature, was preferred to make comparisons between countries using various indicators. Jacquemin and Sapir (1996), Blashfield and Aldenderfer (1978) and Barna, Seulean and Mos (2011) have previously used this analysis in national and international literature.

Cluster analysis is one of the pattern recognition techniques. It can be characterized by the use of similarity or dissimilarity measures between the objects to be identified (Diday and Simon 1976:47).

Due to the different units of measurement of the variables used in the analysis, standardization was applied. In the analysis, social, health and economic indicators of women were used under main headings. Analyses were carried out for the years 2020 and 2021 within the scope of the years with data for the variables used in the analysis, and the variables used in the analysis in this context are given in Table 1.

Table 1: Variables Used in the Analysis

Name of Variables	Unit of Measure
Adult participation in learning by gender in the last four weeks (Women)	%
Long-term unemployment rate by gender (Women)	%
Years of healthy life at age 65 by women	Year
Proportion at risk of poverty by women	%
Employment rates of new graduates (Women)	%
Cancer-related deaths by women	%
Death by suicide by women	%
Deaths due to AIDS (HIV disease) by women	%
Years of healthy life at birth by women	Year
Material deprivation rate by women	%
Rate of material and social deprivation by age, sex and education level (Women)	%

Source: <https://ec.europa.eu/eurostat/data/database> (Access Date: 10.06.2023)

In the cluster analysis technique, Ward method, which is frequently used in the literature, was used. Before the analysis, the standardization process was

carried out since the units of measurement of the variables were different. The aggregation table obtained as a result of including the variables subject to the study in the analysis is given in Table 2.

Looking at Table 2, the first row shows the first stage of the clustering analysis and consists of 27 clusters. In cluster 1 in the "Merged Cluster" section, observation 1 (Belgium) and observation 5 (Germany) are the two closest observations. In addition, the next column of coefficients measures the distance between observations, which is 0.031. In the second stage, observations 2 (Bulgaria) and 28 (Türkiye) are the closest to each other and observations 2 and 28 are joined by observation 23 (Romania) to form the first cluster. Here, Türkiye, Bulgaria and Romania are similar to each other in terms of the variables considered.

In this context, countries in the same cluster can make similar infrastructure and improvements with cooperation in the world where resources are scarce in the policies they will implement for women in social, health and economic fields. In the context of Türkiye's possible full membership to the EU, the indicators that are considered reveal which EU country Türkiye is similar to and what its level of development is. These cluster formations are important in this context. Looking at the third stage, the 7th (Ireland) and 24th (Slovenia) observations constitute another cluster group between them. In the next stage, these two countries are joined by the 3rd observation, the Czech Republic, to form another cluster group. This will continue until the 9th stage. In addition, it is observed that the distance between the observations (countries) in the coefficients column in Table 2 increases gradually in each stage.

Table 2: Agglomeration Table Obtained with Ward Technique
Agglomeration Schedule

Stage	Cluster Combined		Coefficients	Stage Cluster First Appears		Next Stage
	Cluster 1	Cluster 2		Cluster 1	Cluster 2	
1	1	5	,031	0	0	9
2	2	28	,092	0	0	17
3	7	24	,162	0	0	13
4	3	21	,259	0	0	13
5	12	13	,358	0	0	15
6	4	19	,487	0	0	21
7	11	25	,660	0	0	12
8	10	18	,885	0	0	14
9	1	20	1,154	1	0	10
10	1	26	1,474	9	0	19
11	15	22	1,982	0	0	22
12	11	17	2,491	7	0	24
13	3	7	3,315	4	3	19
14	10	16	4,196	8	0	16
15	9	12	5,206	0	5	23
16	10	27	6,383	14	0	23
17	2	23	7,637	2	0	20
18	6	14	9,293	0	0	22
19	1	3	11,172	10	13	21
20	2	8	13,426	17	0	25
21	1	4	16,016	19	6	24
22	6	15	18,656	18	11	26
23	9	10	22,779	15	16	25
24	1	11	29,894	21	12	27
25	2	9	43,038	20	23	26
26	2	6	59,876	25	22	27
27	1	2	81,000	24	26	0

Source: Original analysis output (SPSS)

These situations can also be seen in the dendrogram below;

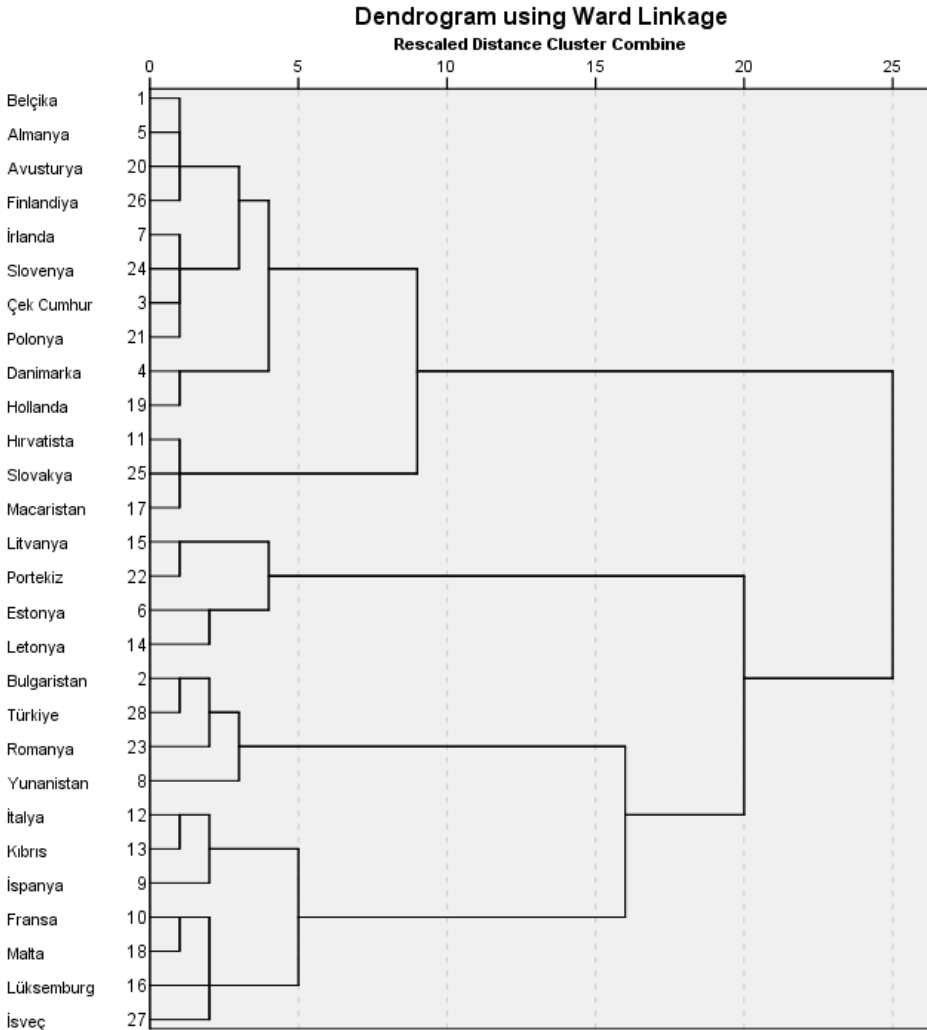


Figure 1: Displaying the Result with a Tree Graph (Dendrogram)
Source: Original analysis output (SPSS)

CONCLUSION

Strengthening the position of women in society is one of the basic conditions for the economic and social development of societies. In this context, the well-being of women in terms of health, education, economic poverty, etc. will positively affect the economic development level of the country. In this context, increasing women's employment, improving their health status, establishing their

social rights and increasing women's representation in parliament will advance the development levels of countries. At this point, it is necessary to investigate the social, economic and health phenomena of women, who are one of the important and valuable parts of society, and to provide necessary improvements and policy recommendations in these areas.

This study aims to reveal the situation of Türkiye vis-à-vis the EU in terms of social, economic and health indicators of women. In this context, to the best of our knowledge, there is no empirical application on this issue in both national and international literature. This study differs from other studies in that it reveals the performance of EU candidate Türkiye in terms of social, economic and health variables of women before becoming a full member.

An empirical analysis of Türkiye's position vis-à-vis the EU in terms of women's social, economic and health indicators is presented. Bulgaria and Türkiye are the closest observations to each other and Romania joined Bulgaria and Türkiye in the second stage to form the first cluster. Here, Türkiye, Bulgaria and Romania are similar to each other in terms of the variables considered. In this context, countries in the same cluster can make similar infrastructure and improvements with cooperation in the world where resources are scarce in the policies they will implement for women in social, health and economic fields. In the context of Türkiye's possible full membership to the EU, the indicators analyzed reveal which EU country Türkiye is similar to and what its level of development is. Based on the results of the analysis, the EU consists of countries with different levels of development, and Türkiye is similar to Bulgaria and Romania, which are full members of the EU, within the scope of the variables discussed, and in this context, it is important in terms of guiding policy makers.

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Chapter 11

Creating Shared Value as a Business Strategy in Extractive Industries: An Overview and Practical Suggestions

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ABSTRACT

This paper examines the concept of Creating Shared Value (CSV) in the context of extractive industries. Through a comprehensive review of the literature, this article examines the potential of the CSV approach in addressing the environmental, social and economic challenges associated with extractive activities. The study shows that CSV integrates societal needs and environmental concerns into core business strategies, providing an innovative framework that creates value for both shareholders and local communities. Benefits of implementing CSV in extractive industries result in improved stakeholder relationships and social license to operate, responsible management of natural resources, inclusive economic development, and minimal impact on the external environment. However, successful implementation requires strategic planning, stakeholder engagement, cooperation, and a supportive regulatory framework. Future research directions include assessing long-term sustainability, leveraging technology and innovation, and examining the role of government policy in supporting CSV initiatives. Implementation of CSV in the extractive industries can pave the way for a more sustainable and inclusive future, balancing economic prosperity, social progress and environmental protection.

Keywords: Shared value, extractive industries, business strategy

1. INTRODUCTION

Extractive industries, including sectors such as mining, oil and gas, and logging, play an important role in the global economy (Addison & Roe, 2018). These industries are responsible for providing natural resources to other economic sectors and they contribute to economic growth, employment and development directly and indirectly. The raw materials provided by extractive industries are used in critical economic activities such as manufacturing, construction and power generation. The minerals, metals, fossil fuels and wood that are supplied by extractive industries form some of the basic building blocks of modern economies. In the absence of these materials, the global economy would face major setbacks in meeting energy demand, infrastructure development and manufacturing needs (Bebbington et al., 2018). Extractive industries therefore ensure the continuation of global production and trade. These industries also create a significant number of jobs, which make them valuable as a source of income for many people.

Despite their important functions in the world economy, extractive industries leave considerable negative social and environmental footprint. The social and environmental impacts of extractive industries form a major impediment to achieving sustainable development goals. Displacement of local populations, human rights violations, local conflicts, deforestation, environmental degradation and greenhouse gas emissions are among the many challenges posed by these industries (Pesa & Ross, 2021). Extractive industries are even associated with economic instability and income inequality in some regions (Ranangen & Zobel, 2014).

For all these reasons, extractive industries are often at the center of controversial issues that involve governments, businesses and civil society organizations. As environmental and social concerns have gained prominence in the recent years, extractive industries face increasing pressure from various stakeholders (Williamson, Symeou & Zygliopoulos, 2022). To manage this pressure and mitigate risks, extractive companies have been using traditional techniques that can be grouped under the corporate social responsibility umbrella. But traditional methods have insufficiently served their purpose, and most of the time they have failed to prevent public criticism and reputation loss (Fraser, 2019; Hilson, 2012; Mutti et al., 2012).

In this study, a new concept by Porter & Kramer (2011), namely creating shared value (CSV), will be evaluated as a potential new way of peaceful co-existence between extractive industries and adverse interest groups. The study seeks answers to the following research questions:

1. What kind of socio-economic impacts do extractive industries have?
2. What are the negative consequences of extractive industries on sustainability?
3. How can extractive businesses create shared value in order to stay competitive and minimize their negative impact at the same time?
4. How can extractive industries integrate environmental concerns into their business strategies through shared value creation?

To achieve this end, this paper reviews the relevant literature on extractive industries and their social and environmental controversies. Then, it develops practical suggestions for creating shared value in extractive industries.

2. THE ROLE OF EXTRACTIVE INDUSTRIES IN THE GLOBAL ECONOMY

Extractive industries are generally evaluated under three main categories: mining, oil & gas and forestry. Mining is the extraction of valuable minerals, metals and other geological materials from the earth. The identification of the mineral deposit, the extraction process and the processing of the extracted material are important parts of mining operations (Marjoribanks, 2010). Mining techniques vary depending on the depth, location and type of minerals to be mined (Nieto, 2011). Examples of mined minerals include gold, silver, copper, coal, iron ore, diamonds and rare earth elements.

The oil and gas industry mainly involves the exploration, extraction, refining and distribution of fossil fuels such as oil and natural gas (Bentley, 2002). Exploration is the discovery and measurement of potential deposits. The extracted resources go through a refining process to produce various petroleum products such as gasoline, diesel, kerosene and lubricants (Wauquier, 1995).

Forestry industry on the other hand includes the management, harvesting and processing of forest products. This includes activities such as logging, transporting logs, processing wood for construction, papermaking and other wood products (Uusitalo & Pearson, 2010). Forestry can be classified into industrial logging, selective logging and sustainable logging, the latter focusing on protecting forest ecosystems and biodiversity while extracting resources (Hahn & Knocke, 2010; Oliver, 2003).

Fossil fuels are still a major source of energy, accounting for a significant portion of the global energy consumption (Pirani, 2018). In addition, energy security is critical to maintaining economic stability, as disruptions or shortages of energy supplies can have far-reaching implications (Chepeliev & van der Mensbrugge, 2020). Extractive corporations play a significant role in reducing

the risk of energy scarcity and price volatility through exploration and production activities (Coady et al., 2017).

Extractive industries also have a major share in global trade. Especially resource-rich countries often rely on commodity exports for economic development. Foreign currency earnings from these exports can be used to finance imports, invest in infrastructure and support development policies (Sultan & Haque, 2018). On the other hand, extractive industries also drive import demand. Industries that rely heavily on raw materials require a steady supply of inputs to sustain production (Helbig et al., 2016). This creates an interdependence between resource-rich and industrialized countries (Rabe, Kostka & Stegen, 2017).

Extractive industries constitute an important stimulation for local development. For example, construction of mines leads to infrastructure development which benefits both mining companies and local populations (Ejdemo & Söderholm, 2011; Söderholm & Svahn, 2015). In addition, extractive companies create direct and indirect employment opportunities. For instance, mining operations require a wide variety of jobs, from skilled workers to technical and managerial positions (Gamu, Le Billon & Spiegel, 2015). Moreover, these industries also stimulate job creation in related sectors such as transportation, logistics and manufacturing (Sadik-Zada, 2021; Sadik-Zada, Loewenstein & Hasanli, 2021). Income generated through these jobs contributes to local economies.

3. ENVIRONMENTAL AND SOCIAL CHALLENGES ASSOCIATED WITH EXTRACTIVE INDUSTRIES

Extractive operations often come with significant environmental and social challenges. Extraction and processing of natural resources can lead to environmental degradation, biodiversity loss and social unrest (Mardones & del Rio, 2019; Fayiah, 2020; Virah-Sawmy, Ebeling & Taplin, 2014; Conde, 2017). Recognizing and addressing these challenges is essential to ensure the sustainable development of extractive industries and the health of communities and ecosystems.

3.1. Environmental issues

3.1.1. Deforestation and habitat destruction

Extractive industries, especially logging, are often responsible for deforestation and habitat destruction, which can lead to loss of biodiversity and valuable ecosystem services. Clear-cutting practices, environmentally unfavorable logging methods and poor land-use planning can lead to

fragmentation and degradation of forest ecosystems (Boekhout van Solinge, 2014; Sharp et al., 2019).

3.1.2. Water pollution

Extractive industries often use considerable amount of water for daily operations. They also release with heavy metals, chemicals and other toxic substances, which can lead to water pollution and degradation of aquatic ecosystems (Liu et al., 2021; Sairinen, Tiainen & Mononen, 2017). Additionally, unintended spills and leaks can occur during oil extraction, which can cause significant damage to marine and freshwater environments (Fisher, Montagna & Sutton, 2016).

3.1.3. Greenhouse gas emissions

Extractive industries are a major contributor to air pollution and greenhouse gas emissions. When coal, oil and gas are burned, pollutants such as sulfur dioxide, nitrogen oxides and particulate matter are released, causing poor air quality and adverse health effects (Oskarsson & Bedi, 2018). Furthermore, fossil fuel usage greatly increases global greenhouse gas emissions, exacerbating climate change and its impacts (Zheng et al., 2023).

3.2. Social issues

3.2.1. Community displacement

The expansion of extractive industries can lead to social unrest by displacing local populations. The establishment of mining operations and large infrastructure projects can result in loss of land, livelihoods and community cohesion (Owen & Kemp, 2015; Askland, 2018). Forced migration often leads to social tensions, loss of identity and increased vulnerability of those affected (Cesar & Jhony, 2021; Haslam & Tanimoune, 2016).

3.2.2. Human rights violations

Extractive industries are associated with human rights violations, including violations of indigenous peoples' rights, labor rights and community rights (Idemudia, Kwakyewah & Muthuri, 2020; Kemp et al., 2010). Indigenous communities often bear the negative consequences of resource extraction in the form of land encroachment, cultural encroachment, and loss of traditional livelihoods (Ali, 2009; Simbulan, 2016). Furthermore, workers in these industries may be exposed to unsafe working conditions and inadequate wages (Saleh & Cummings, 2011).

3.2.3. Socio-economic inequalities

Extractive industries can amplify existing socioeconomic inequalities within local communities. These industries provide employment opportunities, but the distribution of benefits is unequal due to limited local job creation and a focus on higher-skilled jobs (Fleming & Meesham, 2015; Loayza & Rigolini, 2016; Rubbers, 2020). This can lead to inequalities in income, access to resources and quality of life between local communities and industrial workers.

4. TRADITIONAL APPROACHES TO MITIGATING NEGATIVE IMPACTS OF EXTRACTIVE INDUSTRIES

The negative environmental and social impacts of extractive industries have long been a concern for stakeholders around the world. Traditional approaches to mitigate these impacts have long been used as an attempt to address pollution, habitat destruction, displacement of local populations and human rights violations. By understanding the strengths and limitations of these approaches, stakeholders can work on more effective and sustainable strategies.

4.1. Regulatory frameworks

Governments enact laws and regulations to enforce compliance with environmental standards, occupational safety and community rights. These frameworks establish guidelines for sustainable resource extraction, waste management, land reclamation and pollution control (Leonard & Grovogui, 2017).

Regulatory frameworks provide a foundation for responsible industry practice, but their effectiveness depends on enforcement and oversight mechanisms (Tansey, 2020; White, 2017). Weak enforcement, corruption and inadequate oversight often lead to non-compliance and consequent environmental and social harm (Kasekende, Abuka & Sarr, 2016; Teichmann, Falker & Sergi, 2020). Strengthening regulatory bodies and increasing transparency may increase the effectiveness of these frameworks.

4.2. Environmental impact assessment (EIA)

Environmental impact assessment is a systematic process for evaluating the potential environmental and social impact of a proposed project (Glasson & Therivel, 2013). EIA assesses project feasibility, identifies potential risks, and suggests corrective actions. These assessments include stakeholder consultations, data collection, impact simulations and development of environmental management plans (Morgan, 2012).

EIAs have been valuable tools for identifying potential adversities and developing preemptive measures. However, their effectiveness depends on the quality of the assessment, stakeholder engagement, and implementation of suggested corrective actions (Ritter et al., 2017; Ryberg et al., 2016). To be effective, EIAs should be conducted by independent experts, include comprehensive data collection, and ensure community participation (Glasson & Therivel, 2013).

4.3. Community participation and consulting

Participation enables communities to voice concerns, take part in decision-making, and negotiate equitable interests (Dobele et al., 2014). Through consultation, project developers can identify potential problems, take mutually agreed remedial actions and build trust with affected communities.

Power imbalances, inadequate communication channels and limited resources for meaningful participation are the main challenges that hamper the effectiveness of community engagement (Ansu-Mensah et al., 2021; Maher, 2019). Further efforts are needed to ensure inclusive and culturally appropriate engagement, strengthen local ties and address complaints in a timely manner.

4.4. Commitment to corporate social responsibility (CSR)

CSR programs include voluntary actions by companies to contribute to the welfare of local communities, protect the environment and support sustainable development (Pereira et al., 2021). Investments in education, healthcare, infrastructure and environmental protection are examples of this category of activities.

CSR efforts can have positive social and environmental outcomes, but their impacts vary. Challenges include potential greenwashing, lack of accountability, and inconsistent implementation across projects (Schmidt et al., 2022; Zharfpeykan, 2021). To maximize its effectiveness, CSR efforts must be aligned with the needs of local communities and integrated into broader sustainability strategies.

5. CREATING SHARED VALUE: DEFINITION AND KEY PRINCIPLES

Creating shared value (CSV) represents a paradigm shift in how companies perceive their role in society (Porter & Kramer, 2011). CSV challenges the traditional view that social and environmental concerns are separate from business concerns and recognizes the interdependence of business success and social progress (Porter & Kramer, 2011). By adopting CSV principles, companies

can align their strategies with the needs of society and create mutual value for themselves and their environments (Wojcik, 2016).

Creating Shared Value is a strategic approach that enables companies to identify and meet societal needs through their core products and services (Crane et al., 2014). It emphasizes the integration of social and environmental considerations in business strategy and goes beyond the traditional concept of corporate social responsibility (Wojcik, 2016). CSV acknowledges that addressing societal challenges can lead to competitive advantage, innovation and value creation (Spitzeck & Chapman, 2012).

CSV has three basic principles: reconceiving products and markets, redefining value chain productivity and enabling the development of local clusters (Porter & Kramer, 2011). The first principle of CSV requires businesses to rethink their products and markets to improve social and environmental performance. As such, businesses must identify opportunities to create shared value by addressing unmet needs, minimizing negative impacts and creating new market opportunities (Fernandez-Gamez et al., 2020). Through customer centered innovation, companies can adapt their products and services in a way that benefits both them and the society.

The second principle of CSV is to redefine productivity in the value chain to increase efficiency, reduce waste and minimize environmental impact. Companies can achieve this by adopting sustainable practices and integrating social and environmental dimensions across their value chains (Eranda & Abeysekera, 2015). Reducing resource use, improving energy efficiency and minimizing emissions enhance environmental sustainability and increase operational efficiency at the same time (Saenz, 2019).

The third principle of CSV is to enable the development of regional clusters. Businesses can help develop infrastructure, education, healthcare, and other critical services by working with local stakeholders (Alberti & Belfanti, 2019). In addition, supporting local entrepreneurship and local supplier networks can help companies to ensure steady supply of necessary materials while improving the overall socio-economic conditions of local communities (Taghipour et al., 2022).

CSV approach was demonstrated to have many advantages. However, implementing the CSV principle may be difficult for some companies. For example, businesses can struggle to balance competing interests and measure their social and environmental impact (Wieland, 2017). CSV requires a change in organizational mindset and this change can trigger internal resistance (Nikolova & Andersen, 2017). Effective implementation of the CSV principles

requires strong leadership, stakeholder engagement and collaboration with external partners (Menghwar & Daood, 2021).

6. THE SHIFT FROM PHILANTHROPY AND CSR TO CREATING SHARED VALUE (CSV) IN THE BUSINESS WORLD

Companies have long engaged in philanthropic and CSR activities to demonstrate their commitment to social and environmental issues. While these approaches are valuable, they often operate separately from core business activities without a strategic focus. The emergence of Creating Shared Value (CSV) represents a shift in the business world as companies recognize the potential for social challenges to drive innovation, competitiveness and long-term value creation (Fernandez-Gamez et al., 2020).

There are several factors that is driving the shift from philanthropy and CSR to CSV. First, companies are becoming increasingly aware of the interplay between business success and social progress (Porter & Kramer, 2011). They recognize that addressing social and environmental challenges may reveal untapped market segments, improve operational efficiency and reputation. Second, stakeholder expectations are also evolving as they demand more from companies in terms of social and environmental responsibility. CSV enables companies to have good stakeholder relationships by integrating society's needs into their core business strategies.

CSV has many advantages over traditional methods which make it an attractive choice for an increasing number of firms. Firstly, CSV requires the integration of social and environmental concerns into business strategy whereas traditional philanthropy and CSR generally function as separate from strategy (Menghwar & Daood, 2021; Wojcik, 2016). Second, traditional approaches generally offer short-term solutions while CSV focuses on long-term value creation as a strategic imperative (Michelini & Fiorentino, 2012). Third, CSV promotes mutual benefits between business and society instead of one-sided responsibility. By this way, businesses have long-term incentives to take responsibility for their social and environmental impacts (de Ruyter et al., 2022). Fourth, CSV can drive innovation by identifying overlooked market needs that also serve society's wellbeing (Lichtenthaler, 2017). By integrating social and ecological dimensions into their strategies, companies can develop new products, services and business models that give them an edge against their competitors (Saenz, 2019). Fifth, adopting CSV principles improves a company's reputation and stakeholder relationships (Fernandez-Gamez et al., 2020). By demonstrating commitment to social issues, companies build trust with consumers, investors, employees and communities. Sixth, integrating social and environmental

concerns into business strategy helps companies to become more resilient in an ever-changing business environment through robust methods such as local sourcing or local capacity development (Font, Guix & Bonilla-Priego, 2016; Orr & Sarni, 2015).

7. THE POTENTIAL BENEFITS OF ADOPTING A CREATING SHARED VALUE (CSV) APPROACH IN EXTRACTIVE INDUSTRIES

Extractive industries have long been associated with negative impacts on the environment and society. However, adopting a CSV approach may help such firms to increase their legitimacy in public view. Potential benefits of adopting the CSV approach in extractive industries include improved social license to operate, environmental performance, innovation and sustainable development.

7.1. Better social license to operate

One of the main benefits of adopting CSV in the mining industry is the potential for better social license to operate (Saenz, 2021). By being proactive in social and environmental issues, companies can build trust and gain support from multiple social stakeholders (Cesar, 2021; Fraser, Bat-Erdene & Kunz, 2021). This can result in less conflict and more collaboration.

7.2. Enhanced environmental performance

By incorporating environmental considerations into their business strategy, companies can adopt more sustainable extraction techniques that minimize waste and pollution (Chaurasia et al., 2020; Fraser, 2019). For example, businesses can invest in new technologies to reduce energy use, implement responsible water management practices, and engage in ecosystem restoration. These measures may also position companies as pioneers of environmental responsibility and resource efficiency (Yadav, Han & Kim, 2017).

7.3. Increased innovation

CSV can drive innovation in the extractive industries by identifying new market opportunities to develop innovative products and services (Nam & Hwang, 2019). By rethinking products and markets, companies can respond to unmet needs of society, resulting in higher customer satisfaction and market share (Grezes et al., 2016).

7.4. Long-term sustainable development

CSV encourages companies to undertake activities that support regional cluster development, promote economic diversification and improve social

welfare (Alberti & Benfanti, 2019; Jackson & Limbrick, 2019). Businesses can contribute to their host communities by investing in local infrastructure, education, healthcare and entrepreneurship. This will improve resilience, reduce resource dependence and enable more inclusive development (Kim, 2018; Yang & Yan, 2020).

7.5. Stakeholder engagement and reputation enhancement

CSV facilitates meaningful collaboration with different stakeholder groups. By actively involving stakeholders in decision-making, companies can better understand and respond to their needs and expectations (Shah & Guild, 2022). This commitment creates trust and establishes long-term partnerships. Good stakeholder relations lead to better market access, a stronger brand image and a loyal customer base.

8. SUGGESTIONS FOR CREATING SHARED VALUE IN EXTRACTIVE INDUSTRIES

8.1. Stakeholder engagement

Stakeholder engagement is a fundamental element of CSV because it enables companies to identify the needs of society, align their business strategies to meet those needs, and create shared value for the company and society. Extractive industries can create shared value through stakeholder engagement in the following ways:

8.1.1. Collaboration for environment protection

By collaborating with stakeholders, the extractives industry can better understand environmental issues and develop strategies to minimize adverse impacts (Bennett et al., 2018). Stakeholder input can influence the adoption of responsible practices such as utilizing innovative technologies that reduce pollution, conserve resources and protect biodiversity.

8.1.2. Social and economic development

Through stakeholder engagement, extractive firms can identify opportunities for local development. They can collaborate with stakeholders to design and implement initiatives that support local employment, local businesses, and infrastructure (Desai, 2018). By integrating local suppliers into their value chain and providing skill development to local workforce, extractive firms can have cost advantages and improve social well-being (Niu et al., 2018).

8.1.3. Respect for indigenous rights

By engaging stakeholders, extractive firms can uphold the rights of indigenous communities (Fordham & Robinson, 2018). Businesses can work with stakeholders to understand cultural practices, traditional knowledge and community aspirations. This understanding can help develop benefit-sharing policies, protocols and agreements that respect the rights of indigenous peoples and local communities (Fletcher, Pforr & Brueckner, 2016). Meaningful efforts ensure that the indigenous communities' voices are heard and their rights are protected.

8.2. Environmental stewardship

Environmental stewardship is a key component of CSV, as extractive industries can create shared value by addressing environmental issues and aligning their strategies with the needs of society. Extractive industries can create shared value through their environmental efforts by:

8.2.1. Responsible resource extraction

By adopting responsible resource extraction practices, companies can minimize their environmental footprint (Behrens et al., 2007). This includes implementing land disturbance measures, sustainable extraction techniques, and best practices for exploration and production. Responsible mining practices limit habitat destruction, soil erosion and water pollution, and their negative impacts on ecosystems and communities (Henckens, 2021).

8.2.2. Pollution prevention and control

Extractive businesses can invest in technologies and practices that reduce air emissions, water pollution and waste generation (Alberts et al., 2017). This includes waste management systems, water recycling and pollution control technologies (Garbarino, Orveillon & Saveyn, 2020). By minimizing pollution, companies can protect ecosystems, maintain water quality, and reduce health risks to surrounding communities.

8.2.3. Biodiversity conservation

Environmental management includes efforts to conserve biodiversity and restore degraded areas. Companies can develop biodiversity action plans, conduct habitat assessments, and implement reclamation and restoration programs (Locke et al., 2019). Biodiversity protection and land reclamation also contribute to the long-term sustainability of resource extraction, creating value for firms (Kremen & Merenlender, 2018).

8.3. Improving local communities

Social and economic development are important aspects of responsible resource extraction in extractive industries. These industries have the potential to bring significant economic benefits to local communities. However, lack of proper planning and cooperation often causes negative impacts to outweigh positive outcomes. Firms can contribute to community improvement and reap its benefits in the following ways:

8.3.1. Job creation and skills development

Job creation is an important positive consequence of extractive industries (Gamu, Le Billon & Spiegel, 2015). By adopting CSV principles in hiring practices, extractive firms can create sustainable jobs for local communities and have access to a steady supply of labor. To achieve this, they can prioritize local hiring, introduce training programs to local workers and collaborating with local government bodies. In addition, integrating local suppliers into their value chains may enable extractive firms to foster local development and resilience (Alberti & Belfanti, 2019).

8.3.2. Infrastructure development

Extractive industries can invest in local infrastructure such as schools, health facilities, water and sewage systems, and transportation networks. These investments will improve access to essential services, improve quality of life and have a lasting positive impact on communities. At the same time, infrastructure development will serve business purposes through attracting more investment, boosting local trade and demand for products.

8.4. Working with governments, NGOs, and local communities to address shared challenges

8.4.1. The role of governments

Governments regulate extractive industries, ensure legal compliance and protect the interests of society. Governments also act as mediators between various interest groups. They create a platform for dialogue, negotiation and dispute resolution. Governments can harmonize industry interests, community needs and environmental concerns, enabling mutually beneficial solutions (Masuda et al., 2022).

8.4.2. The role of NGOs

Non-governmental organizations (NGOs) are important actors that promote transparency and ensure independent oversight. NGOs monitor the activities of extractive industries and ensure compliance with environmental standards, human rights and social responsibilities. They can assess the impact of extractive industries independently and voice public concerns for needed improvements. NGOs should work with industry representatives, governments and local communities to develop sustainable practices. They can provide technical expertise to help the implementation of responsible policies and initiatives.

8.4.3. The role of local communities

By collaborating with other stakeholders, local communities can negotiate and benefit from extractive industrial activity. They can take advantage of revenue sharing agreements, employment opportunities, skill development programs and local supply chain development. By working together, they can ensure that local communities receive fair and equal benefits from resource extraction.

9. CONCLUSION

The concept of Creating Shared Value (CSV) has emerged as a promising framework for promoting sustainable development of extractive industries. The purpose of this study was to explore the potential of CSV as a business strategy in addressing the environmental, social and economic challenges associated with extractive activities. Through an extensive review of existing literature, we explored key principles, strategies, and benefits of implementing the CSV approach in the resource extraction domain.

The findings show that creating shared value is a transformative approach for extractive industries to meet environmental, social and economic challenges simultaneously. By integrating the interests of all stakeholders and aligning business strategies with the Sustainable Development Goals, companies can contribute to positive social outcomes while ensuring long-term profitability. Adopting CSV requires strong leadership, effective collaboration, and a commitment to transparency and accountability. By adopting CSV principles, extractive firms can lead the way to a more sustainable and inclusive future in which economic prosperity is in balance with social progress and environmental protection.

Looking ahead, there are several avenues for future research on CSV in the extraction industry. First, more empirical studies are needed to assess the long-term sustainability and scalability of CSV approaches in different contexts. This helps build a solid evidence base that can guide decision making and provide a

basis for good practice. Second, examining the role of technology and innovation in CSV strategies may provide valuable insights to leverage technological advances for sustainable development. Finally, considering the role of government policies, regulations and incentives in supporting and facilitating CSV initiatives will set an impactful research agenda for a favorable context.

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Chapter 12

Gendered Power Relations in Agriculture: The Case of Female Seasonal Agricultural Workers in Ordu/TURKEY

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ABSTRACT

In this research, it is aimed to reveal the working and living conditions of seasonal agricultural workers in Anatolia. First of all, the class and gender relations historically established by patriarchal capitalism with agriculture were discussed theoretically and through country examples. The problematic content of the linear capitalist development discourse has been discussed in the context of the industry's inability to develop to the desired extent and the fact that small enterprises in the agricultural sector are not replaced by large capitalist enterprises in various country examples. In Turkey, too, when capitalism encountered agricultural class and gender relations in Anatolia, it reproduced these relational structures in unique ways. On the one hand, small commodity production has survived in capitalist market conditions through the mechanism of self-exploitation and especially the exploitation of women's labor. On the other hand, with the acceleration of hierarchical land conflicts within agriculture, the number of masses who became impoverished by dispossession increased rapidly as well as large land ownership, trade, usury, small commodity production. These families, which are the poorest in Anatolia, regularly do seasonal agricultural work every year in order to survive. In this context, the fieldwork carried out in Ünye and İkizce districts of Ordu province in 2019 focused on the social production and reproductive conditions of landless peasant families and especially seasonal agricultural female workers.

Keywords: Women, Gender, Agriculture, Migration, Reproduction, Labor, Patriarchy, Capitalism

INTRODUCTION

The long history of capitalism has started with the enclosure of women's reproductive activities as well as land dispossessions. Silvia Federici argues that many of the specific features of the transition to capitalism (such as the witch hunts, and the new Enlightenment Cartesian model of the mind/body division and degradation of body, perception of the body as machine) can be explained as part of the reorganization and disciplining of women's reproductive labor and female/male peasants' productive labor. The dispossession of agricultural producers/households from the land and migration have long been distinct conditions of capitalist development.

Specifically in developing countries, the commodification and commercialization processes of agricultural production towards capitalist markets reproduce patriarchal and class inequalities together. On the one hand, conflict and compromise-laden processes among landless peasants, smallholder peasants and capitalist large landowners are reproduced hierarchically. On the other hand, the small peasantry and landless peasantry, who exploit their own labor, especially women and children's labor, as shaped by patriarchal relations, are reproduced in capitalism (Bernstein 1988, 2016, 2017). In this context, with reference to Tom Brass (2008, 2010), the concepts of bonded labor and unfree labor, which include both class and gender inequalities, are reproduced widely.

In this paper, it will be focused on social reproduction conditions of landless peasant families and especially seasonal agricultural female workers in Turkey. It is argued that the labor of female seasonal agricultural workers, devalued in production and reproduction within hierarchical power relations, is shaped by local feudal and patriarchal economic and cultural relational structures. However, this female labor supports global agricultural capital via ensuring the survival of surplus population. The poorest households in Anatolia, who were torn from the land and dispossessed, cannot migrate to the big cities in Western Anatolia because they do not have even a small amount of financial savings, and they cannot make a living by working in informal jobs there. Instead, these impoverished households are able to hold on to seasonal agricultural jobs with low wages thanks to the production and reproduction labor of women.

First, the historical change of agricultural structures in the world and Turkey in the context of gender and class relations will be discussed briefly. It will be pointed out that structurally, the global capital accumulation process and the companies, which are the concrete carriers of this process, have historically reshaped the feudal and patriarchal cultural and economic hierarchical relations in agriculture in unique ways. Then, It will be briefly touched on the current

living and working conditions of seasonal agricultural workers in the world and in Turkey.

Finally, within this framework, the results of qualitative in-depth interviews with 12 seasonal female agricultural workers in Ordu will be presented with the following themes: Firstly, the pressure on women of the impoverishment processes of seasonal agricultural worker families through dispossession will be revealed. Then, it will be discussed how the lack of infrastructure in the campsites complicates the daily struggle of women to care for the family. Then, gendered power relations between men and women will be discussed in the context of man's control over women's labor, wages, and fertility. Finally, The patriarchal male control over women's labor will be examined.

The Question of Gendered Agricultural Labor in Patriarchal Capitalism

Historically, patriarchal capitalism was a revolution against the hierarchy and oppressive relations that formed Feudalism in the West. Nevertheless, later, Global Patriarchal capitalism has uniquely breaded hierarchical relations of production and reproduction in corporate/public and individual/private spheres focused on exploitation, oppression, and profit. First, Western countries have internalized all these forms of economic and social hierarchies and perceptions with the institutional pressures coming from the church and new ruling classes. These transformation processes did not happen easily. Revolts and resistances were carried out against the class, religious and gender hierarchies created in the relations of production and reproduction (bloody peasant revolts, witch hunts, a movement of bandits, the radical movements of Diggers and Levellers, etc.).

Later, these relations and perceptions were imposed on non-Western societies with various economic and social pressures. All these pressures were legitimized by the discourses of Enlightenment, modernization, economic growth, and development. In the historical process, these discourses and pressures have been adapted to non-Western societies in diverse forms and levels. Although these discourses point to linear economic and social development, global capitalism and modernity coexist with pre-capitalist, pre-modern and/or transitory economic and social structures and relations (patriarchal institutional structures, kinship relations, pre-capitalist subsistence agricultural relations, subsistence market activities of rural women, etc.). Again, resistances, search for alternatives and bargains against the unique class, religious, ethnic and gender-based hierarchies in different countries have shaped the processes.

Various views on the articulation of capitalism with different modes of production have created an important area of discussion among critical social scientists. Throughout the history of capitalism, the transformations of subsistence agricultural production in different countries have often been the subject of intellectual analysis. The modernization theory has revealed hierarchical presuppositions regarding the linear development stages. These presuppositions have been accepted not only by mainstream schools of thought but also by critical and orthodox Marxist groups. Historically, it has been generally accepted that different modes of production will necessarily evolve into capitalism, large industrial enterprises will dominate the economy, and small agricultural farms, which have pre-capitalist production relations in the agricultural sector, will turn into large capitalist agricultural enterprises.

Unlike K. Marx and F. Engels, K. Kautsky (1899/1988) and A.V. Chayanov (1925/1966) argue that small peasant farms do not disappear under capitalism but continue their existence in unique ways in the process of historical and social change. One of the issues that these thinkers especially emphasized is 'the process of self-exploitation' in small peasant farms. To make a living, peasant families carry out home-based production to meet their own needs as an alternative to the market, and agricultural works are carried out (Shanin 1971). It is done by unpaid family labor and family members can work as paid workers in agricultural and non-agricultural jobs at certain times of the year. Historically, it is clear that this process of self-exploitation in small peasant farms stems from the devalued production and reproduction labor of women in the household.

Likewise, Rosa Luxemburg is one of the first thinkers who systematically explained that capitalism emerged from a set of non-capitalist or pre-capitalist social relations and was historically nourished by these relations. In her book 'The Accumulation of Capital', first published in 1913, Rosa Luxemburg describes in detail the specific ways in which European capitalism interacted with pre-capitalist economic and social structures and relations in India, Africa, America, and Canada through colonialism. Rosa Luxemburg emphasized that capitalism needs non/pre-capitalist social/economic structures and relations in the colonies. These hierarchies serve three purposes: to exploit people as cheap labor, to use the blessings of nature as low-cost means of production, and to create demand for surplus value (final goods) produced in mainland Europe.

Moreover, in his book 'History of the Russian Revolution', first published in 1930, Leon Trotsky deals with the development of societies from a modernist perspective. He, on the one hand, adopted the discourse that dealt with the capitalist development through the dichotomy of developed and underdeveloped

countries, and on the other hand, emphasized the original stages of the non-linear process between these two. Trotsky argued that underdeveloped countries will experience complex processes towards development and that they can build a unique mix of primary and further development stages in these processes. Comparing the capitalist development of Russia, where the agricultural mode of production is dominant, with other European countries, he reached a historical generalization and revealed 'the uneven and combined development law of capitalism' in different countries.

Apparently, at the beginning of the 20th century, critical social scientists revealed that capitalism intervenes in non-capitalist structures, institutions, and relations of production/reproduction for exploitative and oppressive purposes. It has destroyed some of these institutions, structures, and relations, but preserved others by transforming them in line with its interests.

On the other hand, feminist critical social scientists, through their seminal research, have determined that capitalism creates and/or sharpens the gender hierarchy by interfering with traditional institutions, structures, and relations in the West and non-Western societies. In this regard, capitalism, which intervenes in traditional agricultural production/reproduction relations, has sharpened the hierarchical structure of gender relations in this field. From past to present, exploitation of women's labor is common in agricultural activities in many societies.

In contemporary patriarchal capitalism, seasonal agricultural workers, especially women, are one of the most bounded and devaluated layers of the working class. Historically, women's non-destructive and reproductive relationship with nature and their labor are controlled by men and are subject to capitalist market relations. In the West, when we look for the historical roots of this limitation and devaluation, we come across two traumatic processes: The witch hunts of the late Middle Ages and the first enclosures that emerged in England and spread to other countries in numerous ways.

According to Maria Mies, historically, man's productivity depends on the control of women's productivity and nature through the tools (in its current expression, technology). In this context, male productivity based on hierarchy has been destructive, violent, oppressive, and humiliating against women, children, nature, and other men. In this sense, the witch hunts that swept across Europe from the 12th to the 17th centuries were one of the mechanisms of control and subjugation of women, peasants, and artisans, who posed a threat to the rising bourgeois order with their economic and sexual independence. In particular, witch hunts contributed to primitive capital accumulation for the rising bourgeois class (Mies, 2014).

Silvia Federici's analysis on this subject starts with the analysis of K. Marx's primitive accumulation¹, but it becomes an important part of women's history in the interaction of patriarchy and capitalism. In her book, *Caliban and the Witch*, S. Federici questions both the execution of hundreds of thousands of "witches" at the beginning of the modern era and the rise of capitalism during this war against women. According to S. Federici, Feminist scholars generally agreed that the witch-hunts aimed at destroying the control that women had exercised over their reproductive function and served to pave the way for the development of a more oppressive patriarchal regime. It is also argued that the witch-hunts rooted in the social transformations that accompanied the rise of capitalism. S. Federici analyzes the witch-hunts in the context of the demographic and economic crisis of the 16th and 17th centuries and the land and labor policies of the mercantilist era. She discovers the relation between the witch-hunts and the contemporary development of a new sexual division of labor, confining women to reproductive work. Finally, S. Federici argues that it is sufficient to demonstrate the persecution of witches (like the slave trade and the enclosures) a central aspect of the accumulation and formation of the modern proletariat, in Europe (Federici, 2004: 14).

According to K. Marx the primitive accumulation has two important consequences in the context of class: the transformation of the means of life and means of production into capital, the expropriation of the direct producers and their transformation into wage workers (Marx, 1990: 876). On the other hand, K. Marx argued that these masses detached from the means of life and production were completely disconnected from the past mode of production namely Feudalism (Marx, 1990: 874-875). In other words, K. Marx argued that free labor also liberated from patriarchal cultural/economic ties of the feudal mode of production.

In this context, the class status of seasonal agricultural workers in the current patriarchal capitalism becomes uncertain. These masses have been separated from the means of life and production. However, they did not migrate to the city and become free wage workers working in the industry. These most dispossessed peasant families, who migrate across the country for seasonal agricultural work most of the year, still live in patriarchal/feudal relations of

¹ Historically, the first realization of capital accumulation in the field of agricultural production in England was defined by Karl Marx as the primitive accumulation. The primitive accumulation has two important consequences in the context of class: the transformation of the means of life and means of production into capital, the expropriation of the direct producers and their transformation into wage workers. On the other hand, K. Marx argued that these masses detached from the means of life and production were completely disconnected from the past mode of production namely Feudalism. In other words, K. Marx argued that free labor also liberated from patriarchal cultural/economic ties of the feudal mode of production (Marx 1990: 874-876).

production and reproduction. Referring to Kautsky and Çayanov, the most important reason why these families survive despite low wages and poor working conditions is self-over-exploitation, that is, the devalued production and reproduction labor of women and children (Ossome and Naidu 2021). Seasonal agricultural women workers are waged agricultural workers. However, they are the women who live in the countryside and make up the poorest part of the country's population. They live in an environment dominated by strong patriarchal relations. Therefore, these women are not involved in the free wage labor that K. Marx has stated. In the case of Turkey, these women sell their labor power under all kinds of male violence created by the patriarchal feudal relations.

Gendered Labor in Anatolian Agriculture-based Society

Historically, Anatolia has been a social/geographical area where hierarchical peasantry structure and agricultural activities are dominant. In general, women and child labor are widely used in agricultural activities. Women have existed as unpaid family workers in these activities. This clearly points to the overexploitation of women's labor in agriculture.

In the 1920s, the founding years of the Turkish Republic, approximately 76% of the Anatolian population consisted of small peasants living below the subsistence level. About 50% of the peasants were landless. This indicates the prevalence of agricultural paid labor. In addition, large land ownership is common in agriculture, especially in Southeastern Anatolia, Mediterranean and Aegean Regions. Members of this group, who usually live in towns and cities, are also engaged in trade and usury activities in relation to the products of small peasants. Agricultural production is generally carried out by sharecropping and tenancy methods on the lands of large landowners (Köymen 2008: 107-110).

The effect of the global capitalist crisis and wars in the 1930s and 1940s on the agricultural sector in Turkey was the growth of class inequalities in favor of large landowners, merchant capital and local usurers. In the 1950s, the members of the Democrat Party, as the party that formed the government in Turkey, consisted of large landowners in agriculture. In this context, it is noteworthy that large landowners in agriculture have historically had both economic and political power in Turkey. In this period, with the guidance of Marshall aids from the USA, Turkey was positioned as a country that exports agricultural products and imports industrial products within the current international division of labor. Tractors that came to Turkey with Marshall Aids have led to mechanization in agriculture, mass production, unemployment, and land concentration in agriculture. In this process, the small peasants, who were

constantly in debt, had to sell their lands to the big landowners and were dispossessed and migrated to the big cities. In big cities, where industrialization could not create enough employment, these masses who migrated from the countryside had to work in precarious jobs in informal markets (Köymen 1999; Boratav 2018).

By the 1960s, the industrial planning periods of the state began in Turkey and the share of agriculture in national income began to decline. However, in this period, agricultural employment still has the largest share in total employment when both 'disguised unemployment' and 'unpaid family work' are taken into account. Especially large landowners benefited from government incentives for agriculture. However, producer cooperatives established under the leadership of the state since the 1940s and the state's purchasing by determining the 'base price' of various agricultural products supported the small peasants to continue their agricultural activities until the 1980s. The high level of agricultural employment continued until the 1990s and was replaced by the services sector in this period.

In this context, it is necessary to draw attention to the agricultural transformation processes in Anatolia, which historically differ from the linear capitalist development discourse. It is clearly seen that the policies towards capitalist industrialization, which have been officially adopted by the Turkish State since 1923 and implemented by successive governments, have not created an industrialization process open to global competition, and have not led to the dominance of large capitalist enterprises in agriculture. According to Boratav's (1995) data, the distribution of the workforce in the villages of Turkey in 1994 is as follows: 6.2% capitalist farmers, 7.3% rich peasants, 16.1% middle class peasants, 24.5% small peasants, 21.5% poor peasants, 10.7% agricultural workers, 8.1% rentier, 5.6% other. For this reason, it is possible to say that petty commodity production is common in agriculture, which developed within the historical dynamics of Anatolia (Boratav 2004; Akşit 1999).

As stated above, an important result of mechanization in agriculture that started in the 1950s is migration. In other words, some of the peasants became dispossessed and joined the ranks of the working class in the informal sectors of the cities. Some of the dispossessed peasants have started temporary non-agricultural work and/or seasonal agricultural work, as they did not have any material resources to migrate. However, another result of this process is the transformation of the peasantry into petty commodity producers in Anatolia. Mass production provided by mechanization in agriculture has led to the transition to petty commodity production for the capitalist market (Akşit 1999: 185).

Neoliberal policies that the state started to implement in the 1980s further sharpened the class and gender-based hierarchies in agriculture. Due to the opening of international competition in agricultural markets, the end of state support for producer cooperatives and the decrease in government support for small agricultural producers, agricultural production and employment decreased and proletarianization increased by dispossession in agriculture. On the other hand, the decreasing state support for small farm production led to the exploitation of the farmer by local merchants and moneylenders. In this context, it is possible to say that traders, moneylenders/usurers, and multinational agricultural firms gained hierarchical superiority over the petty commodity producer peasants in the agricultural sector after the 1980s (Kendir 2003; Günaydın 2005).

Considering all this transformation process in Anatolian agriculture historically, women's labor in the form of unpaid family labor still plays a dominant role in agricultural production (Akbiyık 2008). Today, women in Anatolia are the main subjects of the self-exploitation mechanism for the continuity of agricultural production and family subsistence in small commodity producer families. Especially in the Southeastern Anatolian Region, women in poor families trying to make a living through landless and seasonal agricultural work are also exposed to excessive exploitation and oppression in the fields of production and reproduction.

Seasonal Agricultural Women Workers around the World

Recently, global capitalism has sharpened the hierarchical relationship between developed and developing countries as well as unequal relations within each country on agricultural activities. With increasing global competition, agricultural firms in developed countries prefer to employ migrant workers to reduce labor costs. This leads to an increase in unemployment and class tensions within the country.

On the other hand, as a result of unequal international agreements, the state support to the agricultural sector and especially to small farmers in developing countries is decreasing dramatically and the importation of agricultural goods from developed countries is increasing significantly. The process of dispossession in the agricultural field leads to migration along with the detachment of people from the means of life and production. Those who have more or less certain individual capital accumulation (land, herd, etc.) migrate to the cities and join the army of free wage workers.

With this disintegration in rural areas, the masses that have become completely dispossessed continue to live in the countryside or migrate to a

richer country and they are employed on a seasonal, temporary, or daily basis as agricultural workers. According to ILO (2007), the majority of waged agricultural workers in most developing countries and in some developed countries are employed on a seasonal and often a casual or temporary basis. Casual work refers to those employed and paid at the end of each day worked or on a task basis. Temporary work refers to those employed for a specific but limited period of time. Most seasonal, casual, or temporary workers do not receive any form of social security or unemployment benefit, holidays with pay, or sickness or maternity leave (ILO 2007: 9).

In rural areas, women are the ones who suffer the most from the expropriation process during the unraveling of agriculture. Under the hierarchical pressure of patriarchal relations, women are subject to all forms of masculine violence (economic, legal, physical, etc.) In other words, the poorest and exploitable masses in agriculture are women. An increasing number of women workers are employed as casual, temporary, or seasonal agricultural workers. According to ILO (2007: 9), in the cut flower industry, for example, data provided by the Ugandan National Union of Plantation and Agricultural Workers affirms that the majority of casual workers are women. Over 70% of this workforce is casually employed without job security and other benefits such as annual leave. The women workers are mostly employed in harvesting and in the grading sections. A fulltime worker is paid a total package of 70,000 Uganda shillings (\$35 US) per month while a casual worker earns 1,500 Uganda shillings per day (75 cents US).

M. Kilkey and D. Urzi analyze the social reproductive experiences of migrants labouring in Sicily's (Italy) greenhouses. Current global transformations in agricultural production are intersecting with longstanding local economic and social realities, as well as with the 2007 Global Financial Crisis and EU enlargement, to make migrants, male and female, indispensable to a sector resorting to intensified informality in pursuit of flexible and cheap workers. M. Kilkey and D. Urzi conducted interviews with two nationalities of migrants – Tunisians and Romanians – occupying different positions in Italy's migration regime. They have found that the harsh context of reception posed by labour market conditions, alongside a familialistic Italian welfare regime, largely precludes opportunities for proximate social reproduction for Tunisians and Romanians. In response, migrants develop transnational resilience strategies resting on cross-border actions combining market-, family-, community and State-based practices, to navigate the social reproductive challenges encountered. Such strategies, however, are less feasible for irregular migrants whose socio-legal position exposes them to the most exploitative

working arrangements, deny them access to State welfare and render them immobile (Kilkey and Urzi, 2017).

Another analysis of the developed countries on the subject was presented by A. Cohen and S. Caxaj. According to these researchers, in 2016, nearly 7,000 Mexican men and women arrived in BC under the federally administered Seasonal Agricultural Worker Program (SAWP). While all farmworkers face similar workplace hazards, women farmworkers face unique barriers to their reproductive health and wellbeing such as intense surveillance, sexual harassment, and unwanted pregnancies. The reproductive health of women in the SAWP is under-researched. Even less is known about women's experiences in the interior of British Columbia (Cohen and Caxaj, 2018).

In addition, an interesting study is presented by C. Radel, B. Schmook, J. Mcevoy, C. Mendez and P. Petrzelka. The researchers are evaluating the proposal of feminization of agriculture along with globally increasing male labor migration rates. According to the researchers, in 2007, with men travelling from Calakmul to the United States in large numbers for wage work, women's labor did not simply replace men's labor in the fields. They found no evidence of women in general serving as a reserve labor pool. They did, however, observe a general reorientation emerging in the ejidal agricultural sector, as households combined changing agricultural strategies with a variety of strategies to keep women out of the fields. Gender ideologies were defended through actions of both men and women to maintain women as housewives, by cultivating less, moving to pasture and/or hiring male workers. There is perhaps an irony here. Women were instead increasingly managing farming, with potentially much deeper implications for changing gender relations in agriculture over the longer term. Nonetheless, the contemporary outcomes for women's improved household and community status were minor at best, with the larger gender ideology of women's subordination barely nudged. Women began supervising male labor, but with a threat to their reputations. Women gained formal rights to land, but often in name only and occasionally at a great cost (Radel, Schmook, Mcevoy, Mendez and Petrzelka, 2012).

Seasonal Agricultural Women Workers in Turkey

According to the Turkish Statistical Institute (TURKSTAT) data, in 2018, 5.3 million people were employed in the agricultural sector in Turkey. About half of this population (2.4 million) is women. A parliamentary report on the subject suggests that precarious working conditions are very common in seasonal agricultural work, and in 2015, the number of seasonal workers is between 750,000 and 1,200,000. Altınordu Chamber of Agriculture announced

that the number of seasonal workers coming to Ordu in 2018 for hazelnut harvesting is approximately 15,000. At least half of this population is women. As can be seen from the statistics, women are an important component of seasonal agricultural labor.

Seasonal agricultural workers consist of migrants who do temporary agricultural work. As migrant workers doing temporary work, they are part of the labor market in the countryside. According to a definition of migration: "it redistributes the workforce to make production more efficient in the space. In this way, as a mechanism, migration provides harmony between the organization of space and the demands of the system" (Tekeli, 1998, p.11).

Seasonal agricultural workers often migrate from the Southeastern region to work all over the country for a few months each year. However, these temporary migrations of workers are not limited to one place. Depending on the harvest season of agricultural products, they change several places. A significant number of seasonal agricultural workers are in constant migration depending on the nature of agricultural production. Workers are obliged to struggle with important problems due to non-regulation of working life, poor housing conditions, lack of social security and poverty which has become vicious circle.

In addition to her doctoral dissertation on the subject, S. Çınar conducted field work with women workers, intermediaries (called "elçi" in Turkish), male workers who come from Şanlıurfa, Adıyaman and Diyarbakır and work in the apricot harvest in Malatya in July 2011 and 2012. According to the information obtained within the scope of the research, it can be said that seasonal agricultural women workers do not have the right to sell their labor freely according to their own will. Women's labor is not only a labor force that male relatives have confiscated within the framework of patriarchal relations. At the same time, men present their female labor to the higher-tier men. Thus, a tripartite interest is formed by the male worker, the intermediary male, and the employer male, exploiting the labor force of women. The hierarchies in the working relationships created by this interest relationship and the position of women in the hierarchical structure are the reasons why the female labor of the family's common ownership is defined as unpaid family work by male workers, the intermediary male and employer male (Cınar 2012b).

Another field study was conducted by K. Çelik, Z. Şimşek, Y. Yüce-Tar and A. Kırca-Duman between 2014 and 2015 in Urfa and Adıyaman. In this research, the living and working conditions of seasonal agricultural women workers who come from Adıyaman and Şanlıurfa were analyzed in detail. According to outcomes of the research, contrary to a general feminist argument,

working in a paid job does not liberate women in the field of seasonal agricultural labor. Due to the informal working conditions in the sector, female workers are dependent on men inside feudal relations. Families mostly stay in tent areas. This situation affects women and young women negatively. In terms of their own lifetime, women cannot do any distinction between housework and paid work (Celik, Şimşek, Yüce-Tar and Kırca-Duman 2016).

Seasonal Agricultural Women Workers in Ordu/Turkey

The field research was conducted in Ünye, a small town of Ordu Province, in the Black Sea Region of Turkey in September 2019. I have interviewed twelve (12) seasonal agricultural women workers (Rahime is 40, Adalet is 38, Rojbi is 15, Sibel is 18, Leyla is 47, Özlem is 17, Melek is 11, Hatice is 60, Kader is 19, Pervin is 20, Gulizar is 43 years old and Nazar is 16 years old). Due to ethical concerns and respect for the privacy of the women I interviewed, I used pseudonyms in the article.

Through in-depth interviews, I tried to enable women to express their personal experiences in this migration, work and life process, their perceptions of the system as a whole, their living and working conditions, and their problems. In this research, I used the qualitative analysis method from a feminist perspective. In my in-depth interviews with these women, I translated what was told and my own impressions into text. I made a content analysis by taking into account the discourses, comments, and expressions of women, and finally, I carefully reached the research themes.

Dispossessions and the Burden of Poverty on Women

First of all, all the women I interviewed have been coming here regularly from Şanlıurfa with their families over the years. Şanlıurfa, located in the Southeastern region of Turkey, is historically one of the socioeconomic areas where hierarchies and conflicts between large landowners and peasants are experienced the most, in addition to the unfavorable geographical conditions. From generation to generation, a lot of peasant families have experienced the loss of their lands and dispossession. In this region, which also includes Şanlıurfa, feudal and patriarchal relational structures have continued to dominate until today (Arslan and Şengül 2021; Dedeoğlu 2018).

Güllizar (43) from Sanlıurfa's Siverek district explained her struggle against poverty as follows: *I have six children. The eldest (19) went to Antalya to work. Others are with me. I'm trying to get all of them to go to school, but it doesn't work... everything is too expensive... We live on rent... A three-room house is*

not enough for us... My husband goes away in the winter, works in construction...We get help from relatives...but we owe the bank and relatives...

Gülizar's daughter Melek (11) said: *I want to go to school and become a nurse in the future. But I can't go to school regularly because half the year I have to come with my family to pick vegetables and fruits to earn money...*

Key Infrastructure Deficiencies and Women's Struggle for Daily Family Care

Secondly, I visited a total of 3 seasonal worker camps in Ünye and İkizce, two districts of Ordu Province. Two of them were allocated to the workers by the local municipalities and one by the employer (the owner of the hazelnut orchard). The number of women, men and children living in the camps was approximately 500, 200 and 50, respectively. These numbers were constantly changing with the arrival of new families. There were no proper infrastructure or public service areas such as electricity, water, kitchens, childcare room, elderly care room, medical center, etc. in the camp areas allocated by municipalities and an employer (FES, 2012; Selek-Öz, 2016). There was only one shared toilet and bathroom, and neither was adequate. Families who came to the allocated area set up their tents and tried to live with their own financial and physical efforts. The situation of the extended family, who stayed in the two-store house allocated by the employer (the owner of the hazelnut orchard), outside the campsites, was slightly better. The building had electricity, water, and toilet.

Adalet (38), who comes from Şanlıurfa's Siverek district and has 7 children, talks about the problems of her family in the camp: *We use kerosene lamps because we do not have electricity. We also buy water from outside. While we cook, we light a fire with the pieces of wood we collect from the bushes. Since there is no toilet, the children are peeing in the bushes and the whole place smells bad.*

Adalet's daughter Sibel (18) expresses her problems as follows: *I cannot charge my phone because there is no electricity at the campsite... Toilet and bathroom are not enough here...Education is very important to me... I don't want to be like my mother...I study all the time... I must go to university. and I want to be a psychologist in the future... Right now, I want to be in the library and study for the university entrance exam. but here I have to help my mother and collect hazelnuts... In Siverek, my school is far from our house... I walk to school because my family cannot pay the school bus fee...*

Patriarchal Rules and Male Domination over Women's Body and Labor

Historically, social life and cultural values in Anatolia, and especially in the Southeastern Anatolia Region, have been established on a patriarchal (male-dominated) system. Social, economic, and cultural life, which is determined by power conflicts/reconciliations and various kinds of violence relations between men, leads to a violent and unequal division of labor between men and women. In the Southeastern Anatolia region, where patriarchal tribe and kinship relations are dominant, women's body, labor and existence are seen as worthless. Girls, who have been working as 'unpaid family workers' in their families from a young age, have been caring for their many siblings, doing housework and seasonal agricultural work over the years. According to the poverty status of their families, women are arranged for arranged marriages between the ages of 15-20. The spouses of the women are chosen from among their relatives (FES, 2012; Selek-Öz, 2016; Güneş 2016).

Due to the adopted feudal/patriarchal cultural values, women are expected to give birth to many children. A woman can have an average of 6 to 10 children. In this process, she takes serious health problems if necessary. In the first years of their marriage, women can live in the same house with their spouses' parents. In the hierarchy within the home, the woman is the object of obedience to the husband's father, mother, and husband. In conflicts of interest that arise in the home, the woman is exposed to various kinds of violence by her husband's father, mother, and husband. The woman is held responsible for the daily work of the common house, childcare and elderly care.

Rahime (40) was one of the women I spoke to at the first camp I visited. During our conversation, she said: *"It's hard to be a Kurdish woman. I dropped out of primary school. My family did not support. I got married when I was 18 years old. I am married to a man who is a relative. In our extended family, girls are not married when they are under 18. I have two girls and four boys. My husband (Nusret) worked as a long road driver for many years. I had to take responsibility for all the children at home. I'm very worn out. We live in a rented house. We have no material wealth. We recently purchased a truck to transport goods for a fee. However, we bought this vehicle in partnership with our relatives. We borrow money from our relatives when necessary"*.

When I asked Rahime and Nusret whether it was financially and morally difficult to take care of six children, Nusret said: *"Tribe and kinship are very important in Şanlıurfa.. If there is tension or conflict between two families, our family should have more members than the other family...It's like holding some kind of power..."*

When I asked Hatice (60), Rahime's sister-in-law, about the living and working conditions in the camp, she said: “*Before coming to Ünye, we worked in the onion fields in Ankara. We go to the hazelnut field with the employer's simple tool (it is called 'pat pat' in Turkish) or on foot. We work in the fields 7 days a week (from 7 am to 7 pm). When working in the hazelnut field, we stop 3 or 4 times a day. We have to prepare our own lunches. There are ticks, snakes, insects, and bees on the campsite and in the hazelnut field. The camp site was placed next to a stream. Here (Ünye) is raining a lot. I'm worried that it can rain a lot and flood our tents. I have severe rheumatism. My whole body hurts. I went to the State Hospital in Urfa and examined. The doctor gave me drugs. However, I cannot use my medication regularly because my family is constantly migrating...*”.

Rahime's daughter Rojbi (15) described her working experiences as follows: “*I have been working since my childhood... I do housework to help my mother at home... I take care of my siblings. Because my mother can't keep up with everything... I worked as a clerk in a store and as a waitress in a raw meatball shop to earn school money... I worked as a paid worker in the fields around Siverek...now I am collecting hazelnuts here as a paid worker*”.

When I asked Leyla (47) what kind of food they ate at the camp, she said: “*I have 7 children. Two of them got married and are currently in Siverek. In order to earn money, I came here with my five children to collect hazelnuts... In Siverek, we make our own cheese, yoghurt, bread, and winter foods such as tomato paste at home. Every year, we prepare the winter foods of 4 or 5 households in summer in solidarity with related women. In order save money, we brought our food such as cheese and legumes (chickpeas, lentils, rice, burgers, etc.) from Urfa. Here, we bake the bread in a wood-fired tandoor*”.

17-year-old Özlem complains about the division of labor in the camp: “*Women do all the cleaning, childcare and cooking in the camp... Men, on the other hand, collect wood only to make a fire. They smoke and play cards... Women do all the work...*”

The Exploitation/Oppression of Women's Labor under the Masculine Control

Families engaged in seasonal agricultural work are the poorest population in Anatolia. Family members have nothing to sell but their labor. They usually earn their living by borrowing money from their relatives, banks, and intermediaries (called ‘elçi’ in Turkish) during the year. Therefore, these families establish a dependency relationship with the intermediary through borrowing. The intermediaries are obliged to provide seasonal agricultural

workers at harvest time, in accordance with the agreement they have made with the employer who owns the orchard. The middleman mostly leads the families, who are relatives or compatriots, with whom he has a financial dependency relationship, to work as bonded labor in these orchards. The middleman usually makes a deal with the man who is the head of the family. Husband ensures that all family members, especially his wife, participate in the seasonal agricultural work. Therefore, women and children are exposed to labor exploitation in seasonal agricultural work under the hierarchical control of the employer who owns the garden, the middleman, and the husband (FES, 2012; Selek-Öz, 2016; Güneş 2016).

20-year-old Pervin expresses her discomfort about wages as follows: *“We work here with difficulties, but we do not get paid. Because my father said we owe the middleman...that's unfair...”*

16-year-old Nazar complains about the low wages: *“We pay for our transportation expenses, we cook our meals, and we try to live in tents without running water and electricity... We work 12 hours a day in the gardens... Women receive a daily wage of 100 TL and men 150 TL per day... Why do women get paid less than men?”*

19-year-old Kader, on the other hand, complains that she works in the garden but has no money: *“I work in the gardens with my mother and siblings all day, collecting hazelnuts. However, we cannot get the money we deserve by working... The garden owner makes an agreement with the middleman and pays the money to him...The middleman also pays my father if there is any leftover from our debt... As a result, we are not getting anything..”*

CONCLUSION

Patriarchal capitalism has historically developed with class, gender, religion, and ethnic dynamics in relational processes laden with social conflict/reconciliation. The theory of modernization constitutes the ideological infrastructure of patriarchal capitalism. According to the linear development narrative of the modernization theory, the industrial sector will develop in capitalism in the historical process and the agricultural sector will shrink with the increase in productivity. However, it is noteworthy that historically, this linear development scheme has not been realized in many countries, and that agricultural activities maintain their social and economic importance. In Turkey, as in many countries, it is observed that the industrial sector has not developed as envisaged and that large capitalist agricultural enterprises have not replaced small farms in agriculture.

Capitalism does not always destroy the production and reproduction relations and institutions in the social areas it penetrates, but it can transform it within the framework of the market mechanism and corporate profit targets. In this context, as patriarchal capitalism penetrated Anatolian agriculture, it reshaped historical hierarchical inequalities in line with its own goals. In agriculture, apart from large landholding, trade, and usury, it uniquely created small businesses and the proletarianization processes of landless peasants. Interestingly, small farms in Anatolia did not disappear, but transformed into petty commodity producers under the influence of the capitalist market mechanism. In petty commodity production, the self-exploitation of members of the family is striking. Excessive labor in the family, especially women and children through unpaid family work, and the avoidance of consumption by the family ensure the survival of these businesses in the conditions of global capitalist competition.

On the other hand, especially in the Southeastern Anatolia Region of Turkey, the historically unequal development of land-sharing in agriculture has led to a sharp hierarchy and a large number of families becoming landless and impoverished. These poor families generally do seasonal agricultural work in various agricultural areas of Anatolia throughout the year. In these families living in the Southeastern Anatolia Region, where patriarchal tribe and kinship relations constitute the dominant cultural lifestyle, the masculine control of female fertility and the excessive exploitation of female labor are striking.

The main problems that came to the fore in the in-depth interviews with seasonal agricultural workers who came to the Ünye district of Ordu province to collect hazelnuts are as follows: Local municipalities and employers who own gardens do not create living spaces with physical infrastructure in which working families can live in a dignified manner. These adverse conditions especially increase the responsibilities of women to keep the family alive and well. Due to the patriarchal culture, perceptions and lifestyle, women start to work at home from a young age within their own families, but their labor and life are also seen as worthless by their families. For this reason, excessive exploitation of women and child labor takes place in seasonal agricultural work. Women cannot receive monetary compensation for the labor they spend. According to the patriarchal hierarchy, the monetary value of the labor of women and children is shared by the employer who own the garden, middleman and husband.

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Chapter 13

Assessment of Organizational Factors in Ethical Decision-Making in Terms of Organizational Context

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ABSTRACT

Especially in the last quarter of the 20th century, the concept of ethical behavior began to gain importance for organizations. Ethical behavior is defined as the set of principles and values that enable the individual to behave in accordance with this behavior. In this respect, ethical behavior is a foresight of the organization. Rapid changes in management, in the last years, produced different effects on ethical decision-making in organizations. Organizational managers and employees had to make ethical decisions to act within the framework of ethics by considering the effects of the internal and external environment. Ethical decision-making is about the process of making choices by evaluating what kind of consequences a behavior or action will lead to within the framework of applicable ethical principles. This process is about choosing what is ethical. Accordingly, considering all these elements related to ethics, making the right decisions for an organization is important for the organizational functioning process. In this context, organizational factors that affect employees' correct and ethical decision-making are important. These factors can be categorized as organizational culture, benchmarking, effects of managers, organizational structure, organizational groups, and group norms.

In this context, this study aims to emphasize the organizational factors that affect the ethical decision-making of the employees, how these factors affect ethical decision-making, and their importance for organizations. In addition, this study aims to present a theoretically humble contribution to the literature regarding the effects of organizational factors on employees' ethical decision-making. In this study, organizational factors in ethical decision-making are conceptually specified. Ethical behaviors, non-ethical behaviors, basic ethical theories, ethical decision-making, and organizational factors and processes in ethical decision-making are specified by referring to the theoretical aspect of ethics in the study. In this context, what kind of advantages will occur in organizations where organizational ethics is applied intensively is discussed from an organizational framework. The foundations of ethics are also mentioned within the scope of ethics and ethical theories.

Keywords: Ethical decision-making, organizational factors, organizations.

INTRODUCTION

It seems unlikely to ensure a regular social life without ethics. In this respect, ethics is a key to social life. Ethics is a subject that has been used in the organizational sense since the emergence of regular organizations and has not lost its significance. In this context, the ethical process that provides the same type of behavior in employees in time and includes the services and social responsibilities taken by the organization to fulfill for society has become a more important matter in organizations.

Subjects such as ethics, ethical behavior, non-ethical behavior, ethical decision-making, and organizational factors are important interrelated elements in organizations. Accordingly, ethics generally endeavor to reveal what is right and ideal. Ethical behaviors express the basic professional responsibilities of employees towards their profession, organization, and society (Fraedrich, 1993: 207). Ethical behavior is defined as the set of principles and values that enable the individual to behave in accordance with his own behavior (Navran, 1992; as cited in Gümüştekin & Durmaz, 2019: 8). Ethical behaviors express the basic professional responsibilities (individual, collective, institutional) of employees towards their profession, organization, and society (Fraedrich, 1993: 207). Non-ethical behavior refers to the violation of ethical rules accepted as correct by individuals, groups, organizations, society, or a profession, and acting against these rules (Gino, 2015: 107; Mai et al., 2020: 491).

Ethical decision-making is the process of making choices by evaluating what kind of consequences a behavior or action will lead to within the framework of applicable ethical principles. This process is about choosing what is ethical. The ethical understanding of an organization is shaped by its responsibilities to its employees, shareholders, customers, society, and state are considered more significant (Aydm, 2022: 89). Accordingly, considering all these elements related to ethics, making the right decisions for an organization is important for the organizational functioning process. In this context, organizational factors that affect employees' correct and ethical decision-making are important. These factors can be listed as organizational culture, benchmarking, effects of managers, organizational structure, organizational groups, and group norms (Aydm, 2022: 89). The basis of these organizational factors is ethics. These factors that create the organizational environment affect the moral judgments of the employees. These judgments play a significant role in the ethical decision-making of the employees.

In this context, this study aims to emphasize the organizational factors that affect the ethical decision-making of the employees of the organization, how these factors affect ethical decision-making, and their importance for

organizations. In addition, this study aims to present a theoretically humble contribution to the literature regarding the effects of organizational factors on employees' ethical decision-making. This study is important because it is one of the rare studies that evaluate organizational factors in ethical decision-making in terms of organizations. The importance of this study is also to evaluate the organizational factors that are effective in ethical decision-making within the framework of the organization and to shed light on the efficient use of these organizational factors by organizations. Accordingly, researchers and managers are expected to understand the importance of organizational factors and act ethically in line with this importance. Furthermore, it is desirable that managers act within the framework of ethical rules by addressing organizational factors. In this context, the study is discussed within the framework of various parts. In this sense, ethical behaviors and non-ethical behaviors are discussed in the second part of the study, and basic ethical theories are discussed in the third part. In the fourth chapter, ethical decision-making and organizational factors in ethical decision-making are discussed. In the last part, the conclusion and evaluation part, the subject is assessed.

ETHICAL BEHAVIORS AND NON-ETHICAL BEHAVIORS

Ethical Behaviors

In general, ethics are all of the specific moral principles that guide a person's behavior (Eryılmaz & Biricikoğlu: 2011: 34; Kırıl, 2015: 74). Ethics is included in life as a set of principles and values that are determinant in human attitudes, behaviors, actions and decisions in human relations, social, cultural, scientific, technological, economic, legal, political and similar fields and that no one can be excluded or avoided (Güney, 2020: 126). Ethics are not taught in organizations. Organizations should also be places where ethical behaviors are exhibited in the direction of organizational ethics. Many organizations guide the ethical behavior of their employees through tools such as codes of conduct, training, and ethical guidelines (Jacobs et al., 2014: 64).

Ethical behavior is a foresight of the organization. As a result of ethics, managers, and colleagues influence each other in the acquisition of ethical behaviors (Fraedrich, 1993: 207). Ethical behavior is defined as the set of principles and values that enable the individual to behave in accordance with his behavior (Navran, 1992; as cited in Gümüştekin & Durmaz, 2019: 8). Ethical behaviors express the basic professional responsibilities (individual, collective, institutional) of employees towards their profession, organization, and society (Fraedrich, 1993: 207). The principles of predisposition to ethical behavior by some researchers are equality, honesty, integrity, impartiality, responsibility,

human rights, humanism, loyalty, the superiority of law, love, tolerance, respect, frugality, democracy, positive human relations, openness, rights and freedoms, granting the right of labor, and resistance against illegal orders (Akbaba & Sarıkaya, 2017: 292; Karaoğlu, 2023: 47).

Non-Ethical Behaviors

Today, non-ethical behavior, which has become a universal problem, refers to the violation of ethical rules accepted as correct by individuals, groups, organizations, society, or a profession and acting against these rules (Khuong & Duc, 2015; De Silva & Opatha, 2015; as cited in Mithulan & Opatha, 2023: 3; Buckley et al., 1998; as cited in Yuan et al., 2023: 1, Gino, 2015: 107; Mai et al., 2020: 491). In other words, non-ethical behaviors are interpersonal behaviors that cause the degeneration of the ongoing social behavior rules in society (Mai et al., 2020: 491). Non-ethical behaviors in organizations are generally wanted to be hidden (Trevino, 1992; as cited in Amore, 2023: 496). It is also possible to classify the organizational causes of non-ethical behaviors in organizations as poor communication, the lack of organizational policies, cost reduction efforts, and weak organizational culture (Akbaba & Sarıkaya, 2017: 293). Non-ethical behaviors create a clash environment within the organization, weaken the organizational culture, and decrease employee commitment, performance, and motivation (Özdevecioğlu & Aksoy, 2005: 96). It is important to prevent non-ethical behavior in organizations. In this context, the principles of predisposition to non-ethical behavior are important to understand this type of behavior. According to some researchers, the principles of predisposition to non-ethical behavior are discrimination, favoritism, bribery, intimidation-threat, exploitation (abuse), neglect, selfishness, torture (torment), injury, violence - pressure, insult and swearing, physical and sexual abuse, bad habits, gossip, dogmatic behavior, bigotry-zealotry and corruption (Akbaba & Sarıkaya, 2017: 293).

BASIC ETHICAL THEORIES

Ethical theories have an important place in understanding the foundations of ethics and ethical decision-making. If a basic classification is needed, ethics can be divided into normative and non-normative ethics. While normative ethics is divided into consequentialist ethics, deontology ethics, and virtue ethics sub-branches, non-normative ethics is divided into descriptive and meta-ethics sub-branches (Kanlıoğlu & Alanka, 2013: 114).

Normative Ethical Theories

Normative ethics emphasizes that elements such as principles, rules, and norms must be present to realize the moral actions of the individual. However, it aims to relate these elements to causes rather than to define them (Pieper, 1999: 224; as cited in Özmen & Güngör, 2008: 141). Normative ethics mainly focuses on the basic questions of how to behave and how a virtuous life should be (Küçüköğlü, 2012: 180; Erdoğan, 2006: 6). In addition, this type of ethics examines the moral principles that deal with how to live (Bartneck et al., 2021). Normative ethical theories are based on the highest moral principle or refer to the most ideal good that binds everyone (Pieper, 1999: 224; as cited in Özmen & Güngör, 2008: 141). This type of ethics is divided into three groups; consequentialist, deontology, and virtue ethics.

Consequentialist Ethics

The consequentialist ethical theory focuses especially on the individual or social consequences of actions (Torlak, 2013: 22; as cited in Yılmaz, 2019: 132). In other words, behavior or action cannot be classified as good or bad by itself within the scope of this type of ethics. What makes it good or bad is the consequences of behavior or action (Pops, 2001: 157; Fennel & Malloy, 1999). In short, consequentialist ethics argues that what determines the behavioral value is the result of that behavior (Fennel & Malloy, 1999; Boone, 2019: 81). If the behavior or action ultimately provides benefits or serves certain interests for goodness and righteousness, it is “good” (Küçüköğlü, 2012: 180).

Deontology Theory

Deontological theory is not concerned with the outcome of the action. It is more focused on the action or types of actions. This theory does not argue that a right or wrong action produces an action with good or bad consequences. According to this theory, some actions have nothing to do with the consequences. Action is already right or wrong by itself (Torlak, 2013: 23; as cited in Yılmaz, 2019: 133). This theory is basically related to that morality is based on duties and responsibilities and that all people should be treated equally (Bartneck et al., 2021; Boone, 2019: 81).

Virtue Ethics

One can say that virtue ethics basically deals with the question "How should one live? Accordingly, among the answers developed based on this question, living virtuously has been the common answer of philosophers. Aristotle's ethics is the most basic example of virtue ethics created within a certain

method. In this direction, the ancient philosophers, especially Aristotle, claimed that the individual would transcendentalize himself through certain virtues. The philosophers also argued that philosophers have argued that a person becomes naturally well, which is the last point to be reached by internalization of virtue ethics within the personality of the individual (Christman, 2002: 16; as cited in Küçükalp, 2008: 73-74). According to virtue ethics, the individual is a product of society, and the difference in their understanding of virtue stems from the cultural differences of each community (Mulhal & Swift, 1992: 19; as cited in Küçükalp, 2008: 79).

Non-Normative Ethical Theories

Just like normative ethics, this type of ethics is more concerned with the regular investigation of the objectivity of moral systems than with what the virtuous life should be like (Erdoğan, 2006: 6). In other words, non-normative ethics deals with the systematic investigation of the logic and language of moral systems. This type of ethics is divided into two main groups; descriptive ethics and meta-ethics (Çobanoğlu, 2021: 412).

Descriptive Ethics

Descriptive ethics follows the behavior of individuals and defines the consequences of their behavior. It focuses on how individuals behave and the reasons for their behavior. This type of ethics does not set rules, or set principles, regulations, or norms (Küçükkoğlu, 2012: 180; Özmen & Güngör, 2008: 141). Descriptive ethics evaluates events and situations and tries to explain how basic concepts are used (Boone, 2019: 57). Essentially, this type of ethics examines the ontological status of moral principles by making the following question the main research topic "Are moral principles an objective feature of the world or are they according to people, cultures and species?" (Erdoğan, 2006: 10).

Meta-Ethics

Meta-ethics emerged in the early 20th century as a judgment mechanism against normative ethics. Meta-ethics is about the basic elements and analyses that underlie ethics. According to meta-ethics, two main questions come to the forefront. The first of these is the question "What is a moral judgment?", and the second is the question: "Can a moral judgment be logically justified?" (Tepe, 2011: 42-43; as cited in Çobanoğlu, 2021: 413). Meta-ethics reflects on moral concepts and moral judgments put forward by normative ethical systems. This type of ethics has been determined as the main subject to analyze the

ethical provisions and to investigate the meanings of the said ethical provisions in question (as cited in Çobanoğlu, 2021. 413). In this direction, according to meta-ethics, philosophers should analyze the concepts and provisions within the scope of morality, examine the distinctive features of moral actions and behaviors, and clearly explain the meanings of these concepts (Özmen & Güngör, 2008: 141).

ETHICAL DECISION-MAKING AND ORGANIZATIONAL FACTORS IN ETHICAL DECISION-MAKING

Ethical Decision-Making

Ethical decision-making is the process of making choices by systematically considering and evaluating the various ways and consequences of a behavior or activity according to ethical principles (Özdemir, 2009: 132). Ethical decision-making by the person is first of all the search to reach the desired good decision. In other words, ethical decision-making refers to a logical process that includes deciding on the morally most accurate action with a systematic way of thinking in a situation where there are conflicted options (Berggren et al., 2002: 15; Dreyer et al., 2011: 515).

Ethical decision-making processes are as follows; thinking before acting, defining the problems, knowing the facts, developing options, considering the consequences of the action, choosing and deciding, as well as reviewing and evaluating (Bateman & Snell, 2004, Aydın, 2006: 81). We can list the ethical decision-making principles as follows, starting from what has been explained so far (Neçare, 2017: 55): (a) Ethical decision-making is a situation that individuals and organizations confront every moment, but it is an issue that deals with both the internal and external environment. In this case, it is necessary to make decisions by taking into consideration the customers, employees, shareholders, and suppliers and keeping the organization's interests at the forefront. (b) The concepts of justice, honesty, and trust should be regarded as key values of the organization. In organizations, decisions should be made in accordance with ethical values and also in harmony with the external environment. (c) Since the success of organizational activities will be achieved by the existence and maintenance of effective communication, it is necessary to establish and announce the ethical decision-making guide in writing. (d) Ethical decisions should be consistent. Decisions made previously in a similar situation should be in parallel with future decisions. (e) Ethical decision-making must be compatible with the legal context and adapted to the organizational culture. (f) Ethical decision-making principles should be one of the main policies of the organization and ensure transparency. In addition to the items mentioned above,

these principles aid organizations by guiding them in case of professional or individual dilemmas. If confronted with dilemmas, evaluating and balancing the alternative consequences of action from positive and negative aspects and examining related events in the past are other alternatives that can help ethical decision-making.

Decision-making is the act of choosing among alternatives. However, this choice may not always be possible within ethical frameworks. In this context, every decision will not lead to ethical consequences (Ergeneli & Mert, 2003: 640; as cited in Bektaş & Köseoğlu, 2007: 102). The decision made should be explained to the related people open-mindedly and together with reasons. Ethical decision-making requires acting in the direction of ethical principles. Ethical situations include duties and obligations. The decisions made in organizations must include the principles of justice, rights, honesty, and equity (Strike et al., 2005, 4; as cited in Kıranlı & İlğan, 2007: 152).

Organizational Factors in Ethical Decision Making

The ethical understanding of an organization is shaped by responsibilities to its employees, shareholders, customers, society, and the state are considered more significant (Aydın, 2022: 89). When it comes to the ethical decision-making of organizations, there are some efficient organizational factors (Aydın, 2022: 89). Many studies found that the factors that create the organizational environment affect the moral judgments of the employees. In this context, organizational factors are efficient in ethical decision-making. These factors can be categorized as organizational culture, benchmarking, effects of managers, organizational structure, organizational groups, and group norms (Adams et al., 2001: 200; Aydın, 2022: 95).

Organizational Culture

Organizational culture is the ideas and thoughts that serve as the basis of the organization, which are found and developed together by the employees of the organization in time. Organizational culture includes all the rules, philosophy, traditions, common values, beliefs, and behavioral role models of the organization (Schein, 1973; as cited in Güney, 2020: 354; Denison & Mishra, 1995; as cited in Bagga et al., 2023: 122). Organizational culture is efficient in the attitudes and behaviors of employees towards other employees, in addition to having the same group consciousness, and in terms of their actions in line with the goals of the organization (Genç, 2017: 377; Alvesson, 2012: 1, as cited in Isensee et al., 2020: 3). In this context, organizational culture plays a fundamental role on elements such as the organizational goals, policies, and

strategies. It is also binding for managers to implement and develop these elements (Schein, 1973; as cited in Güney, 2020: 354; Genç, 2017: 377).

Organizational culture shapes the attitudes and behaviors of employees over time. Since this situation guides the attitudes and behaviors of the employees, it is ethically very effective in revealing organizational behaviors and ethical values and making ethical decisions (Robbins, 2003; as cited in Sihombing et al., 2018: 508). Accordingly, organizations can establish a strong relationship between organizational cultures and ethical principles by prioritizing ethical elements, and thus, they can embed ethical values into their organizational cultures (Çiftçioğlu & Sabuncuoğlu, 2013: 90; Robbins & Judge, 2013: 424).

Organizational culture is a determining factor for the success of organizations (Fokina & Krupnov, 2020: 2). According to Robbins and Judge (2013), what management should do to create a more ethical culture in organizations in this sense can be listed as follows (Robbins & Judge, 2013: 436): a) Be a visible role model: The manager should be a good role model for employees in ethical issues. b) Communicate ethical expectations: It is especially related to determining corporate codes of ethics and bringing ethical rules to the forefront for employees. c) Provide ethical training: It includes organizing seminars, workshops, and similar ethical training programs within the organization and thus trying to prevent ethical problems before their occurrence. d) Rewarding and punishing ethical behavior: It is about rewarding the ethical behavior of employees while punishing their non-ethical behavior. e) Provide protective mechanisms: It is related to the creation of various mechanisms consisting of those responsible within the organization to reveal the non-ethical behaviors perceived by the employees.

Benchmarking

Benchmarking is related to taking some attitudes and behaviors of other employees as role models, adopting and applying them in the same manner, although not explained in writing in the organization (Çiftçioğlu & Sabuncuoğlu, 2013: 93; İnceoğlu, 2010). In other words, benchmarking is when employees learn ethical or non-ethical attitudes and behaviors from their colleagues or other work groups working in the organization instead of the written ethical codes of the organization. If the person who is taken as an example and adopted as a guide by an employee exhibits non-ethical behaviors, the person who takes the example will also exhibit these behaviors over time. The most typical example of benchmarking in ethical decision-making is orientation. In particular, most of the organizations carrying on business within

the scope of the product and service sector place importance on orientation. (Küçükönel & Korul, 2002: 87). Starting to learn the job alongside a more senior employee by a new employee essentially enables the senior employee to imitate and adopt their attitudes and behaviors. These adopted attitudes and behaviors also affect the ethical tendency of the new employee at the beginning of his working life. This effect continues in the future working life of the employee (Çiftçioğlu & Sabuncuoğlu, 2013: 93).

Effects of Managers

Most managers, who ensure that ethical values and organizational culture complement each other, notice that ethics affect the behavior and actions of employees at the organizational level. In this case, the ethics provided by such managers are considered organizationally rather than individually for the organization (Robbins, 2003). Some researchers argue that the ethical nature of organizational culture is first determined by senior management. In particular, the senior management's understanding of organizational ethics, commitment to ethical values, and the perspective of non-ethical attitudes and behaviors within the organization are significant. Accordingly, it is easier for the manager to manage the moral behavior and actions of the employees (Dertli, 2014: 23; as cited in Erol & Kulualp, 2019: 697). In this sense, if the role of effective managers in making ethical decisions is high, it will be unavoidable for employees to guide and influence their attitudes, behaviors, and decisions ethically. In other words, if managers can benefit from the power sources that characterize the power of management, they will have a certain authority over the employees (Robbins, 2003; Çiftçioğlu & Sabuncuoğlu, 2013: 95, Erol & Kulualp, 2019: 697). Power sources of managers; legitimate power which represents the authority of the manager, reward power which represents the manager's reward, coercive power which represents the manager's controlling and punishing, expert power related to the manager's knowledge, skills, expertise, and referent power related to the manager's high-level personality (Robbins, 2003; Çiftçioğlu & Sabuncuoğlu, 2013: 95). The use of these power sources by the managers will bring along organizational success.

Organizational Structure

Organizational structure is related to the organizational rules, the employment and training way of employees, the division of labor among employees, the employee reward system, the rules of administration, and similar elements (Robbins, 1994). There are differentiations in various roles and job descriptions within the scope of organizational structures of organizations. This

differentiation affects the attitudes, behaviors, and decisions of employees regarding ethics. Hierarchical status is significant in organizational structure. Vertical relationships, which represent subordinate and superior relations through the organizational structure, horizontal relationships, which represent the situation between the employees themselves, and interactional channels between the employees and the managers are created. Information, orders, thoughts, requests, and complaints are transmitted through these channels (Winnubst, 2018; Li et al., 2019).

A good organizational structure has several characteristics. These features are; a) to create an environment within the organization that attaches importance to the employees' ideas, b) to evaluate the success of the employees with the elements of reward and promotion, c) to place importance on the trust and social needs of the employees, d) to support the development of the employees through organizational and vocational training e) to ensure that the employees are satisfied with their jobs and the organization. (Genç, 2017: 56; Çiftçioğlu & Sabuncuoğlu, 2013: 98).

In central organizational structures, the manager can make all kinds of decisions without consulting the employees. Employees have no specific effect on these decisions. Such organizational structures are more efficient in small organizations where all business is managed by a top manager. In central organizational structures, all authority belongs to the top manager directing the organization, and the central structure is effectively implemented. In larger organizations, it has been seen that the central structure is advantageous when major troubles occur, in crisis situations and when it is necessary to make radical changes (Zabojnik, 2002: 5-6; as cited in: Altan, 2018: 144). In decentralized organizational structures, the decision-making authority rests mostly with the employee. The manager does not have a dominant role over the employee in the decision-making process. Accordingly, the employees can make decisions about their own tasks (Zabojnik, 2002: 5-6; as cited in Altan, 2018: 144).

Organizational Groups

Although organizations are generally regarded as a holistic structure, this holistic structure consists of a number of sub-elements. One of these elements is organizational groups. These groups have a specific subculture. Organizational groups have norms, principles, values, rules, beliefs, and behaviors related to their own structures in these subcultures (Koçel, 2018; Pitsakis, & Gotsopoulos, 2019). Group subcultures affect other groups and group members in the organization, and this is important in creating organizational culture.

Accordingly, it is necessary to reveal the interactions between organizational groups and groups in ethical decision-making. Thus, it is possible to more clearly determine the direction of ethical decisions within organizational structures (Çiftçiöğlü & Sabuncuoğlu, 2013: 103; Pitsakis, & Gotsopoulos, 2019).

The groups that affect the ethical decision-making process in organizations can be grouped under two main headings. These groups can be called formal and informal groups. Formal groups are permanent groups established by the management of the organization to perform certain works. Informal groups, on the other hand, are the groups formed by the relations of the employees of the organization with each other (Mızrak, 2020: 33; Koçel, 2018: 603). Informal groups are formed depending on factors such as friendship, neighborhoods, and kinship, as well as interindividual relations (Yücel & Erkut, 2003: 50; as cited in Mızrak, 2020: 33).

Group Norms

Group norms are codes of conduct that group members must adhere to in individual activities and relationships within the group. Group norms can be created orally or in writing, and their creation occurs over time. Once norms are adopted and accepted by most members, they become dynamic tools of pressure for other members and new entrants to the group. Therefore, norms are tools of social pressure (Neville et al., 2021). There should be an adaptation between organizational norms and group norms (Koçel, 2018; Neville et al., 2021). Group members must learn group norms and act accordingly. Group norms are tools that enable groups to act in the direction of certain goals and that lead to higher levels of success and productivity (Koçel, 2018). If an employee does not comply with group norms or deviates from them, even partially, this member is made to feel or sometimes explicitly reported by the group that his behavior is faulty and informed to behave in accordance with the norms. If the member is unconcerned about these warnings, then individual warnings turn into social pressures (Çiftçiöğlü & Sabuncuoğlu, 2013: 108; Neville et al., 2021).

CONCLUSION AND EVALUATION

In this age, reliable, transparent, and honest organizations are among the most important factors expected from them. Organizations have important tasks in providing social order and economic stability, both in ensuring their sustainability and in the fight against ethical and non-ethical behaviors and practices in terms of their responsibilities towards their stakeholders.

(Rodriguez-Dominguez et al., 2009: 187). Since the written rules and legal sanctions determined to prevent non-ethical behavior are not enough alone, moral values should also be considered in performing professional activities (Daştan et al., 2015: 65).

In this respect, the management of ethical behaviors becomes crucial ethical behavior is based on the social norms of society. These social norms also contribute to the individual creating his management's code of ethics (Luthans et al., 1987). In this context, members of a profession who give particular importance to the interests of society should support acting ethically in the face of all kinds of ethical dilemmas, and in this respect, organizations should contribute to ethical decision-making efforts (Daştan et al., 2015: 65).

Managers must develop the skills necessary to make ethical decisions, especially against non-ethical behaviors, and reach a level where they can make their judgments. In this context, the importance of ethical decision-making in organizations is unimpugnable. However, some organizational factors also affect ethical decision-making.

Rapid changes in management, especially in the last quarter of the 20th century, produced different effects on ethical decision-making in organizations (Özer, 2012: 147). Organizational managers and employees had to make ethical decisions to act within the framework of ethics by considering the effects of the internal and external environment. Ethical decision-making, as one of the most important management activities, is about determining the option most equal to the occasion. In other words, ethical decision-making is choosing among alternative situations in order for the individual to get the desired result (Bakan & Büyükbeşe, 2008: 30; as cited in Özer, 2012: 151). In ethical decision-making, some basic behavioral processes such as understanding the problem, collecting information about the problem, analyzing the information, evaluating the options, finding the best option, implementing, and evaluating should be followed (Erdoğan, 2000). If some organizations have problems with public image, they should pay more attention to the issue of ethics. In this direction, organizations can organize ethical programs to increase the motivation of employees, job satisfaction, productivity, and so on, to prevent problems that may occur in public relations, and to have a more reliable image (Aydın, 2022: 168). Organizational factors have an important place in ethical decision-making. In this sense, it is obvious that organizational factors are a guiding element for the employees of the organization who attach importance to ethical values. These factors can be categorized as organizational culture, benchmarking, effects of managers, organizational structure, organizational groups, and group norms.

The ethical decision-making process is also related to the impression made by ethical principles and rules and the cultural, social, personal, and societal tendencies of individuals in their place (Daşdan et al., 2015: 65). The people, who take different results of an activity or behavior into consideration according to ethical principles, may be influenced by his role in the selection process or by external environmental factors (Özdemir, 2009: 132-138; as cited in Özdemir & Karakaya, 2021: 112). In this case, managers have to make the most ethically appropriate choice among many factors in ethical decision-making.

The objectives of this study include determining which organizational factors affect the ethical decision-making of the employees of the organization, how these factors play a role in ethical decision-making, and their importance for organizations. In this study, organizational factors in ethical decision-making are conceptually specified. In the study, ethical behaviors, non-ethical behaviors, basic ethical theories, ethical decision-making, and organizational factors and processes in ethical decision-making are specified by referring to the theoretical aspect of ethics. In this context, what kind of advantages will occur in organizations where organizational ethics is applied intensively is discussed from an organizational framework. The foundations of ethics are also mentioned within the scope of ethics and ethical theories. It is also thought that the study will make a contribution to researchers and managers since the organizational factors in ethical decision-making are not discussed so much in the national and international literature. This study is important because it is one of the rare studies evaluating organizational factors in ethical decision-making in terms of organizations. Different studies that examine organizational factors from different perspectives can be performed for future studies and a more comprehensive advantage can be provided to the literature with these studies.

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Chapter 14

Employee Poaching: Malpractice or Brainchild

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ABSTRACT

This conceptual and framework-oriented book chapter investigates the controversial practice of "employee poaching," aiming to shed light on its multifaceted nature and potential implications. In today's competitive global market, attracting top talent has become a vital pursuit for businesses, and employee poaching has emerged as a recruitment strategy that raises ethical and strategic questions. The chapter takes a balanced view, exploring diverse perspectives surrounding employee poaching. Proponents argue that it stimulates healthy competition, fosters innovation, and encourages knowledge diffusion across industries, ultimately benefiting the entire sector. On the other hand, opponents criticize employee poaching as a disruptive force that can destabilize businesses and foster mistrust among competitors. Throughout the exploration, the chapter evaluates the consequences of employee poaching from the perspectives of poached employees and the companies involved. It highlights legal and ethical considerations related to this practice, including the potential impact on employee commitment, retention, and work-life balance. To mitigate the negative effects of employee poaching, the chapter suggests various strategies for companies, such as improving employee engagement and satisfaction and implementing non-compete agreements and confidentiality measures. By maintaining a neutral standpoint, the chapter aims to facilitate informed discussions, allowing readers to form their own conclusions about the ethical and strategic aspects of employee poaching. It emphasizes the importance of striking a balance between recruiting top talent and upholding trust and loyalty between employers and employees. Overall, this exploration contributes meaningfully to ongoing dialogues on talent acquisition practices and their impacts on modern-day businesses, offering insights to navigate the challenges of a competitive market while promoting ethical practices and progress in the corporate world.

Introduction

In this conceptual and framework-oriented book chapter, the controversial practice of "employee poaching," exploring its multifaceted nature and potential implications were examined. The objective is to shed light on whether this recruitment strategy should be deemed unethical malpractice or, alternatively, hailed as an innovative brainchild driving progress and competition in the corporate world. In today's competitive global market, attracting top talent has become a vital pursuit for businesses (Tanwar and Kumar, 2019). One such approach that has raised eyebrows is employee poaching, where organizations actively seek to hire skilled professionals from rival firms, enticing them with various incentives (Kim, 2014). While this strategy might offer access to exceptional expertise, it has sparked debates among ethicists, industry experts, and policymakers.

Throughout this chapter, a balanced view, analyzing the diverse perspectives surrounding employee poaching was taken. On one hand, proponents argue that this practice stimulates healthy competition, leading to enhanced innovation and productivity across industries. They contend that talent mobility fosters personal growth for employees and encourages knowledge diffusion, ultimately benefiting the entire sector (Kim and Steensma, 2017). On the other hand, opponents criticize employee poaching as a disruptive force, capable of destabilizing businesses and fostering mistrust among competitors (Kumar et al., 2015). They caution against a potential "war for talent," leading to an inflated job market and implications for the overall labor ecosystem.

The intention is to approach the topic with neutrality, facilitating informed discussions that allow readers to form their own conclusions about the ethical and strategic aspects of employee poaching. As it is embarked on this exploration, the world of talent acquisition practices, examining whether employee poaching embodies an ethically acceptable strategy worthy of praise and adaptation or demands caution and reflection were investigated. Through this intellectual journey, I hope to contribute meaningfully to ongoing dialogues on talent acquisition practices and their impacts on modern-day businesses.

Employee Poaching

Employee poaching refers to the practice of one company intentionally recruiting and hiring employees who are currently employed by another company (Gardner et al., 2010). It is often seen as a predatory behavior, as it involves actively targeting and enticing employees away from their current employers (Kim, 2014). Poaching can occur within the same industry or even among competitors (Amankwah-Amoah, 2020). The act of poaching can have significant

implications for both the poached employees and the companies involved. Employee poaching is a complex phenomenon that can be influenced by various factors. One such factor is the availability of skilled labor in the market. When there is a shortage of skilled workers, companies may resort to poaching as a way to quickly acquire the talent they need (Kumar et al., 2015). Additionally, the reputation and attractiveness of a company can also play a role in employee poaching. Companies that are known for offering better compensation, benefits, and career opportunities may be more likely to attract employees from other organizations (Guedri and Hollandts, 2008).

The consequences of employee poaching can be both positive and negative. From the perspective of the poached employees, it can offer new career opportunities, higher salaries, and better benefits (Kim, 2014). However, it can also create a sense of instability and mistrust among employees, as they may fear being targeted by other companies (Panagiotakopoulos, 2012). From the perspective of the companies involved, poaching can lead to the acquisition of valuable talent and knowledge (Kim and Steensma, 2017). However, it can also result in increased turnover, loss of institutional knowledge, and damage to the employer-employee relationship (Amankwah-Amoah et al., 2017).

There are legal and ethical considerations associated with employee poaching. From a legal standpoint, poaching may not necessarily be illegal, as employees have the right to seek employment opportunities elsewhere (Friedman and Reed, 2007). However, there may be legal implications if poaching involves breaching non-compete agreements or misappropriating trade secrets (Kim, 2014). Ethically, employee poaching raises questions about fairness, loyalty, and the treatment of employees. Some argue that poaching undermines trust and loyalty between employers and employees, while others argue that employees have the right to pursue better opportunities (Gardner et al., 2010).

To counteract the adverse impacts of employee poaching, companies should concentrate on enhancing employee engagement, satisfaction, and retention. This can be accomplished by offering competitive compensation packages, providing many opportunities for career growth and progression, and fostering a positive and conducive work environment. Additionally, companies can safeguard their proprietary information and discourage employees from easily transitioning to competitors by implementing non-compete and confidentiality agreements.

Employee Poaching as a Malpractice

Employee poaching is widely considered an unethical and negative practice in the literature. Several studies have examined the negative consequences and

implications of poaching on individuals, organizations, and the broader business environment.

One study by Uraon (2018) focused on the impact of comprehensive human resource development (HRD) practices on organizational commitment and employee intention to stay. The findings indicated that low levels of employee commitment, engagement, and intention to stay are significant challenges faced by software companies. This suggests that employee poaching can disrupt the HRD efforts of organizations and negatively affect employee commitment and retention. Proost and Verhaest (2018) explored the perception of recruiters towards applicants expressing a desire for a good work-life balance. The study suggested that expressing a desire for work-life balance might signal to recruiters that the applicant prioritizes personal life over work commitments. This implies that recruiters, potentially affecting their chances of being hired, may view applicants who prioritize work-life balance less favorably. Erasmus (2018) investigated the susceptibility of unethical behavior in human resource management (HRM) practices. The study found that employee selection, performance management, recruitment, and advertising were the area's most susceptible to unethical HRM practices. Employee poaching can contribute to unethical behavior in HRM practices, compromising the fairness and integrity of the recruitment and selection process. Dietz and Zwick (2022) examined the retention effect of training portability, visibility, and credibility. The study found that training participation increases employee retention. Employee poaching can disrupt training efforts by luring trained employees away from their current organizations, leading to a loss of investment in their development.

Lu et al. (2023) investigated the relationship between sustainable HRM practices, employee resilience, work engagement, and employee performance. The study found that sustainable HRM practices positively influenced employee resilience, work engagement, and performance. Employee poaching can disrupt the implementation of sustainable HRM practices and hinder the positive outcomes associated with them. Liao et al. (2022) explored the relationship between socially responsible HRM and employee ethical voice. The study found that socially responsible HRM practices positively influenced employee ethical self-efficacy and organizational identification. Employee poaching can undermine the implementation of socially responsible HRM practices and limit employees' opportunities to voice ethical concerns.

Kim (2014) examined the conditions under which predatory hiring practices, including employee poaching, can occur. The study found that predatory hiring could occur when the match between the worker and the new employer is relatively poor, and the old employer has a shallow pool of replacement

candidates. Predatory hiring practices can disrupt the stability of the labor market and create negative competition among organizations.

These studies collectively provide evidence that employee poaching is considered unethical and has negative implications for individuals, organizations, and the broader business environment. It disrupts HRD efforts, increases workloads and job dissatisfaction, undermines conservation efforts, compromises the integrity of HRM practices, hinders training investments, and can lead to inappropriate behaviors and recommendations.

Overall, the harms of employee poaching for both companies and employees are multifaceted. For companies, poaching can lead to a loss of valuable knowledge and expertise. When talented employees are lured away, companies may struggle to fill the knowledge gaps and maintain their competitive advantage. This can hinder innovation, disrupt organizational learning, and impede the development of new ventures (Kim and Steensma, 2017). Additionally, poaching can create a negative reputation for companies, affecting their relationships with stakeholders and potential employees (Jehn and Scott, 2015). It can also result in increased turnover, loss of institutional knowledge, and damage to the employer-employee relationship (Amankwah-Amoah, 2015).

Employee poaching also has negative consequences for employees. When employees are poached, they may face ethical dilemmas regarding loyalty and trust (Gardner et al., 2010). Poached employees may experience a sense of instability and uncertainty, as they may fear being targeted by other companies. Moreover, poaching can disrupt career development opportunities within the original company, as employees may miss promotions and growth prospects (Utete, 2021). It can also lead to increased workloads and job dissatisfaction, as companies may struggle to fill the gaps left by poached employees. Furthermore, employee poaching can have broader societal implications. It can contribute to a phenomenon called 'poaching,' where well-skilled workers are headhunted by other companies, leading to a dearth of qualified and skilled employees from previously disadvantaged groups. This exacerbates inequality and hampers efforts to promote diversity and inclusion in the workforce (Utete, 2021). Poaching can also disrupt labor markets, create negative competition among organizations, and hinder economic development.

In conclusion, employee poaching is associated with various harms for both companies and employees. It can result in a loss of valuable knowledge and expertise for companies, hinder innovation and organizational learning, damage reputation, and increase turnover. For employees, poaching can create ethical dilemmas, instability, and missed career development opportunities. It can also contribute to inequality and disrupt labor markets. To mitigate these harms,

companies should focus on employee engagement, satisfaction, and retention strategies, while policymakers should consider regulations to protect employees and organizations from unfair practices.

Employee Poaching as a Brainchild

It is crucial to consider the broader body of literature, which overwhelmingly highlights the negative aspects of employee poaching. The negative consequences for both companies and employees include the loss of valuable knowledge and expertise, disruption of organizational learning and innovation, damage to reputation, increased turnover, ethical dilemmas, instability, missed career development opportunities, and potential negative effects on labor markets and economic development. While the majority of the literature on the subject has focused on the negative aspects and harmful consequences of the employee-poaching phenomenon, considering it as a talent acquisition practice reveals some significant benefits.

Suryantini et al. (2022) explores the effect of transformational leadership on employee performance. The findings, suggest that transformational leadership, characterized by qualities such as sensitivity, creativity, and problem solving, can positively influence employee performance. While the study does not specifically discuss employee poaching, it implies that attracting and retaining transformational leaders through talent acquisition practices, which may involve poaching, can have positive effects on organizational performance. Additionally, a study by Sayed and Agndal (2020) analyzes neo-colonial dynamics in global professional service firms. The study suggests that subsidiary workers in peripheral units can elevate their status and gain opportunities for growth and development through socio-ideological and technocratic control mechanisms. While the study does not directly focus on employee poaching, it implies that the movement of employees across different units within a global firm can provide opportunities for career advancement and knowledge transfer. Furthermore, Zhao and Thompson (2019) investigate investments in human capital and find that companies with a promotion focus and experiencing gains are more likely to invest in talent training. While the study does not specifically discuss employee poaching, it suggests that attracting talented employees through talent acquisition practices, which may involve poaching, can lead to investments in human capital and potentially improve organizational performance.

Nayak et al. (2020) explores the impact of social recognition on employee engagement. The findings suggest that social recognition, facilitated through social media platforms, can enhance employee engagement. Effective talent acquisition practices can help organizations attract and retain talented individuals

who contribute to a positive work environment and foster employee engagement. Chapman et al. (2016) discuss the role of human resource development and human resource management practices in creating high-performance work systems. They argue that organizations benefit from adopting practices that lead to high-performance work systems, which can enhance firm performance. Talent acquisition practices play a crucial role in identifying and acquiring individuals with the necessary skills and competencies to contribute to high-performance work systems. Karunathilaka (2020) examines the impact of talent management on employee performance in the banking industry. The findings suggest that talent acquisition practices are crucial for improving performance, organizational effectiveness, and efficiency. Effective talent acquisition enables organizations to attract and select individuals who possess the skills and capabilities required for high performance.

Talent acquisition is recognized as a vital component of talent management in the study by Javed et al. (2019). The findings highlight the importance of talent acquisition in attracting and recruiting employees who align with the organization's values and contribute to job satisfaction. Effective talent acquisition practices help organizations build a workforce that is aligned with their strategic objectives. Marrybeth et al. (2019) investigate the impact of talent acquisition and talent engagement practices on employee satisfaction in universities and business schools. The study reveals that talent acquisition practices have a significant positive impact on employee satisfaction. By effectively acquiring talent, organizations can ensure they have the right individuals in the right positions, leading to higher levels of employee satisfaction.

Talent acquisition practices are also recognized for their role in building a sustainable talent pool. Mohapatra and Sahu (2018) discuss the importance of sustainable talent acquisition in meeting future organizational needs. By adopting sustainable talent acquisition practices, organizations can ensure a steady supply of talent and build a competitive advantage. Furthermore, talent acquisition practices contribute to building a strong employer brand. Kurek (2021) highlights the role of talent acquisition in creating a positive image of the organization as an employer. Effective talent acquisition practices, such as leveraging social media and building relationships, help organizations attract top talent and enhance their employer brand.

In essence, talent acquisition practices, which encompass employee poaching, offer numerous advantages. These benefits encompass improved employee engagement, enhanced firm performance, heightened employee satisfaction, the establishment of a sustainable talent pool, and the reinforcement of the employer

brand. By adopting effective talent acquisition strategies, organizations can successfully attract, select, and retain individuals with the necessary skills and competencies for achieving organizational success.

Countermeasures against Employee Poaching

Employee poaching, the practice of attracting and hiring employees from other organizations, poses challenges for companies in terms of talent retention and organizational stability. To protect against employee poaching, companies can employ various countermeasures. This literature review examines the strategies and practices that organizations can implement to mitigate the risks associated with employee poaching and enhance employee loyalty and engagement. Talent management practices play a crucial role in protecting against employee poaching. Cocolova et al. (2020) emphasize the importance of talent management in acquiring and retaining talented employees. They argue that talent management practices, which support the effective use of human resources, can lead to strong employee loyalty and commitment. Sharma and Syal (2023) highlight the role of talent management in addressing talent shortages and gaining a sustained competitive advantage through human capital.

Organizational effectiveness is closely linked to talent management practices. Tamunomiebi and Worgu (2020) find that talent management creates a competitive edge that improves organizational performance and effectiveness. Javed et al. (2019) emphasizes the impact of talent management practices on job satisfaction among employees in the higher education sector. Effective talent acquisition practices are crucial in protecting against employee poaching. Kravariti et al. (2021) highlight the challenges faced by small and medium-sized enterprises (SMEs) in acquiring talent and stress the importance of leveraging social networks and building employment brands to attract and recruit talent. Pyszka and Gajda (2016) emphasize the role of positive corporate social responsibility (CSR) strategies in successful talent acquisition.

Creating a positive work environment is another countermeasure against employee poaching. Ogbonnaya et al. (2019) suggest that employment protection legislation (EPL) can act as a buffer against adverse health and well-being outcomes during difficult times at work, increasing workers' bargaining power and making redundancies more difficult. Marino et al. (2014) highlight the importance of a friendly work atmosphere and management style in enhancing staff loyalty. Non-compete and confidentiality agreements can also protect against employee poaching by preventing employees from easily switching to competitors. French (2009) emphasizes the legal protections available to public

sector employees, such as constitutional rights to freedom of speech, privacy, and due process.

Building a strong employer brand is another effective countermeasure. Napathorn (2023) highlights the role of talent acquisition in creating a positive image of the organization as an employer. By effectively managing their employer brand, organizations can attract top talent and reduce the likelihood of employee poaching. In sum, protecting against employee poaching requires a multi-faceted approach. Talent management practices, effective talent acquisition strategies, creating a positive work environment, implementing non-compete agreements, and building a strong employer brand are all-important countermeasures. By implementing these strategies, organizations can enhance employee loyalty, engagement, and satisfaction, reducing the likelihood of employee poaching and its negative consequences.

Conclusion

The contentious practice of employee poaching has been thoroughly explored in this conceptual and framework-oriented book chapter. Through a balanced examination of diverse perspectives, the multifaceted nature of employee poaching and its potential implications on modern-day businesses and the broader labor ecosystem was identified. The practice of employee poaching has been a subject of debate in the literature. While some studies highlight potential benefits and positive aspects of employee poaching, the majority of the research emphasizes the negative consequences and ethical considerations associated with this practice.

From the outset, it became evident that employee poaching is an acquisition strategy that elicits both fervent support and vehement opposition. Some researchers argue that it stimulates healthy competition, fosters innovation, and encourages knowledge diffusion across industries (Kim, 2014). They contend that talent mobility enriches employees' personal growth while benefiting the entire sector. Conversely, opponents of employee poaching raise concerns about its disruptive nature, warning against a potential "war for talent" and the destabilization of businesses. Mistrust among competitors and the potential loss of institutional knowledge are among their chief apprehensions (Amankwah-Amoah et al., 2017).

The intention throughout this exploration has been to maintain a neutral standpoint, facilitating informed discussions to allow readers to form their own conclusions about the ethical and strategic aspects of employee poaching. While legal implications may vary depending on the specific circumstances, it is crucial for organizations to consider the ethical dimensions of this practice.

It is evident that employee poaching can bring both positive and negative consequences for individuals and businesses alike. On one hand, poached employees may find enhanced career opportunities and remuneration, but they may also experience a sense of instability. Companies engaging in poaching might acquire valuable talent and expertise, but they also risk higher turnover rates and damage to employer-employee relationships (Amankwah-Amoah, 2015).

Countermeasures to protect against employee poaching have been explored in the literature. These countermeasures aim to enhance employee satisfaction, engagement, and loyalty, as well as create a positive work environment. Strategies such as offering competitive compensation and benefits, providing career development opportunities, implementing employee recognition and rewards programs, fostering a positive work culture, and ensuring strong leadership and management practices can help mitigate the risks of employee poaching (Amankwah-Amoah et al., 2017).

Additionally, non-compete and confidentiality agreements can prevent employees from easily switching to competitors, while talent development and succession planning can reduce the need for external hiring. Building a strong employer brand and implementing targeted retention strategies are also effective countermeasures. However, it is important to note that the effectiveness of these countermeasures may vary depending on the organizational context and industry. Small firms, for example, may focus on creating a friendly work atmosphere and emphasizing management style to enhance staff loyalty (Panayiotopoulos, 2012). The transferability of skills and the visibility of employees' expertise to outsider firms can also influence the likelihood of poaching.

In conclusion, the practice of employee poaching raises significant ethical considerations for businesses. While the pursuit of top talent is essential for success in the competitive market, it is equally vital to uphold trust and loyalty between employers and employees. Striking a balance between recruiting skilled professionals and respecting existing relationships is paramount. To ensure ethical talent acquisition, organizations must promote practices that value and support their employees. By offering competitive compensation, providing opportunities for career growth and fostering a positive work environment, companies can enhance employee satisfaction and loyalty. As it is reflected on this exploration of talent acquisition practices, it is aimed to have contributed meaningfully to the ongoing dialogues surrounding employee poaching. Through a comprehensive understanding of its complexities and consequences, the challenges of the competitive global market while upholding ethical principles can be navigated. By prioritizing ethical considerations and creating a sustainable

and thriving workforce, companies can set a positive example for the corporate world. With careful consideration and a commitment to ethical practices, employee poaching can be approached responsibly, fostering progress and innovation while maintaining the integrity of employer-employee relationships.

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Chapter 15

How Economic Growth Correlates with Electric Consumption: A Cross-Sectional Dependent Panel Analysis

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ABSTRACT

In this paper, the causal relationship between electric power consumption and economic growth has been investigated by considering cross-sectional dependence in the panel data. The data include observations for variables of electric power consumption (kWh) and real GDP (in current U.S. \$) for 12 OECD member countries from 1971 to 2011. The empirical results confirmed the existence of a long run relationship between variables. The impact of electric power consumption on economic growth is larger than the impact of economic growth on electric power consumption in both short- and long run. Besides, the results of dynamic panel error-correction model confirmed the feedback hypothesis in the long run, and the growth hypothesis in the short run.

Keywords: Panel cointegration; Cross-sectional dependence; Panel error-correction, Electricity consumption, Economic growth, OECD

INTRODUCTION

Energy is a key driving force for a growing global economy, and a prerequisite for economic and social development. Ironically, a consequence of such an economy is an increased demand in world energy. The establishment of a balanced and sustainable society is therefore related to energy policies. The causality nexus energy policies and economic growth is an important case especially considering competing objectives of reducing greenhouse gas emissions and global warming. Determining the direction of causation will play a vital role in future energy strategies. Based on the potential causal pathways, there are four different cases or hypotheses. In the existence of bidirectional causality, which is called the feedback hypothesis, energy consumption and economic growth affect each other simultaneously. The validity of the growth hypothesis relies on the unidirectional causality from energy consumption to economic growth. According to the growth hypothesis, energy consumption is an essential factor in the economy, and energy conservation policies could adversely affect economic growth. In contrast, the conservation hypothesis posits that energy conservation policies would have little or no impact on economic growth if there were unidirectional causality from economic growth to energy consumption. The neutrality hypothesis contends that there is no discernible causal connection between energy consumption and economic growth. The energy consumption- GDP growth has been vastly studied in the literature on energy economics. The empirical results of these studies vary due to the selection of research area, time span, and econometric procedures. The detailed literature could be found in Ozturk (2010), and Payne (2010).

The focus of this study is on the investigation of relationship between electric power consumption and economic growth using cross-sectionally dependent panel data analysis.

METHODOLOGY

In this section, we briefly explained my econometric methodology. First, the importance of cross-sectional dependence in panel data models and some techniques to test the validity of this assumption have been introduced. Second, first- and second-generation unit root and cointegration testing procedures has been discussed. Finally, short- and long run estimators have been briefly presented.

Cross-Sectional Dependence

A standard assumption in panel data regression models is that the residuals are independent across the cross- section units. This assumption is important in

choosing the appropriate estimator, and distinctive in unit root and cointegration tests.

The Lagrange multiplier test statistic, which was proposed by Breusch and Pagan (1980), can be employed to test for cross-sectional dependence when the number of cross-sectional units (N) is not large, and the time span (T) is large enough. Otherwise, Breusch and Pagan (1980) test is not valid. In case of small T and large N , the hypothesis of cross-sectional independence can be tested by Friedman (1937), Frees (1995, 2004) and Pesaran (2004). Friedman (1937), and Frees (1995), Frees (2004) are semi-parametric tests which uses Spearman's rank correlation coefficient, and sum of squares of rank correlation coefficients, respectively. Pesaran (2004) is a parametric test, which can be used in unit root dynamic heterogeneous panels with structural breaks as well as stationary panel data models (Dobnik, 2011).

Panel Unit Root Tests

A time series is stationary when the process that generates the data remains constant over time. It is important to obtain stationarity to avoid the spurious regression problem. Moreover, to investigate a possible long run relationship between non-stationary variables, the order of integration of the variables should be determined. Unit root tests are used to determine the stationarity properties of variables.

Panel unit root tests can be classified into two groups: first-generation and second-generation tests. First-generation unit root tests are based on Augmented Dickey-Fuller (ADF) testing procedure and characterized by the assumption of cross-sectional independence. These tests can be classified into two groups. First group assume that the autoregressive parameter is common for all units, and tests the null hypothesis of a common unit root. These tests are Harris and Tzavalis (1999), Breitung (2000), Hadri (2000), and Levin, Lin and Chu (2002). Harris and Tzavalis (1999), Breitung (2000) and Levin, Lin and Chu (2002) test the null hypothesis of a common unit root while Hadri (2000) tests the stationarity under the null hypothesis. These tests are only applicable for balanced panel data. Among them, Breitung (2000) is robust to correlated residuals across the cross-section units and can be used in heterogeneous panel.

Second group allow individual autoregressive parameters for each unit. These tests are Im, Pesaran and Shin (2003), Fisher- ADF and Fisher- Phillips and Perron, and test the hypothesis of each unit has a unit root against the alternative at least one of them is stationary. An advantage of these tests is that they are applicable for unbalanced panel data.

Second-generation unit root tests incorporate cross-sectional dependence. Bai and Ng (2009), Moon and Perron (2004), Phillips and Sul (2003), Pesaran (2004), Maddala and Wu (1999), Choi (2001), Breitung and Das (2005), and Bai and Carrion-i-Silvestre (2009) are frequently utilized in the field. Bai and Carrion-i-Silvestre (2009) account for structural breaks and cross-sectional dependence through a common factors model proposed by Bai and Ng (2004) and Dobnik (2011).

Panel Cointegration Tests

If the order of integration of the variables is same, there could be a long run relationship between the variables. Cointegration tests are used to clarify this relationship. If the variables are co-integrated, then there is a long run relationship among them. Thus, it is possible to estimate the long run parameters.

Most commonly used panel cointegration tests are Kao (2000), Pedroni (1999, 2004) and Westerlund (2007). Kao (2000) uses DF and ADF unit root testing procedures. Pedroni (1999, 2004) proposes seven different residual-based test statistics to test the hypothesis of no cointegration. First group of test statistics, *group ρ - statistic*, *group PP- statistic*, and *group ADF- statistic*, are based on pooling the residuals along the between groups. Second group of statistics, *panel v - statistic*, *panel ρ - statistic*, *panel PP- statistic*, and *panel ADF- statistic*, are based on pooling the residuals along the within panel. Pedroni (1999) proposes that group ADF and panel ADF statistics are more applicable when the sample size is small. Westerlund (2007) proposes four different error correction model-based test statistics. First group of statistics (P_a and P_i) assume a common autoregressive parameter while second group statistics (G_a and G_i) allow individual autoregressive parameters. The statistics proposed by Westerlund (2007) are applicable in the presence of cross-sectional dependence, heterogeneity, and in unbalanced panels.

Short- and long run Estimations

If the variables are co-integrated, the short- and long run parameters can be estimated by using several methods.

Panel dynamic ordinary least squares (PDOLS) estimator (Kao and Chiang, 2000) can be used to estimate long run parameters.

$$\begin{aligned}
 Y_{it} &= \alpha_i + X'_{it}\beta \\
 &+ \sum_{j=-q}^q c_{ij}\Delta X_{it+j} \\
 &+ v_{it}
 \end{aligned}
 \tag{1}$$

where β is the long run parameter.

If the parameters differ across the groups, the techniques that assume the homogeneity of parameters would be inappropriate. In the case of heterogeneous parameters across the groups, the Pooled Mean Group (PMG) estimator by Pesaran et al. (1997), Pesaran et al. (1999), and Mean Group (MG) estimator by Pesaran et al. (1995), could be used to estimate short- and long run parameters in non-stationary dynamic panels. Additionally, Dynamic Fixed Effect (DFE) estimator could be used in both short- and long run estimations.

These estimators are based on the error correction model.

$$\begin{aligned}
 \Delta Y_{it} &= \phi_i Y_{it-1} + \beta'_i X_{it} \\
 &+ \sum_{j=1}^{p-1} \lambda_{ij} \Delta Y_{it-j} \\
 &+ \sum_{j=0}^{q-1} \delta_{ij} \Delta X_{it-j} + \varepsilon_{it}
 \end{aligned}
 \tag{2}$$

Where,

$$\begin{aligned}
 \phi_i &= - \left(1 - \sum_{j=1}^p \lambda_{ij} \right), \beta_i = \sum_{j=0}^q \delta_{ij}, \lambda_{ij}^* \\
 &= - \sum_{m=j+1}^p \lambda_{im}, \delta_{ij}^* = - \sum_{m=j+1}^q \delta_{im}
 \end{aligned}
 \tag{3}$$

The parameter ϕ_i is the error correction parameter that adjusts the speed of error- correcting. If $\phi_i = 0$, there would be no evidence for a long run relationship. Error correction parameter is expected to be significantly negative which means the variables would return to a long run equilibrium.

The MG estimator allows all parameters to differ across groups. The PMG estimator allows short run parameters to vary but restricts long run

parameters to be equal across all panels. The PMG estimator would be efficient and consistent if these restrictions are valid, otherwise it would be inconsistent where MG estimators would be consistent in either case. The DFE estimator restricts all of the parameters, including error-correction parameter to be equal across groups. The Hausman (1978) test can be used to choose the appropriate estimator (Blackburne, 2007).

RESULTS

Data and Model Specification

In this study, we used annual data from 1971 to 2011 for 12 OECD member countries. These are Canada, Denmark, Finland, France, Germany, Japan, Norway, Spain, Sweden, Turkey, United Kingdom, and United States. Electric power consumption (kWh) and real GDP in current U.S. dollars is used to analyze the relationship between energy consumption and economic growth. All variables are in natural logarithms and obtained from the World Bank's database. Figure 1, and Figure 2 show the time series graphs for level and differenced forms of the variables, respectively.

The relationship between real GDP and electric power consumption (EPC) has been analyzed based on the following panel regression model,

$$\begin{aligned} Y_{it} \\ &= \alpha_i + \beta_i EPC_{it} \\ &+ \varepsilon_{it} \end{aligned} \tag{4}$$

where Y_{it} and EPC_{it} represents real GDP and electric power consumption respectively, and $i= 1, \dots, N$ represents 12 OECD member countries and $t = 1, \dots, T$ denotes years included in time period.

Firstly, we have estimated both the fixed effect model and the random effect model, and to decide which model fits better we used the Hausman test. Hausman test results ($\chi^2 = 53.09$; p-value=0.000) indicated that the null hypothesis could be rejected at 1% significance level. Therefore, the appropriate model should not be the random effect model. Additionally, we have applied several post-estimation tests to test the existence of cross-sectional dependence, autocorrelation and heteroscedasticity. The results of these tests presented in the following sub-section.

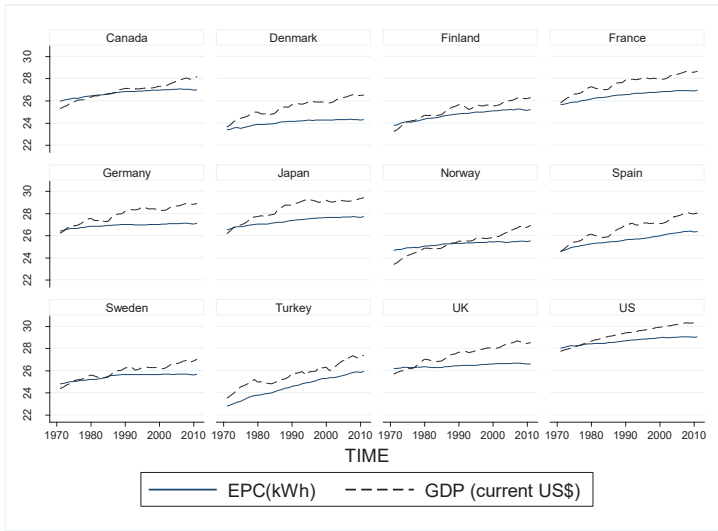


Figure 1: Time series graphs of series of EPC and GDP by countries

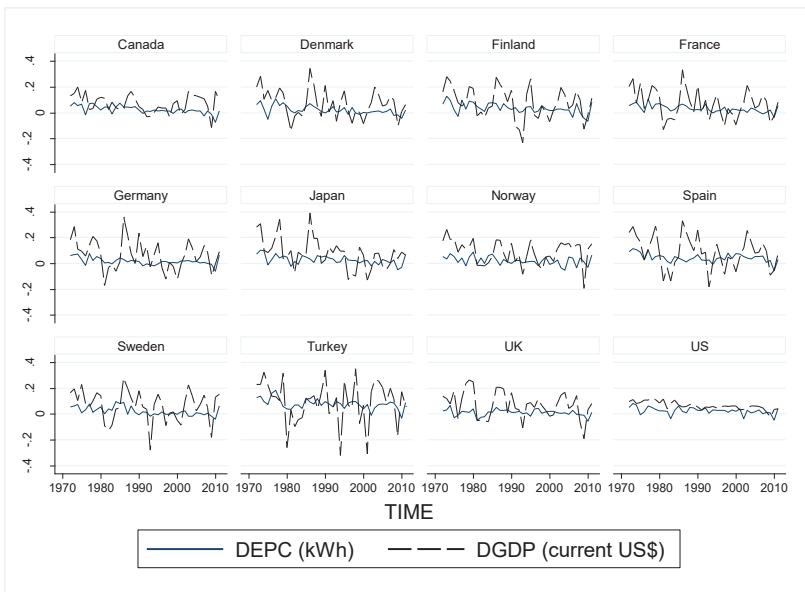


Figure 2: Time series graphs of differenced series of EPC and GDP by countries

Tests for cross-sectional dependence, autocorrelation and heteroscedasticity

Several tests have been applied to investigate the cross-sectional dependence among 12 OECD member countries. Each test statistic is significant

at 1% significance level. Thus, the null hypothesis, which implies the cross-sectional independence, can be rejected (Table 1). This result is important because most of the unit root tests assume cross-sectional independence. Furthermore, the presence of serial correlation in residuals should be tested to avoid less efficient results due to the biased standard errors. There are several tests for serial correlation in panel data models such as Baltagi and Wu (1999) and Wooldridge (2002). Among them, Wooldridge (2002) requires fewer assumptions, and provides more robustness (Drukker, 2003). According to the results of tests, the residuals have serial correlation (Table 2). Even if the residuals are homoscedastic within cross-sections, it could be heteroskedastic across cross-sections (Greene, 2000). A modified Wald test have been applied to identify the groupwise heteroskedasticity in the residuals. The modified Wald test statistic indicates that the variance of residuals differs across cross-sectional units (Table 3). Because of the violation of the assumptions, it is necessary to use robust estimators instead of traditional fixed effects estimator.

Table 1: Test results for cross-sectional dependence

Test statistics	Values
Breusch-Pagan LM test of independence	1141.62***
Pesaran's test of cross sectional independence	21.309***
Friedman's test of cross sectional independence	214.302***
Frees' test of cross sectional independence	4.489***

Note: ***, **, and * indicate the significance at the %1, %5, and %10 levels, respectively.

Table 2: Test results for autocorrelation

Test statistics	Values
Wooldridge test for autocorrelation	67.712***
Modified Bhargava et al. Durbin-Watson	0.0789***
Baltagi-Wu LBI	0.2186***

Note: ***, **, and * indicate the significance at the %1, %5, and %10 levels, respectively.

Table 3: Modified Wald test result for heteroscedasticity

Test statistics	Values
Modified Wald test	1860.23***

Note: ***, **, and * indicate the significance at the %1, %5, and %10 levels, respectively.

Unit Root Tests

To investigate the stationarity properties of variables, both first- and second-generation unit root tests have been applied. All of the test results, with the exception of LLC test result for GDP and Hadri test result for ΔEPC , indicates that both GDP and EPC is not stationary on the level, but the first differences are stationary (Table 4). However, first generation unit root tests assume cross-sectional independence. Since the panel data under investigation have cross-sectional dependence, the results obtained from first generation tests cannot be conclusive.

Table 4: First generation panel unit root test results

Variable	LLC	HT	Breitung	Hadri	IPS	ADF-Fisher	PP-Fisher
Level							
GDP	2.26**	0.83	0.72	23.10** *	-1.72**	27.88	26.45
EPC	-0.52	0.89	1.12	43.31** *	1.49	22.51	11.99
1st Differences							
ΔGDP	- 16.53** *	0.06** *	- 3.49***	-0.68	- 15.75** *	149.68***	316.76** *
ΔEPC	- 12.56** *	0.12** *	- 3.78***	3.51***	- 13.01** *	100.21***	319.70** *

Note: ***, **, and * indicate the significance at the %1, %5, and %10 levels, respectively.

Pesaran’s (Peseran, 2004) panel unit root test, considering the cross-sectional dependence, has been applied for a conclusive result. Test results indicate that none of the variables is stationary on the level. However, the stationarity could be obtained by differencing variables once, which means the order of the integration is one for all variables (Table 5). With regard to this result, now it is appropriate to do panel cointegration tests to investigate a possible long run relationship between variables.

Table 5: Pesaran’s (2004) panel unit root test results

Variable	CADF (t)	CADF (Z)
Level		
GDP	-2.086	1.001
EPC	-2.292	0.190
1st Differences		
ΔGDP	-3.395 ***	5.987***
ΔEPC	-2.947***	-4.339***

Note: ***, **, and * indicate the significance at the %1, %5, and %10 levels, respectively.

Cointegration Tests

Since the precondition of common integration order for all variables has been confirmed by Pesaran’s (Peseran, 2004) unit root test, it could be questioned whether these variables are co-integrated or not. For this purpose, both the cointegration tests that assume cross-sectional independence and the Westerlund (2007) cointegration test, which allows cross-sectional dependence, have been applied. According to panel v- statistic, panel ADF- statistic, and group ADF- statistic proposed by Pedroni (1999, 2004) the null hypothesis that claims no cointegration can be rejected. Additionally, Kao (2000) ADF statistic indicates the rejection of no cointegration hypothesis, as well (Table 6).

Table 6: Panel cointegration test results without cross-sectional dependence

Pedroni’s panel cointegration test results

Test statistics	Values
Panel v- statistic	3.116227***
Panel ρ- statistic	-1.252264
Panel PP- statistic	-0.955356
Panel ADF- Statistic	-2.152761**
Group ρ- statistic	1.198047
Group PP- statistic	0.995754
Group ADF- statistic	-1.848652**

Kao’s panel cointegration test result

ADF- statistic	-2.327199***
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Note: ***, **, and * indicate the significance at the %1, %5, and %10 levels, respectively.

In the presence of cross-sectional dependence, Westerlund (2007) cointegration test results would provide a decision that is more conclusive. The results indicate that the no cointegration hypothesis can be rejected, except for G_a test statistic (Table 7). Therefore, it is concluded that the variables are cointegrated, in other words there is a long run relationship between the variables.

Table 7: Panel cointegration test results with cross-sectional dependence
Westerlund's panel cointegration test results

Test statistics	Values
Gt	-1.535**
Ga	-4.142
Pt	-5.211***
Pa	-3.891***

Note: ***, **, and * indicate the significance at the %1, %5, and %10 levels, respectively.

Short- and long run Estimations

If the existence of a long-term relationship between variables is established, estimators can be employed to calculate the short- and long-term parameters. While the PDOLS estimator can only estimate long run parameters, the PMG, MG and DFE estimators can estimate both short- and long run parameters. Table 8 presents the estimations of short- and long run parameters while EPC is the exogenous, and GDP is the endogenous variables. Since all variables are in logarithmic form, the parameter estimations are elasticity coefficients. Except the MG estimation which is insignificant, all other estimations indicate that 1% increase in EPC causes approximately 1% increase in GDP, in the long run. The short run parameter estimations indicate that 1% increase in EPC causes 0.54%, 0.48% and 0.60% increases in GDP, according to the PMG, MG and DFE estimators, respectively. The error correction coefficient, which is estimated significantly negative, implies that the short run imbalances will be adjusted through the long run equilibrium. According to the PMG estimation, 0.08% of the imbalances will be corrected in each period. Similarly, 0.11% of the imbalances will be corrected with respect to the MG estimation, and 0.06% of the imbalances will be corrected with respect to the DFE estimation in each period.

Table 8: Results of short- and long run estimations

Dep. Var. (GDP)	Long	run	Short run Estimations
	Estimations		
	EPC	EPC	ECT
β_{PDOLS}	1.0034*** (5.91)	-	-
β_{PMG}	1.0748*** (9.27)	0.5423*** (3.36)	-0.0832*** (-4.90)
β_{MG}	-3.6267 (-0.75)	0.4790*** (3.44)	-0.1168*** (-4.98)
β_{DFE}	1.0705*** (4.41)	0.6027*** (3.65)	-0.0626*** (-5.13)

Note: ***, **, and * indicate the significance at the %1, %5, and %10 levels, respectively.

The estimations of short- and long run parameters while GDP is the exogenous, and EPC is the endogenous variables are presented in Table 9. The long run parameter, estimated by using MG and DFE are insignificant while PDOLS and PMG are significant. However, the error-correction term estimation of PMG is significantly positive which implies inconsistency with the prior assumption of variables will adjust through the long run equilibrium. According to the MG and DFE estimations, 1% increase in GDP causes 0.04%, and 0.06% increases in EPC, respectively. The error correction coefficient, estimated significantly negative by MG and PMG, implies that the short run imbalances will be adjusted through the long run equilibrium. The speed of adjustment is relatively faster in MG estimation compare to the DFE estimation.

Table 9: Results of short- and long run estimations

Dep. Var. (EPC)	Long run	Short run Estimations	
	Estimations	GDP	ECT
β_{PDOLS}	0.8243*** (22.68)	-	-
β_{PMG}	0.9675957*** 5.70	0.0798868*** 5.07	0.0234444*** 3.77
β_{MG}	-3347693 -0.88	0.0387221** 2.52	-0.0892293*** -4.26
β_{DFE}	-3552409 0.185	0.0576852*** 4.78	-0.0210064 *** -3.13

Note: ***, **, and * indicate the significance at the %1, %5, and %10 levels, respectively.

The MG estimator allows both constant and slope parameters evaluate from unit to unit. The PMG estimator allows short run parameters to vary but restricts

long run parameters. The DFE estimator allows none of the parameters varies. The Hausman test can be used to choose the appropriate estimator. According to the Hausman test result, the choice between PMG and MG estimator for electric power consumption should be in favor of PMG estimator. Therefore, the long run parameter estimations are homogeneous across the panels, and PMG estimator provides efficient and consistent estimates. This result also implies that the PMG, PDOLS, and DFE estimates are appropriate. However, the choice between MG and DFE estimator should be in favor of MG estimator while GDP is the exogenous variable. Baltagi, Griffin, and Xiong (1999) discuss the simultaneous equation bias to which the FE models are vulnerable due to the endogeneity between the error term and the lagged dependent variable (Blackburne, 2007). According to the Hausman test results, the simultaneous equation bias is minimal (Table 10).

In the short run, the causal relationship between GDP and EPC is bidirectional. However, in the long run, it is unidirectional, with EPC causing GDP (Table 11).

Table 10: Hausman test results

	β_{MG}	β_{PMG}	β_{DFE}	Difference	<i>Prob</i> > χ^2
EPC	-3.6267	1.0748	-	-4.701641	0.3280
GDP	-0.3347693	-	-0.3552409	0.0204716	0.9994

Table 11: The direction of causal relationship between GDP and EPC

Long run causality	Short run causality
EPC → GDP*	EPC ← → GDP**

Note: *, and ** indicate the results are obtained from PMG, and PMG and DFE estimators, respectively.

DISCUSSION

In this study, the annual data from 1971 to 2011 for 12 OECD member countries were used to investigate the short- and long run relationship between energy consumption and economic growth. Electric power consumption (kWh) and real GDP in current U.S. dollars were included in the analyses. Most of the previous research do not consider cross- sectional dependence in unit root and cointegration testing processes. In this study, tests that allow the cross-sectional dependence were used in addition to the first-generation tests. The findings indicate that the variables of economic growth and electric power consumption are integrated of a common order (I(1)), and there is a long run relationship between them. The estimated long run elasticity coefficients indicate that 1%

increase in electric power consumption results in 1% increase in economic growth. This estimate is larger than previous findings. The reason behind this could be the electricity supply composition of the countries under investigation. Most of the countries have a reasonable percentage of renewable shares in terms of resource composition of the electric power production. Further research for long run relationship between economic growth and electricity production focusing on renewable shares to clarify the impact of resource composition of the supply side on the long run elasticity coefficients is needed.

The short run parameter estimations indicate that 1% increase in electric power consumption causes approximately 0.5% increase in economic growth. On the other hand, 1% increase in economic growth causes 0.4- 0.6% increase in EPC, in the short run. Findings confirm the feedback hypothesis, which claims a bi-directional causality between economic growth and electric power consumption, in the short run. Since the energy consumption and the economic growth affect each other simultaneously, energy conservation policies could have undesirable effects on economic growth. More importantly, the validity of growth hypothesis has been confirmed in the long run. The growth hypothesis claims that the energy consumption is an important input in the economy, and energy conservation policies may have severe negative impacts on economic growth.

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Chapter 16

An Overview of the Relationship Between the Global Financial Crisis and Tax Havens

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ABSTRACT

With the financial liberalization policies introduced in the late 1970s, tax havens have become more attractive after the removal of controls on capital movements. Tax havens affect the tax structures of countries, and even beyond that, their economic structures. Because it can be said that harmful tax competition changes the direction of economic decisions. This study emphasizes the importance of tax havens in the global economy and evaluates their relationship with the 2008 financial crisis. In addition, the relationships of tax havens on the paths that show the negative impact of tax havens on the total amount of taxes that constitute public revenues are also tried to be explained. It is argued that not only developed countries but also developing countries are negatively affected by tax havens. In order to overcome the negative consequences of the global crisis, tax increase policies were implemented in many countries. With the increased tax burden, tax havens have managed to attract both individual investors and global investment companies thanks to the tax advantages they provide. This has negatively affected the public revenues collected through taxes in countries trying to recover from the crisis.

Keywords: Tax Havens, Financial Crisis, Offshore Centers

INTRODUCTION

The balances formed worldwide after the Second World War were replaced by the "deregulation" process in the 1970s. In the post-1970 period, many countries around the world made efforts to remove controls on money, capital and investments. In this process, capital owners gained a wide range of movement while tax administrations were trapped within certain legal boundaries. It can be said that this structure has brought developed and developing countries face to face with a global problem, namely the problem of "tax havens and harmful tax competition". Although developed countries tried to take necessary measures against this problem since the 1970s, they realized too late what kind of a problem they were facing. By the 1990s, it is seen that countries tried to find common solutions to this problem (Türk, 2010).

Especially in the aftermath of the global financial crisis, numerous reports have been prepared by national and international organizations on the link between tax havens and the crisis. In spite of the fact that the degree of the interface cannot be clearly uncovered in these reports and political articulations, there's a consensus that there's an affect. In fact, it can be said that the most talk about is on the degree of the relationship between charge safe houses and the worldwide monetary emergency.

Nations require nonstop and steady sources of income for the administrations they give to social orders. The foremost critical of these sources is assess incomes. In this manner, a diminish in assess incomes causes nations to confront financing issues whereas giving these administrations. It is contended that assess sanctuaries or seaward money related centers permit people and educate to maintain a strategic distance from paying the sum of assess they are lawfully required to pay and cause nations to endure genuine income misfortunes. Characterized by a few specialists as the dim side of globalization, charge safe houses or seaward budgetary centers are places specialized in pulling in remote ventures and monetary exercises. In this setting, the truth that these places are considered to play a negative part on a worldwide premise in issues such as cash washing, fear based oppressor financing, assess avoidance and monetary flimsiness has caused this issue to come beneath more investigation by Western nations, worldwide teach such as the IMF and the OECD, particularly since the final two decades, and unused and more comprehensive directions have been presented to avoid these negative hones.

While this study emphasizes the importance of tax havens in the global economy, it also includes evaluations on their relationship with the 2008 financial crisis.

THE GLOBAL ECONOMIC IMPACT OF TAX HAVENS

Tax havens are places with very low tax rates and other tax features that are organized to appeal to foreign investors (Dharmala & Hines, 2009). Or they are countries with low tax rates that provide investors with opportunities to avoid taxes (Desai, Foley & Hines, 2004). Tax havens are places that offer businesses and individuals various opportunities to avoid taxes in a context of increasing international competition (Hines, 2005). Tax havens are economic and financial islands that are located within the borders of a particular country but offer all kinds of tax and audit exemptions to capital. The term tax haven alludes to any nation that does not look for to draw in genuine venture but instep energizes assess avoidance by utilizing delicate charge laws and strict bank mystery to extend and pull in remote capital (Addison, 2009). This is a long-term and deliberate strategy (Yilmaz, 2006).

Tax havens affect the tax structures of countries, and even beyond that, their economic structures. Because it can be said that harmful tax competition changes the direction of economic decisions (Aktan and Vural, 2004).

In tax havens, a simple taxation system is generally used and public services are financed by indirect taxes, especially taxes on consumption. In this context, given that there are no or very low rates of direct taxes and that corporate or individual investors almost never bear any tax burden on income, it can be seen as a negative that they benefit from public services free of charge (Aydın, 2009).

Tax havens may encourage investment in other countries, if the ability to reposition taxable income is developed in tax havens, investment in high tax jurisdictions may be desirable, or if tax rates are low, the cost of goods and production inputs or services sold in high tax jurisdictions may be reduced (Hines, 2007).

In terms of the international financial and economic system, it is argued that there are serious negative effects of tax havens. For example, tax havens assess tax heavens are criticized for expanding the risk premium in worldwide money related markets, debilitating the working of tax and open fund frameworks, expanding imbalance within the conveyance of tax incomes, diminishing proficiency in asset assignment, making financial wrongdoings more profitable, decreasing private incomes by empowering rent-seeking behavior in creating nations, and harming regulation structures and development in these nations (Arslan, 2011).

It can be said that the main factor in the emergence of tax havens is to attract capital and to benefit from the financial opportunities that this will bring. One of the reasons that push countries to become tax havens is that they do not have

sufficient human capital and natural resources for development. Therefore, it is a natural consequence of this situation that tax havens are composed of small-scale states, especially island states. In this respect, tax haven countries have adopted a development method based on financial capital and portfolio investments instead of development based on industrial production, which requires a large geographical area, natural resources, transportation and infrastructure facilities (Aydın, 2009). It is observed that tax haven countries have received a large amount of foreign capital investment and, largely as a result of this, have experienced a very rapid economic growth process in the last 25 years (Hines, 2005).

Foreign capital investments are basically realized in two ways. These are foreign direct investment (FDI) and portfolio investment (Portfolio Investment). Foreign capital establishing a new facility, purchasing an existing facility or becoming a partner in an established facility in the country of origin is a type of direct investment. When foreign capital buys shares of a company traded on the stock exchange, this is a portfolio investment. The reason why foreign capital invests directly in a country depends on the purpose of the foreign capital's investment. Foreign capital investment is made to take advantage of the cheap labor force in the country, or to take advantage of the rich natural resources of the country, or to avoid leaving the firms operating in the country of investment and competing in the global market alone in such markets, or because the tax and foreign exchange policies applied in the countries of investment are more advantageous. However, it is observed that some multinational companies prefer to invest in so-called tax havens in order to benefit from the tax facilities and trade secrecy services offered by these countries. However, it is a fact that many foreign capital owners turn to such countries especially for money laundering (Yetkiner, 2001). In other words, tax rates and other fiscal facilities are used by tax havens as a conscious strategy to attract investments. This strategy pursued by tax haven countries caused them to grow faster than the rest of the world between 1980 and 2000. During this period, tax haven countries (22 countries) grew by 4.4 percent while the rest of the world grew by 3.3 percent.

Most tax haven countries have been able to attract investments and investors to their countries with the tax facilities and advantages they provide. Thus, they have prepared the ground for the tax bases of other countries to be formed in their own countries. Therefore, it is argued that tax haven countries cause the erosion of the tax bases of other countries through their practices. This leads to sub-optimal public services. This group, which takes advantage of the opportunities of tax haven countries and takes a share in the financing of the

services of the countries in which they are located without participating in the financing of the services by paying taxes, may lead to the formation of a class of "freeloaders" and to the deterioration and corruption of the economic environment. A deterioration in the balance of income and expenditure will adversely affect the budget balance and may lead to a decline in the quantity and quality of public services. In this context, the search for new sources of revenue may lead to a change in the distribution of tax revenues. This may lead to deviations in trade and investment decisions and cause a decline in welfare. In order to prevent this, countries may increase the tax burden on factors of production other than capital by shifting capital to tax haven countries. In particular, the labor factor of production, which is unskilled and has weak tax evasion opportunities, may be under a large tax burden. This situation contradicts the principle of justice, encourages informal employment and may increase the unemployment rate in the country. It is claimed that the increase in the fluidity of capital with the removal of barriers between countries in the international arena may cause imbalances in the international distribution of capital in favor of tax haven countries and facilitate tax avoidance opportunities. In such a case, if the capital factor chooses a location by considering tax advantages, it may cause capital to shift from productive areas to unproductive areas and lead to waste of scarce resources in the world. For this reason, countries have to take into account the developments and changes in the world in the tax decisions they take while implementing their tax policies. Otherwise, it can be said that they will not be able to prevent capital from shifting to more advantageous countries in evaluations made only by taking into account the national situation. As countries engage in different practices to attract capital, their tax regimes may vary (Arıkan & Akdeniz, 2005).

Looking at developing countries, it is argued that some of them have become increasingly impoverished in the triangle of debt, corruption and tax havens. It is claimed that this situation is particularly evident in countries with dictatorial governments and that a large portion of the money smuggled out of these countries through political and bureaucratic corruption goes to tax havens and never returns to the relevant country. As a result, it is inevitable that the problems of poverty and hunger in these countries will become chronic (Arslan, 2011).

It is claimed that people and companies that sidestep taxes through tax heaven nations advantage from an out of line sum of government administrations in extent to the taxes they pay. That's, they get more than they grant to the state. In expansion to the diminishment in their national social welfare, numerous nations concur that tax heavens too diminish worldwide

welfare. In any case, nations have overlooked why other nations select to ended up tax heavens and have hence fizzled to embrace procedures that clarify why assess sanctuaries exist (Akdiş, 2002).

In general, the advantages of the offshore system and tax havens for banks can be listed as follows (Akdiş, 2002):

- Investors are relieved from depositing zero-interest reserves with the central bank against their deposits,
- They do not pay premiums to the savings deposit insurance fund,
- Such banks attract deposits because they promise higher interest rates,
- Since the accounts are shown abroad, they evade official audits but can use the money within the country,
- They increase their balance sheet profits because they have fewer liabilities.

In addition to banks, investors also benefit from various advantages for their investments in tax havens and offshore banks. The most prominent of these advantages for cash funds held there is the absence of withholding tax and fund deductions on interest income. On the other hand, national governments face huge losses for the funds deposited in offshore banks. These losses can be listed as follows (Akdiş, 2002):

- a) The country faces tax losses. Since the interest appears to have been earned outside the country, interest income may not be declared,
- b) The central bank is unable to collect legal reserves, cannot collect premiums for the savings deposit insurance fund, and as a result, monetary policy instruments become ineffective and fail to yield the desired results,
- c) The central bank loses its authority and trust, the supervisory bodies lose their audit capabilities, and the treasury loses both its efficiency and means of control since it cannot ensure full competition.

While tax havens cause negative impacts on other countries, they also lead to positive externalities such as technology and knowledge transfer, create a center of attraction for foreign portfolio and direct investments, accelerate economic growth and development and improve the quality of life in these countries. The potential for tax competition to occur to the detriment of countries and global welfare in general further increases the importance of these centers. However, although a significant portion of world trade takes place in these centers, even on paper, the contribution of tax havens to world gross domestic product is only 3 percent. The reason for this anomaly is that many multinational corporations register most of their economic transactions in these regions in order to avoid taxes or pay very low levels of taxes, while in reality they carry out a very small portion of their real economic activities in tax havens. As a matter of fact, the

value of assets registered in tax havens for the same reasons is 1/3 of the world's gross domestic product and the funds transacted through the financial services sector in tax havens in a one-year period is equal to the world's total trade in goods and services. The UK, which has the largest tax haven of all time, London, as a tax-immune offshore area for euro-dollars after 1970, has an annual loss of 20 billion pounds sterling, while developing countries lose as much as the total amount of official aid given to them every year (Aktan & Vural, 2004).

Considering that as of 2006, 15 banks operating in Liechtenstein had deposits totaling USD 155 billion, the small island states of Jersey, Guernsey and Isle of Man had deposits totaling USD 1 trillion, and 281 banks operating in the Cayman Islands had deposits totaling USD 1.9 trillion, it is clear that the harmful tax competition is not over, but only a transitional period in which it will be seen whether the promises made to the OECD are kept. In this transition period, sanctions are also needed to force tax havens to keep their promises, which has been under considerable pressure, especially in the recent period. It is claimed that the annual tax loss of governments due to tax havens is 100 billion dollars for the US, 30 billion dollars for Germany and more than 250 billion dollars worldwide, and it is estimated that the money invested in tax havens is between 7 and 12 trillion dollars on a global scale (Türk, 2010).

It is known that the US spends approximately 35-40 billion dollars annually on the fight against drugs. The illegal arms trade is estimated to be around 1 billion dollars annually, while illegal earnings from copying music or movies in the US were estimated to be around 9.4 billion dollars in 2001. It is claimed that the rate of pirated software is around 40% in Japan and France, 60% in Greece and South Korea, and around 30% in Germany and the UK. In 2001, it was reported that 40% of Procter and Gamble shampoo and 60% of Honda motorcycles sold in China were pirated (Moises, 2003). These figures are estimated to be much higher today. It is accepted that the revenues obtained through these and similar acts, which are criminalized by the law, choose tax havens as locations and are laundered in this way and enter the financial system legally (Gümüşkaya, 1998).

Today's international financial structure facilitates the escape of trillions of dollars from developed and developing countries to tax havens through banks and other financial institutions. As a result, huge amounts of funds accumulate in tax havens and these funds are almost not subject to any tax. Considering that the annual value of financial assets in all tax haven countries in the world is estimated to be approximately 11.5 trillion dollars and the annual return on these financial assets is estimated to be approximately 860 billion dollars, the

estimated total loss of tax revenue in the world reaches 255 billion dollars annually (Arslan, 2011).

Since tax haven countries generally do not require anything from foreign citizens and companies in terms of both company establishment and legal legislation, it is seen that almost all of the international companies or individuals that make transactions in the world have communication or transaction centers in these countries. It is argued that these functions of tax havens distort the conditions of competition in an unfair manner and make it difficult for other countries to collect tax revenues.

It is argued that tax havens and unfair tax competition cause countries to lose their sovereignty over tax policy. It is argued that this leads to a shifting tax burden and that this shifting tax burden poses a major threat, especially for the developing world. It is argued that tax burden shifting causes wealthy individuals and multinational corporations to benefit from tax havens and low tax regimes, while ordinary individuals and small national firms bear additional costs, which (loss of revenue) reduces tax revenue that finances public services and contributes to development and poverty reduction (Ulusoy & Karakurt, 2009).

It is argued that not only developed countries but also developing countries are negatively affected by tax havens. According to estimates, developing countries suffer an annual loss of tax revenue amounting to at least 15-50 billion dollars as a result of tax evasion by their own affluent elite. When we examine this figure of 50 billion dollars, we observe that it is equivalent to the aid provided by the OECD to developing nations each year. These forgone tax revenues could have been utilized to construct vital commercial infrastructure, enhance the quality of education and healthcare systems, and finance other public initiatives aimed at improving living standards in developing countries (Addison, 2009).

Tax havens are evident in the current debate on the consequences and scope of tax competition. Countries competing for mobile foreign investors may implement incentives to reduce taxes (Desai, Foley & Hines, 2004). In order to eliminate hidden revenue incentives in tax havens, countries may compete for tax cuts. Although this reduces the demand for tax havens, it does not prevent the total amount of tax revenue in these countries from falling. As a consequence, the level of public goods would decline below the optimal threshold, leading to a decrease in overall social welfare. Moreover, in these countries, substantial resources are allocated towards enforcing tax regulations targeting tax havens. This allocation of resources reduces the availability of funds for public programs, resulting in a further reduction of social welfare.

Therefore, while it may seem advantageous for countries to allocate resources to protect their revenue base, the allocation of human resources in this manner is undesirable. Moreover, more problematically, tax havens have a negative impact on voluntary taxpayers because individuals and companies do not want to be "fools" who pay their taxes. It can be argued that as the number of tax cheats increases, the number of those engaged in illegal tax evasion will also increase (Addison, 2009).

TAX HAVENS AND THE GLOBAL FINANCIAL CRISIS

Tax heavens have been shown within the world economy since the early 20th century. It is contended that tax heaven is utilized not as it were for tax evasion or charge avoidance but moreover for numerous other purposes. Since the 1960s, the world's driving tax heaven have created quickly. Stores in these money related centers are evaluated to be a quarter of worldwide credit stores. Agreeing to the Bank for Worldwide Settlements (BIS) worldwide store measurements, Switzerland, Ireland, Luxembourg, Luxembourg 11th, Bahamas 15th, Shirt 19th and Cayman Islands 4th largest international monetary centers within the world. The victory of these budgetary centers is based on an arrangement of lawful directions. The foremost outstanding of these controls are bank mystery and trust laws. These lawful courses of action appear to ensure that the personality of shareholders is kept mystery indeed from the tax havens' claim governments. Typical exchanges in these centers are either exceptionally shallow or non-existent. For illustration, the creation of an unused fence support in Ireland takes less than a day. Indeed, in case these centers would like to create their claim household supervision and direction, there's a wide hole between their eagerly and the reality (Palan, 2010).

In the aftermath of the crisis, governments have enacted regulations for large spending programs, support for weak industries, nationalization of some companies and the legalization of bank debt guarantees. In order to realize these arrangements, countries need additional sources of financing, namely tax revenues. Particularly the G20 and OECD part nations see tax heavens as capable for this emergency and the fundamental measures to be taken to anticipate this emergency. In his discourse to the US Congress, Gordon Brown, the British President, expressed that tax heavens and offshore financial centers ought to be announced illicit (Raftopoulos & Banks, 2009).

Tax Havens and Tax Evasion

It is abundantly clear that tax evasion and tax avoidance are both antisocial and equally harmful. Tax evasion can be said to occur when an individual

creates a secret bank account outside his or her home country, for example in the Caribbean, and fails to declare interest income (Gravelle, 2013). Intentionally covering up taxable income could be a criminal offense in numerous nations and is culpable by fines, detainment or both. The OECD and G20 nations contend that tax havens and offshore financial centers encourage tax avoidance. For banks, mystery is alluring not as it were for tax avoidance or since individuals need to stow away something, but moreover since they need to keep their money related connections mystery. Tax havens are a necessarily portion of the worldwide economy and they give a neutral tax base for ventures within the nation. Most of the cash pulled in by tax safe houses comes from regulation speculations, but person financial specialists moreover utilize these centers, but most of this cash isn't of criminal root. Or maybe, it speaks to lawful speculations by individuals who are curious about cash administration, resource security and lawfully bringing down tax collection. In truth, it can be argued that the over the top tax burden, particularly in created nations (and this incorporates numerous creating nations), empowers the flight of capital to these centers. The way to anticipate usually for both created and creating nations to embrace more judicious tax controls (Raftopoulos & Banks, 2009).

Some countries such as Switzerland, Luxembourg, Austria, Monaco and Liechtenstein had decisions to loosen the bank secrecy orders and institutional charges on tax evasion. Advancing data trade to combat tax avoidance is impossible to be specifically related to the monetary crisis. Progressing budgetary direction may of course be related to the crisis, but not to assess authorization. It is additionally improbable that the victory of either course of action will have an effect on universal tax avoidance (Loomer & Maffini, 2009).

Tax Havens and Tax Avoidance

Tax avoidance which has a separate content from the tax evasion, means structuring to reduce the tax liability of households with the border of regulations. A specific shape of tax avoidance is legitimate unless it is terminated by a court (Loomer & Maffini, 2009). Tax avoidance can stem from affluent individual investors as well as major multinational corporations. It can encompass both lawful and unlawful practices. Tax avoidance is occasionally used to denote a legitimate decrease in tax rates. In reality, it is challenging to assert that the distinction between tax evasion and tax avoidance is entirely clear. For instance, a multinational corporation might establish a factory in a country or region with a low tax rate, aiming to capitalize on tax advantages instead of its home country. In such a scenario, it can be said that the

corporation engages in tax avoidance (Ulusoy and Karakurt, 2009). Different perspectives exist regarding the legality of tax avoidance, depending on the commercial, political, and moral stances of individuals and organizations. It is not possible to attribute the collapse of the financial system, as claimed in tax evasion, solely to tax avoidance (Loomer & Maffini, 2009). Nonetheless, during the G20 Leaders Summit in St. Petersburg, Russia, held on September 5-6, 2013, the final declaration emphasized the need for a strong, sustainable, and balanced growth of the global economy and acknowledged the challenges faced by the global economy. In this context, it was highlighted that cross-border tax evasion and tax avoidance undermine public finances and erode society's trust in tax justice, necessitating measures to prevent such practices. It is seen that the G20 member countries found the arrangements to solve these problems appropriate and gave the necessary support and commitments to combat this problem. The declaration expresses support for the OECD's proposal for a global model of multilateral and reciprocal automatic exchange of information. The governments were urged to participate in this initiative without delay, and it was stated that the global standard for automatic information exchange was anticipated to be established by February 2014, with technical modeling expected to be finalized within the same year (Uludağ, 2013).

Tax Havens and Money Laundering

The money laundering practices of tax havens and offshore banks are highlighted in many reports and documents prepared on this subject. The IRS-Internal Revenue Service (IRS-Internal Revenue Service) cites as an example the 1993 case in which an individual who presented himself as being from Antigua or Belize collaborated with the Americans to run gambling on the internet and transferred the money to offshore banks. Lax internal controls have also been linked to the recent case at Merrill Lynch, where the former energy giant allegedly embezzled \$43 million from the firm and laundered it with the help of a Canadian offshore bank consultancy (Buchanan, 2004). Incidents of this nature, along with comparable occurrences, bolster the assertions that tax havens are utilized for money laundering, highlighting inadequate regulations within the international banking system, numerous loopholes in the global financial system with regards to money laundering, significant opportunities facilitated by the internet for money laundering, and the concentration of illegal income and money laundering activities in these havens. The US State Department, the CIA, and the FATF maintain that tax havens and offshore financial centers are unlikely to be directly involved in money laundering. This is due to the fact that exposing illicit activities would be detrimental to global

economies by creating stronger incentives for identifying wrongdoers. If funds are not held within any financial institution, transferring money to offshore financial centers become challenging. Conversely, if illicit funds are already within a bank, there is no necessity to resort to an offshore financial center since the money has already been documented and laundered. In essence, it is difficult to unequivocally assert that offshore financial centers are the origin and epicenter of illicit income and money laundering activities (Raftopoulos & Banks, 2009).

CONCLUSION

As a result of the development and change in the understanding of social welfare in the world, it is seen that there has been a significant increase in public expenditures and with this increase, the tax burden has started to increase in order to finance the expenditures. In addition, with the increase in inheritance tax rates and other liabilities, tax havens have started to attract the attention of not only multinational companies but also individuals. It can be said that tax havens started to experience their most productive period after the removal of controls on capital movements with the financial liberalization policies introduced in the late 1970s. In the last two decades, the number of countries defined as tax havens has increased significantly.

The main characteristic of a tax haven is that it can use its own laws and other measures to evade or avoid tax laws or to avoid the regulations of other countries. Minimization of tax liability is an important element. Tax havens are low-tax areas and therefore provide large capital flows for investment. Bank secrecy is also a key feature of tax havens. Since bank secrecy does not allow for effective exchange of information, it may lead to income concealment and tax evasion. In the global financial crisis, it has been argued that the inadequate regulation of tax havens and the lack of effective exchange of information led to many problems. Bank secrecy, the lack of effective exchange of information and the unwillingness of countries to cooperate on taxation can have a corrosive effect on the national fiscal sovereignty of other countries. Bank secrecy is a matter of law and business practice not only in tax havens but also in many other countries. In fact, it is an element of professional ethics in banking that information about customers' business and transactions should not be disclosed to third parties without their consent.

In the second half of 2007, the financial crisis that emerged in the US and then spread across the world, particularly in developed countries, was caused by the asset and credit bubble inflated by borrowing. The collapse that started in the housing market later turned into a liquidity crisis and formed the basis of the

global crisis that spread all over the world. It can be said that the developments in virtual markets and their failure to meet expectations caused the global financial markets to enter into the widest and deepest credit crisis ever experienced in 2008. In fact, it would be more accurate to define this crisis as a crisis caused not by credit but by the transactions based on it.

Some circles claim that there were quite high levels of deposits in offshore accounts, that the global financial system suffered due to these accounts that did not enter the banking system, and even that these accounts were the main source of the financial crisis and that this collapsed the global financial system.

In the aftermath of the crisis, governments have enacted regulations to enact large spending programs, support weak industries, nationalize some companies and guarantee bank debts. In order to realize these arrangements, countries need additional sources of financing, namely tax revenues. In specific, G20 and OECD part nations see tax heavens as mindful for this emergency and the fundamental measures to be taken to avoid it.

From the perspective of the international financial and economic system, it is claimed that there are serious negativities caused by tax havens. For example, tax havens are criticized for expanding the risk premium in universal budgetary markets, debilitating the working of assess and open fund frameworks, expanding imbalance within the dispersion of charge incomes, lessening productivity in asset allotment, making financial wrongdoings more profitable, decreasing private incomes by empowering rent-seeking behavior in creating nations, and harming organization structures and development in these nations.

The tax havens are one of the reasons on increasing tax evasion and tax avoidance according to OECD and G20 members. In reality, bank mystery isn't a smokescreen for charge avoidance. For banks, mystery is alluring not only for tax evasion or because people want to hide something, but also because they want to keep their financial relationships secret. Tax havens are an integral part of the global economy. Tax avoidance refers to structuring to reduce one's tax liability within legal limits. Tax evasion can start from person financial specialists and huge multinational enterprises. It can reflect lawful and unlawful activities. Charge evasion can now and then be utilized to allude to a lawful diminishment in charge rates. In fact, it is difficult to dictate that the line between tax evasion and tax avoidance is completely obvious. There are diverse sees on whether tax avoidance is legitimate or not, depending on the commercial, political and ethical positions of households and organizations. It is not conceivable to underline that tax avoidance is dependable for the falling down of the financial system as claimed for tax evasion.

The money laundering practices of tax havens and offshore banks have been highlighted in many reports and documents on this subject. But most of this money is not of criminal origin. Rather, it represents legitimate investments made by people for the purposes of money management, asset protection and legally lower taxation.

In conclusion, tax havens are not a phenomenon that is emerging today. However, in the aftermath of the global economic crisis and the rebellion of those whose tax burden has increased, attention has turned more strongly to tax havens. Today, it is clear that behind the calls to fight against tax havens are the reactions in countries where the crisis has been deeply felt. It can be said that many countries are more interested in this issue with the expectation of large additional tax revenues. It can also be said that the sincerity of some developed countries, especially the US, in combating tax havens is also controversial.

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Chapter 17

The Dynamics of Economic Development and Income Inequality in Turkiye Evidence from Asymmetric Causality Test

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ABSTRACT

This study explores the dynamic relationships between economic development and income inequality in Turkiye using annual data from 1994 to 2021. Unlike conventional approaches, the dependent variable of economic development is represented by a composite index generated through Principal Component Analysis (PCA) using ten different variables. Income inequality is measured by the Gini Coefficient. The study employs cointegration and causality tests to examine the relationship between the Development Index and Gini Coefficient. The long-term relationship is assessed using the Autoregressive Distributed Lag (ARDL) bounds testing approach by Pesaran et al. (2001). Asymmetric causality tests by Hacker and Hatemi-J are utilized to investigate causal links between variables. The findings reveal a statistically significant and negative long-term impact of the Gini Index on economic development in Turkey. The analysis demonstrates that increasing income inequality, as indicated by the Gini Index, leads to lower levels of economic development. Short-term results indicate a significant negative influence of the Gini Index on the Development Index. Asymmetric causality tests suggest a causal relationship between negative shocks in the Gini Index and positive shocks in the Development Index, indicating that substantial reductions in income inequality can contribute to increased development under specific conditions. These outcomes underscore the potential positive effects of social and economic policies, societal stability, openness to trade, and human capital on development. Overall, the results emphasize the close interplay between economic development, social factors, and community dynamics.

Keywords: Economic development, Income inequality, GINI Index, ARDL, Asymmetric causality

INTRODUCTION

The Turkish economy is at an important crossroads in its endeavour to integrate into the transforming and evolving world economic order, armed with sustainable and inclusive development goals. This endeavour requires the economy to be approached from a broader perspective that includes not only growth but also key elements such as increasing social welfare (DPT, 2001; DPT, 2014), reducing income inequality, environmental sustainability (Hamza Çelikyay, 2021), structural change in production (Moalla, 2020; Nas et al, 2023) and human rights (Akyıldız, 2011). In this context, understanding, analysing and effectively managing a key indicator such as income inequality has a vital role in shaping and implementing Turkey's development strategies. In this respect, the perspective on the concept of development gains importance. This understanding, which goes beyond traditional approaches, emphasises that development should not be limited to economic growth, but should include a broad spectrum of factors such as technological progress, productivity growth, production capacity, sociocultural development and institutional quality. The concept of development is not limited to economic growth, but includes a multidimensional and comprehensive perspective (Myrdal, 1974).

This study aims to analyse the relationship between a unique development index and income inequality by addressing this complexity in the development process of the Turkish economy. The Development Index goes beyond traditional growth approaches and includes economic factors such as technological development, productivity growth, production capacity as well as economic growth, and social dynamics such as sociocultural and institutional quality. In line with this information, a comprehensive development index has been constructed in this study. The indicators used in the construction of the Development Index consist of two separate parts: Economic-Technological Indicators and Cultural- Institutional Indicators. Economic-Technological Indicators include various factors such as industrialisation, life expectancy, national income per capita and total patent applications and reflect the economic dimension of development. Cultural-Institutional Indicators, on the other hand, address the social and institutional dimension of development through factors such as control of corruption, government effectiveness, political stability, regulatory quality, rule of law and accountability.

The study revisits the traditional view that the relationship between development and income inequality is asymmetric in the sense that income inequality negatively affects development. For example, if a causality is found between positive shocks of income inequality and negative shocks of development, policies should be developed to reduce income inequality. In

general, it is important to determine in which direction the positive and/or negative shocks of income inequality cause causality towards the shocks of development in order to formulate an appropriate policy set. Therefore, the aim of this study is to investigate the causality between positive and negative shocks of income inequality and economic development in Turkey by using asymmetric methods. In this direction, three possible contributions of the study to the literature can be mentioned: i. to the best of our knowledge, this is the first study to investigate the relationship between income inequality and economic development for the Turkish economy using asymmetric causality. ii. by going beyond traditional growth approaches, a comprehensive development index specific to the Turkish economy has been constructed with many indicators. iii. It is the first time that the Hatemi-J causality test is used to determine the causality relations between the variables in question.

The rest of the paper proceeds as follows. The empirical literature is presented in the following Section 2, Section 3 introduces the dataset, model and methodology. Section 4 reports the empirical findings and the last section, Section 5, presents the conclusion and policy recommendations.

LITERATURE REVIEW

When the studies on the relationship between income inequality and development are analysed, this relationship is considered in the context of Kuznets (1955) Curve and inverted U theory. At the same time, economic growth is considered as an indicator of development. Kuznets argued that income inequality initially increases in an economy, but then decreases as economic growth continues. The Kuznets Curve, which represents this idea, aims to explain the phases of the economy. This curve represents three basic phases in the process of economic growth: an initial phase in which income inequality increases, followed by a subsequent phase in which income inequality begins to decrease, and finally a period of stable income distribution. This view argues that income distribution evolves in parallel with economic development. Kuznets Curve has been tested for many economies by researchers in the following periods (Lindert and Williamson, 1985; Adelman and Robinson, 1988; Shahbaz, 2010; Canh et al., 2020). However, Kuznets' views have been criticised in the following years and the views on income inequality have become more complex. The existing literature presents four different perspectives on the relationship between income inequality and economic growth. Studies in the first row argue that there is a negative relationship between income inequality and economic growth. On the other hand, studies in the second row argue that there is a positive relationship.

Studies in the third row suggest an inverted "U" shaped relationship. The researches in the last row indicate that the relationship is not clear or cannot be concluded with certainty (Shin, 2012). In Mbaku's (1997) study, the Human Development Index (HDI) and the Total Quality of Life Index (PQLI) were used as alternative measures to evaluate the relationship between development and income inequality in the context of the Kuznets curve hypothesis. In previous studies, researchers have controlled for development with GDP per capita, but the results obtained vary. This study is one of the first studies in the use of alternative development indicators. From this point of view, it is emphasised that development is better represented by these indicators in this study where measures such as HDI and PQLI are used.

Another empirical study analysing the relationship between development and income inequality is Malinen (2012). The study analysed the relationship between development and income inequality using 37-year data for 53 countries. According to the findings of the study, increases in development across countries reduce income inequality. In addition, in his analysis by dividing the countries into three groups among themselves, he found that development has a negative effect on income inequality in middle and upper income group countries and a positive effect in lower income group countries. Kanberoğlu and Arvas (2014) analysed the effect of financial development on income inequality for Turkey with data for the period 1980-2012. ARDL method was used in the analysis. According to the findings of the study, it is proved that the increase in credit volume reduces income inequality.

Kubar (2016) analysed the relationship between development and income inequality in 21 low- income and 32 middle-income countries for the period 1995-2010. In the analysis, national income per capita growth, agricultural sector value added, industrial sector value added, fixed capital consumption, consumer price index, exports of goods and services, imports of goods and services and consumption expenditures data and PDOLS and PFMOLS panel regression analysis methods were used. According to the findings of the analysis of the study, it was found that increases in agricultural sector value added, fixed capital consumption and inflation decreased the national income per capita, while increases in exports, consumption expenditures and industrial sector value added increased the national income per capita. It is also proved that increases in imports increase GNI per capita in low- income countries and decrease it in middle-income countries. Öztürk and Otkar (2017) analysed the relationship between development and income inequality within the framework of a parabolic model using the data of Turkey for the period 1990-2015 with the ARDL method. They concluded that the series are cointegrated in the

cointegration test conducted by the Boundary Test method. In the long-run analysis conducted with the ARDL method, they found that as development increases, income inequality decreases and this relationship is a linear relationship with a negative slope. In the short-run analysis, they proved that increases in development increase income inequality in the short run. Akhmad, et al. (2018) analysed the relationship between development and income inequality for Indonesia in the period 2009- 2015. According to the findings of the study, it was found that increases in development reduced poverty and income inequality in this country. Erkekoğlu and Uslu (2020) analysed the relationship between development and income inequality by using the data of 11 developed and

14 developing countries for the period 1990-2017. Long and short-term analyses were conducted with the PDOLS method. According to the findings of the analysis, a 1% increase in development reduces income inequality by 0.23% in developed countries and 0.38% in developing countries. Çütçü et al. (2020) analysed the relationship between development and income distribution with data for Turkey between 1980-2018. In the study, time series analyses allowing structural breaks were used as a method. According to the findings of the analysis, a long-run cointegration relationship was found between development and income distribution. However, no causality relationship between the variables was detected in the analysis. Kardeş (2021) analysed the relationship between development and income distribution for BRICS-T countries between 1990-2018. Westerlund ECM, Westerlund D-H cointegration and Kónya panel causality tests that take homogeneity and heterogeneity into account were used in the analysis. According to the findings of the analysis, it was found that there is a long-run relationship between income distribution and development for the country group.

EMPIRICAL ANALYSIS

Scope, Data Set and Model

In order to investigate the dynamic relationships between economic development and income inequality for Turkey, annual series between 1994-2021 are used in this study. Unlike the literature, the economic development variable, which is the dependent variable, is represented by an index reconstructed by PCA (Principal Component Analysis) method using 10 different variables. Income inequality, which is the explanatory variable, is represented by the Gini Coefficient. The institutional quality variables in the Development Index are obtained from the World Governance Indicators (WGI) published by the World Bank and the sub-data are obtained from the World Development Indicator (WDI) published by the World Bank. The explanatory variable Gini Coefficient

was obtained from Frederic Solt (2022) Standardised World Income Inequality Database (SWIID). The model is shown in Equation 1.

$$DI_t = \beta_0 + \beta_1 GINI_t + \varepsilon_{i,t} \quad (1)$$

DI in Equation 1 represents the development index and GINI represents income inequality. t , represents the time dimension. The method of obtaining the data used in the empirical analysis of the study is thought to contribute significantly to the development of the literature. Because, while constructing the dependent variable DI, the historical development of the concept of economic development was taken into consideration. In this context, it is thought to be useful to explain the Development Index.

Development Index (DI)

Although the concepts of economic growth and economic development are frequently used interchangeably in the literature, they are two different concepts. Economic growth is essentially a sub-component of economic development, and according to the Human Development Report (1996), economic growth is one of the paths to the ultimate goal of economic development. Economic growth refers to the increase in the total goods and services produced in an economy. Economic development, on the other hand, is the improvement of the quality of life of individuals in socio-economic, cultural, legal and political areas and the targeting of this (World Development Report, 2013). In this context, it is clear that the development indicator cannot be reduced to a single variable and/or parameter. In his study, Godo (2005) addresses the concept of development with the dependency relationship between the cultural and economic subsystems they define. According to the study, the cultural subsystem consists of value judgements and institutions, while the economic subsystem includes factors of production and technology. The multidimensionality of development is also taken into consideration in this study, as development is recognised as improving the quality of life of the individual in the World Bank's Development Report and Godo (2005). Table 1 below provides information on the variables used in the DI constructed by PCA method.

Table 1: Indicators Used in the Development Index

	Indicator	Description	
Economic- Technological Indicators	Industrialisation	It expresses the share of the value added created by the industrial sector including construction in GDP.	World Bank- WDI (2022)
	Life Expectancy	It shows the number of years a newborn baby will live if the mortality rates prevailing at the time of birth remain the same throughout its life.	
	National Income Per Capita	GNI per capita based on purchasing power parity (PPP). PPP GNI represents gross national income converted into US dollars using purchasing power parity rates.	
	Total Patent Applications	It refers to worldwide patent applications filed through the Patent Co-operation Treaty procedure or through a national patent office.	
Cultural- Institutional Indicators	Controlling Corruption	It refers to perceptions of the capture" of the state by private interest groups and the extent to which public power is used for private gain.	World Bank- WGI (2022)
	Government Effectiveness	It refers to the quality of public services and the degree of independence from political pressures.	
	Political stability and Absence of Terrorism	Refers to perceptions of the likelihood of political instability and/or politically motivated violence, including terrorism.	
	Regulatory Quality	It refers to perceptions of the government's ability to formulate and implement sound policies and regulations that allow and encourage private sector development.	
	Rule of Law	It refers to the extent to which individuals trust and abide by the rules of society and perceptions of the quality of the police and courts and the likelihood of crime and violence.	
	Accountability	It refers to the extent to which a country's citizens can participate in electing their government, as well as perceptions of freedom of expression, freedom of association and free media.	

The indicators that make up the Development Index in Table 1 show that development in this study does not depend solely on economic growth; it is addressed with a perspective ranging from concepts such as technological, productivity and production to sociocultural and institutional quality, including growth.

Cointegration Test

This study uses cointegration analysis and causality test to examine the relationship between Development Index and Gini Coefficient. The ARDL bounds test (Autoregressive DistributedLag) method developed by Pesaran et al. (2001) is used to examine the existence of a long-run relationship. The ARDL estimation method is the most appropriate approach when the integration levels of the variables are different. The main advantage of the ARDL approach is that it analyses short and long run relationships between variables. Moreover, Pesaran and Shin (1999) argue that the ARDL approach provides consistent results against autocorrelation and endogeneity problems. The ARDL model is as follows:

$$\Delta DI_t = \delta + \eta_0 DI_{t-1} + \eta_1 GINI_{t-1} \sum_{j=1}^q \beta_{1j} \Delta DI_{t-j} + \sum_{j=0}^q \beta_{ij} \Delta GINI_{t-j} + \varepsilon_{i,t} \quad (2)$$

Asymmetric Causality Test

In the study, Hacker and Hatemi-J Asymmetric causality test was used to investigate the causality relationships between variables. Although Granger causality test and Toda- Yamamoto (1995) procedure examine the causal relationship between variables, the effects of positive and negative shocks of a variable on the explanatory variable cannot be separated by these tests. For this purpose, an asymmetric causality test based on the asymmetric cointegration test developed by Hatemi-J (2012) and the bootstrap distribution in lagged incremental causality developed by Hacker and Hatemi-J (2006) was developed. The system showing the response of two cointegrated variables (DI and GINI) to each other's negative and positive shocks is shown below.

$$DI_t^+ = \sum_{i=1}^t \varepsilon_{1i}^+, DI_t^- = \sum_{i=1}^t \varepsilon_{1i}^-, GINI_t^+ = \sum_{i=1}^t \varepsilon_{2i}^+, GINI_t^- = \sum_{i=1}^t \varepsilon_{2i}^- \quad (3)$$

EMPIRICAL RESULTS

The stationarity levels of the variables used in our model are analysed by Kwiatkowski et al. (1992) unit root test. This method gives better results for

small sample time series ($T < 100$) compared to other conventional unit root tests (Shin and Schmidt, 1992). The results of the unit root tests are given in Table 2.

Table 2: Unit Root Test Results

Model	Variable	LM stat.	5% Critical Value
With Constant	DI	0.173**	0.463
With Constant	Δ DI	0.447	0.463
With Constant	GINI	0.591	0.463

** indicates rejection of null hypothesis at 5% significance level

According to the unit root test results in Table 2, the development index (DI) is stationary at first difference $[I(1)]$ and the GINI coefficient is stationary at level $[I(0)]$.

Before the short and long-run estimations of the ARDL model, it is necessary to look at the ARDL Bound test results. Bound test results are shown in Table 3.

Table 4: ARDL Bounds Test Results

Statistic		Lower bound, $I(0)$	Upper bound, $I(1)$
9.521	%10	3.02	3.51
	%5	3.62	4.16
	%1	4.94	5.58

According to the results given in Table 3, the F test statistic (9.521) is above the accepted lower and upper bound values at all confidence levels. This indicates that the test statistic exceeds the threshold values and is therefore statistically significant. These results support the existence of a long-run relationship between Development Index and Gini Index. Short and long run coefficient estimation results are shown in Table 4. Diagnostic test results are also reported in Table 4.

Table 5: Short and Long Run Coefficient Estimation Results

Variable	Coefficient	t statistic
<u>Long Run</u>		
Cons.	0.261	3.788***
GINI	-0.984	-3.755***
<u>Short Run</u>		
D(GINI)	-0.345	-1.972*
D(GINI(-1))	-0.648	-2.082**
D(GINI(-2))	0.722	1.945*
D(GINI(-3))	0.276	3.614***
D(GINI(-4))	-0.397	-3.124***
ECT(-1)	-0.407	-8.147***
Diagnostic test results	F Statistic	Probability
J-B normality test	1.589	0.451
Serial cor. LM test	0.302	0.590
Heteroscedasticity test	1.692	0.208
Stability Ramsey	1.520	0.237
CUSUM -CUSUMQ	Stable	

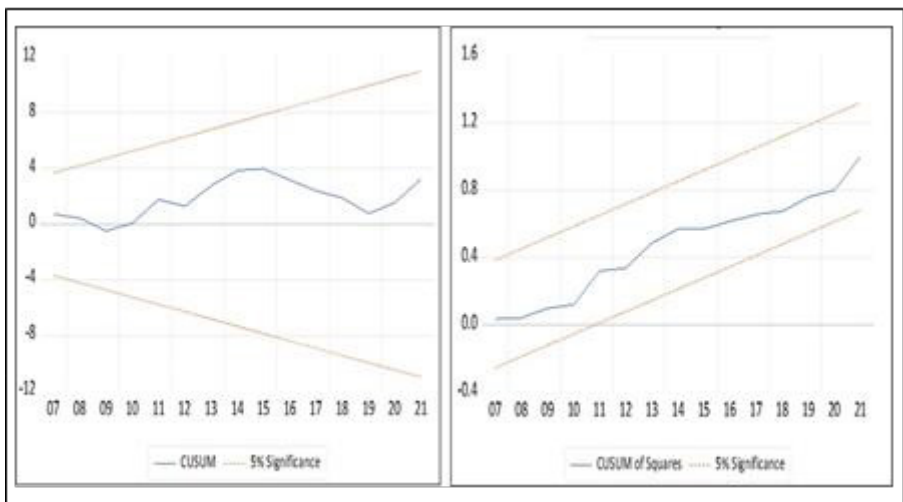
indicates rejection of null hypothesis at 1% significance level.

Before interpreting the short and long run coefficients in Table 4, the Diagnostic test results should be analysed. According to the result of Jarque-Bera normality test, the F statistic is 1.589 and the probability value is 0.451. Since the probability value is high, it can be assumed that the error terms are normally distributed. This indicates that the model meets the statistical requirements. As a result of the serial correlation LM test, the F statistic obtained is 0.302 and the probability value is 0.590. This indicates that serial dependence (serial correlation) is not present in the model and the error terms are independent in consecutive periods. According to the heteroscedasticity test result, the F statistic is 1.692 and the probability value is 0.208. Since the probability value is also high, it indicates that the heteroskedasticity problem is not significantly present in the model. The Stability Ramsey result shows that the F statistic is 1.520 and the probability value is 0.237. Since the probability value is also high, it indicates that the model is stable and the parameters do not change over time. The CUSUM and CUSUM of squares graph (Graph 1) indicates that the model is "Stable" as a result of the analysis. This means that the model remains stable over a certain period of time. In conclusion, the reported diagnostic test results support the overall statistical reliability of the model. The results that the error terms are normally distributed, there is no serial

dependence, there is no heteroskedasticity and the model is stable indicate that the model is appropriate for the data set analysed.

According to the long-run coefficient estimation results in Table 4, the long-run effects calculated with the ARDL model for Turkey are as follows: Indicates that the constant term is statistically significant. It is seen that the Gini Index in Turkey has a statistically significant and negative effect in the long run. When the relationship between the Gini Index and the development index is analysed, it shows that increases in the Gini Index, i.e. income inequality, lead to a lower level of development in the economy. This result reflects the negative impact of the Gini Index on economic development. This result is consistent with the studies of Malinen (2012) and Erkekoğlu and Uslu (2020).

The short-term results in Table 4 show that the Gini Index has a statistically significant negative effect on the Development Index. The coefficient of ECT(-1) variable is calculated as -0.407 and is significant at 1% significance level. This result indicates that the error correction term (ECT) has a negative effect on the Development Index in the long run. More precisely, it means that the long-run deviations in the Development Index have a tendency to be corrected in the next period and the economy tends towards its equilibrium level. In conclusion, according to the results of the analyses, short-run changes in the Gini Index have a negative effect on the Development Index and at the same time, the effect of the error correction term on the Development Index in the long run is negative. These results indicate that a steady and sustainable decline in the Gini Index is important for the economy to reach a higher level of development. This result is consistent with the study of Öztürk and Oktar (2017).



Graph 1: CUSUM-CUSUMQ Stability Test Result

Asymmetric causality test results are given in Table 5.

Table 5. The results of asymmetric causality test

Null hypothesis	Wald Stat	Bootstrap Critical values		
		%1	%5	%10
<u>From GINI to DI</u>				
GINI ⁺ ⇒ DI ⁺	2.162	17.055	11.130	7.602
GINI ⁺ ⇒ DI ⁻	9.932	25.678	15.305	10.515
GINI ⁻ ⇒ DI ⁻	0.651	14.576	9.481	7.438
GINI ⁻ ⇒ DI ⁺	13.787*	18.714	10.807	8.268
*				
<u>From DI to GINI</u>				
DI ⁺ ⇒ GINI ⁺	5.899	23.303	12.240	8.911
DI ⁺ ⇒ GINI ⁻	0.358	19.177	11.045	8.789
DI ⁻ ⇒ GINI ⁻	0.363	15.582	11.983	8.596
DI ⁻ ⇒ GINI ⁺	0.995	23.550	12.961	9.007

According to the asymmetric causality test results, only negative shocks of the Gini Index are associated with a causality relationship in the direction of positive shocks of the Development Index. This result shows that under certain conditions, significant decreases in the Gini Index lead to increases in the Development Index. As a result, the causality of negative shocks of the Gini Index towards positive shocks of the Development Index indicates that social and economic policies, social stability, openness to foreign trade and human capital can have positive effects on development. These results show that economic development is closely related not only to economic factors but also to social and societal factors.

CONCLUSION AND POLICY RECOMMENDATIONS

This study analyses the dynamic relationships in the Turkish economy between 1994 and 2021 and investigates the linkages between economic development and income inequality mainly using ARDL bounds test and asymmetric causality analysis. Economic development is represented by an index constructed by PCA of 10 different variables, while income inequality is expressed by the Gini Coefficient.

When we look at the long and short-run estimation results of the ARDL model, it is clearly seen that the Gini Index has a negative impact on economic development. It emphasises that increases in income inequality have a negative impact on the level of economic development and that a steady decline is

required in the long run. Moreover, the negative coefficient of the error correction term indicates that the long-run deviations in the Development Index tend to stabilise in the subsequent period. This indicates that income inequality should be reduced for sustainable development of the economy. Asymmetric causality analysis reveals that negative shocks in the Gini Index can cause positive shocks in the Development Index. These results indicate that social and economic policies, social stability, openness and human capital can have positive effects on development.

The findings provide important policy recommendations to accelerate and sustain Turkey's economic development. First, comprehensive policies to reduce income inequality need to be developed and implemented. Measures such as the efficient distribution of social assistance and improving access to education and labour markets can reduce income inequality. At the same time, economic growth and development policies should be designed from a more comprehensive perspective. Not only economic factors but also social and societal factors should be taken into account. Steps such as investment incentives, entrepreneurship support and strengthening educational infrastructure can form the basis of sustainable development. In conclusion, the findings of this study emphasise that economic development is based on balanced and sustainable policies that not only reduce income inequality but also in social and societal areas. In this context, future policy efforts can adopt this multidimensional approach and help Turkey to pursue a more equitable, inclusive and sustainable development path.

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Chapter 18

The Impact of Foreign Direct Investment on Income Distribution in Selected SAARK Countries

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ABSTRACT

1. INTRODUCTION

The effects of globalization on the economy have been the subject of a contentious discussion in economics. Foreign direct investment (FDI) is one sign that a country is becoming more globalized. Researchers have generally been upbeat when addressing FDI's impacts on host nations since they frequently frame these effects in terms of economic growth, which eventually results in sustainable economic development the income distribution in the host nations is one of the most significant consequences of foreign direct investment that has gone unnoticed by scholars. Is FDI beneficial for distributing income? There are two opposing points of view on this issue; one set of scholars thinks that FDI helps to improve the wealth disparity in the host nations, while the other thinks it makes it worse. Those who believe that FDI lessens income disparity contend that FDI causes the host country's economy to flourish, and that this economic growth subsequently serves as a source of income distribution for the country's citizens. In their view, FDI provides capital to the host nations. The majority of the least developed nations (LDCs) have very low capitalization levels. Their savings levels are lower than their required investment levels, which causes a savings-investment gap. FDI fills this gap. According to Herzer & Nunnenkamp (2011), the second argument presented in favor of FDI is that it transfers modern technology to host countries. International commerce can also be used to convey this technology, although foreign direct investment is more significant than trade. According to Figini & Holger (2006) FDI is associated with modern technology and domestic companies also adopt this technology by imitating foreign companies. Third, Foreign direct investment improves the host country's capacity to manage production factors. Fourth, FDI boosts worker productivity and income. These advantages of foreign direct investment do not always have to come at the expense of economic disparity. According to Herzer & Nunnenkamp (2011) the way to economic progress is through increased production and worker productivity. Foreign direct investment, according to Khan & Khan (2011), is the key driver of economic growth. FDI promotes economic growth as well as the development of human resources through the use of channels for education and training. Because of this, it raises the productivity of both labor and other production components. If foreign direct investment is focused on income-oriented industries rather than industries that replace imported goods, economic development might be improved, so FDI leads to higher economic growth (Atique et al. 2004).

The question at hand is whether a country's whole people will benefit from this economic expansion. The correct answer to this question is that, although

foreign direct investment might have uneven impacts in the near term, it improves income distribution over the long term. According to Figini & Holger (2006) FDI plays a positive role in income distribution.

Better technology is introduced, and domestic businesses copy it. The host nation passes through two stages of revenue distribution throughout this process. They employ research and innovative technologies in the early stages; therefore they don't need many trained personnel. Due to the lower need for expert labor, businesses often pay skilled and unskilled workers around the same rates; nevertheless, as the economy transitions to a larger use of the contemporary technology provided by foreign enterprises, the demand for skilled people increases. It is relatively more for unskilled workers. Because of this higher demand for skilled workers, companies have to pay them more wages and income inequality increases, but when all companies start using modern technology, they hire skilled labor and income inequality decreases. This shows that a U-shaped relationship. There is an inverse relationship between FDI and income inequality based on Herzer & Nunnenkamp (2011) FDI may cause the problem of income inequality in the short term, but it is solved in the long term. Therefore, FDI has a positive role in the distribution of income through the channel of economic growth. Another team of academics contends, however, that FDI causes economic disparity in host nations. The research in support of FDI overstates two benefits, namely the idea that it increases jobs and raises quality. The condition of customers will also improve as a result of the amount of items.

While part of this is accurate, not everything is as it looks. The growth in employment is not as great as it should be, despite the fact that FDI raises the level of employment in the host nations. A lot of progress has occurred. The role of FDI in affecting an economy's income distribution can be good or negative. The income distribution is improved if MNCs hire a large number of workers from the host nation. On the other hand, if it requires less labor and is capital-intensive, the income distribution is worsened. According to Shahbaz & Aamir (2008), developing countries can benefit from the benefits of foreign direct investment in the agricultural sector and agriculture-based industries. Because in this way multinational companies can attract unskilled labor of the host countries. Second, the workforce that MNCs employ is skilled labor and has minimal skill and human capital, so unskilled labor suffers. Additionally, the diversity of products grows, which is beneficial for customers, but it is also true that global corporations invest in products that are primarily valuable exclusively to a particular demographic. The gap between the affluent and the poor in the host nation widens as a result of all these variables. Because they

have greater human capital and expertise, wealthy people have access to more positions in MNCs. They also have access to better goods produced by MNCs. The poor, on the other hand, are unable to get employment in multinational corporations since the majority of them lack human capital, skills, and access to the products made by these businesses. Because of this, foreign direct investment contributes to income disparity in the host nations. Finally, while it is true that multinational corporations are a source of tax revenue for the host countries, it is also true that the governments of the host countries grant tax breaks to multinational corporations, making it difficult for the government to raise much money through taxation. As a result, the poor people of the nation suffer in the sectors where private investors have little incentive to invest. This is because private sector investors do not want to invest in these sectors and the public sector does not have enough income to do so.

Domestic foreign direct investment is seen favorably due to its favorable impact on employees' wages. It is argued by Figini & Holger (2006) that foreign companies pay more wages to their workers. As a result, if domestic companies do not want to lose their workers, they are required to pay higher wages to their workers, as a result, the wage level increases. Analyzing how foreign direct investment affects income disparity is urgently necessary. We have chosen eight SAARC nations for this project: Afghanistan, Bangladesh, India, Nepal, Pakistan, Bhutan, Maldives, and Sri Lanka. The structure of the current study is as follows. The introduction, literature review, and methodology are all included in the first section. The third section discusses the economy's features and approach. Analyzing how foreign direct investment affects income distribution is urgently necessary. Eight SAARC nations Bangladesh, India, Nepal, Pakistan, Bhutan, Maldives, Sri Lanka, and Afghanistan are used for this purpose. After the fourth phase of the data analysis and analysis, a conclusion has been reached.

2. LITERATURE REVIEW

The link between domestic foreign direct investment and income distribution is a topic of debate among scholars. Some believe that inward FDI is a source of bettering income distribution in host nations, while others believe that inbound FDI is a source of worsening income inequality in host countries. An overview of some of the available studies is as follows: The effect of economic openness and democracy on income inequality was investigated by Reuveny & Li (2003) for 69 countries from 1960 to 1996. The dependent variable was the Chinese index, while the independent variables were FDI inflows, trade openness, portfolio investment, and GDP The square of per capita was used.

Democracies' GDP levels can be determined by previous income inequality and the democracy index. First, emerging and developed nations were independently integrated into the OLS technique to estimate the model in three different ways. The results revealed that while trade liberalization had a negative and significant impact on income inequality as well, FDI inflow had a significant positive impact on income inequality. Sensitivity analysis was used to test the reliability of the findings was used for the strength of the income share of the top 20 percent of the population as a measure of income inequality to replace the Gini index, while the random effect of the country fixed effect and the estimation of the decade fixed effect were used to replace the OLS approach. The results of the robustness test showed that the level of democracy has a negative effect. And it is significant on income inequality. The effect of foreign direct investment on income inequality was positive and significant. However, openness to trade improved income distribution.

The effect of FDI on wage differentials in the manufacturing sector in the case of Indonesia is analyzed by Lipsey & Sjöholm (2004). The key question addressed by this study was whether or not similar-quality workers were paid more by international corporations than by local individual businesses. Various data were shown for this purpose, and the association between regression and regression was discovered using the regression approach. White-collar and blue-collar employees, the two major groupings, were separated the total number of dummy variables included the labor force, inputs used in the manufacturing process, sector, and location according to industries and provinces. There were three distinct regressions run for every category of worker. First, the regression did not take into account how workers' educational attainment affected their pay. There are no dummy variables for industries or provinces in the model. The degree of education of the workers was taken into account in the second regression. Both the employees' education level and dummy variables representing industries and provinces were included in the third regression. Results from the time when workers were free in the provinces and industries revealed that foreign businesses paid their employees more than domestic ones did. Workers with comparable levels of education were paid more by host nations than by international corporations. Additionally, they frequently chose to recruit people with advanced degrees. When the presumption of employees' freedom to transfer across industries and provinces was lifted, the outcomes remained the same. This survey also revealed that firms with foreign ownership employ more women and provide them lesser compensation. When a result, the average pay is paid less when more women are hired. World Development Indicators analyzed the effect of FDI on wage

and wage inequality in five East Asian countries, namely, Hong Kong, Korea, the Philippines, Singapore, and Thailand from 1985 to 1998. The dependent variable of the wage inequality model was measured as a ratio of labor wages. Skilled to the wages of low-skilled labor, the explanatory variables were union FDI, relative lack of skills and trade ratio. The empirical results obtained from pooled regression were not good, so the country-specific effects of FDI, relative lack of skills and trade were used. The findings indicated that pay disparity in Thailand is growing as a result of FDI. However, in the other four nations, FDI had a negligible impact on wage disparity. Earnings demonstrated a favorable effect of foreign direct investment on skilled and low-skilled worker earnings.

Choi (2006) aggregated data for the period from 1993 to 2002 for 119 countries to find the relationship between FDI and income inequality. The Gini index was used as the dependent variable. To determine whether the chosen countries were in Asia or Latin America and the Caribbean, the independent variables used were the share of domestic foreign direct investment as a percentage of GDP, the share of foreign direct investment as a percentage of GDP, the total stock of foreign direct investment as a percentage of GDP, per capita GDP, GDP domestic, and real GDP growth rates of dummy variables. The models were estimated using the combined ordinary least squares regression method. To examine the effects of foreign direct investment, total foreign direct investment, and total foreign direct investment with and without regional dummy variables on income inequality, six models were individually evaluated. The findings indicated that total foreign direct investment and income inequality in the chosen nations have a positive and substantial association. Foreign investment and foreign direct investment both have a favorable impact on income inequality. Here, the coefficient of foreign direct investment is higher than foreign direct investment, which shows that the former is more important in creating income inequality than the latter. These findings don't include any regional dummy factors. By including dummy variables, the effect of foreign direct investment regions, foreign direct investment, and total foreign direct investment on income inequality remained positive. The fake coefficients for Asia and Latin America and the Caribbean were both positive and significant, whereas the fake coefficient for Asia was negative but insignificant.

The impact of FDI on wage inequality for more than 100 developed and developing countries have been analyzed by Figini & Holger (2006) considering data from 1980 to 2002. The purpose of this study is to investigate whether the impact of direct investment is linear or non-linear. The degree of foreign pay inequality is influenced by a country's level of development. The

Gini index and the till index were used to calculate wage inequality in the production sector. These indicators served as the model's dependent variables. Foreign direct investment shares as a percentage of squared GDP, FDI, trade openness, the number of secondary school pupils as a proportion of the population overall, and GDP per capita are the independent variables. Using the categories of OECD nations and non-OECD countries, this study divided the chosen countries into developed and developing countries. Fixed effect regression estimation of the econometric model for aggregated country data revealed that the impact of FDI on pay inequality is negligible.

The impact of FDI on income inequality in Mexico from 1990 to 2000 taking panel data for 32 states, this study used two models for empirical analysis. In the first model, the dependent variable was the level of income inequality in 2000, which was measured by the Gini coefficient. In the second model, the instrument of foreign direct investment with the regression of the inflow of foreign direct investment between 1993 and 2000 replaced the independent variables of the Gini coefficient in 1990, which were an instrument for the average FDI inflow from 1993 to 2001 and per capita GDP in 1990. On the basis of GDP in 1990, average years of education per capita, income disparity in 1990, and distance, findings were made. Instrumental variable two-stage least squares (IV-SLS and OLS) approaches were used for the empirical study. The results demonstrate that foreign direct investment has a negative and considerable impact on income inequality. Shahbaz & Aamir (2008) investigated the impact of FDI on income inequality in Pakistan. In this research, time series data from 1971 to 2005 were used. Income inequality was measured with the Gini coefficient and the variable of the model was explained. The explanatory factors included FDI as a percentage of real GDP per capita, yearly inflation, the size of the government, trade openness, and the GDP proportion of agricultural value added. The results demonstrated that foreign direct investment had a very beneficial and considerable impact on income inequality.

The Gini coefficient model was the dependent variable. The ratio of trade to GDP and the ratio of foreign direct investment to GDP were used to measure economic globalization. GDP per capita was used to measure economic growth. The Johansen cointegration test was used to examine the long-term connection between the variables. Gregory Hansen's test was employed to look into the structural alterations in the co-accumulation vector, and the results showed that there weren't any. The co-accumulation test's findings demonstrated that trade and foreign direct investment had a detrimental impact on income inequality. This indicates that China's income distribution benefited from globalization.

Government investment on social insurances played a beneficial influence in enhancing income distribution.

3. METHODOLOGY

3.1. Model Specification

The model listed below will be examined using economic analysis:

$$IND_{it} = \alpha + \beta_1 FDI_{it} + \beta_2 GDP_{it} + \beta_3 TO_{it} + \beta_4 INF_{it} + \varepsilon_{it}$$

IND: Income Distribution

FDI: Foreign Direct Investment

GDP: Per Capita GDP in U.S. \$ (proxy for economic growth)

TO: Trade openness

INF: Annual inflation rate (consumer price index)

ε_{it} : Error term

i: Countries (8)

t: Years (2004-2020)

3.2. Variable Explanations and Expected Effects

A) Income Distribution: Income Distribution has been used as the dependent variable of model. Describing the degree of inequality between the people of a country and explaining how different people a country contribute to the national income is called income distribution. Therefore, the study of income distribution and its inequality is a comparison of the share of different population groups in the national income.

B) Foreign Direct Investment (FDI)

The model's primary independent variable is domestic FDI. Both positive and negative effects of domestic FDI on income inequality are possible. If there is a rise in income disparity, inward foreign direct investment may make the income distribution worse. The use of capital production methods will create less employment. Second, it brings modern technology to host countries and increases the demand for skilled labor more than the demand for unskilled labor. It could exacerbate wealth disparity. On the other hand, domestic FDI may enhance income distribution due to the disparities it fills in the host economy, as well as because it may increase capital creation, boost employment, and enhance the quality of life for residents of the host nation. A greater distribution of income results from sharing the advantages of this economic growth with the general public through a second channel, which is that it can accelerate the host nation's economic growth. Therefore, depending on the proportional impacts of FDI on income inequality, the projected sign of

the domestic FDI coefficient may be positive or negative. The FDI stock as a share of GDP was utilized. FDI flows or FDI stocks can be used as a stand-in for FDI. Accordingly, a nation's technological reserves can be found through foreign direct investment.

C) Gross domestic product per capita: The second independent variable of the model is gross domestic product per capita, which is taken in current US dollars and is used as an indicator for economic growth. The expected sign of GDP per capita coefficient is positive or negative. Economic growth leads to an increase in income inequality in a country whose fruits are not used equally for all people. On the other hand, economic growth may lead to a decrease in income inequality, if economic growth there should be labor recruitment and better income distribution policies.

D) Income Distribution: Describing the degree of inequality between the people of a country and explaining how different people a country contribute to the national income is called income distribution. Therefore, the study of income distribution and its inequality is a comparison of the share of different population groups in the national income.

E) Trade openness: Trade openness is the fourth independent variable in the model. It is calculated as the ratio of trade to GDP, i.e., exports + imports / GDP. Exports, imports and GDP are in millions of US dollars. This factor is taken into account as a percentage. Due to the possibility that trade openness will increase or decrease income inequality in a nation, the projected sign of the trade openness coefficient may also be positive or negative. Because it boosts both the demand for labor and its productivity, trade openness may be beneficial for income distribution. But if a nation's exports outweigh its imports, this occurs. The demand for labor may decline and ultimately revert to labor, on the other hand, if a nation imports more than it sells. This might result in rising income disparity. Better technology may raise labor productivity through trade openness, but it may also lead to a decrease in labor demand owing to a rise in capital-intensive production techniques and disparities in the demand for qualified workers and lose their skills. This might contribute to rising income disparity.

F) Rate of inflation annually: The yearly inflation rate, often known as the Consumer Price Index (CPI), is the model's last independent variable. Income disparity may be positively or negatively impacted by inflation. There are two potential causes for inflation's beneficial effects. The poor are more impacted by increasing inflation than are the wealthy since their buying power is declining faster than that of the wealthy. Second, the country's inflation may lead to a rise in the number of impoverished individuals. As a result, there may

be a rise in income disparity. It may lead to strong economic growth and more jobs. As a result, there may be a greater demand for labor and a rise in its productivity, which would improve the distribution of wealth. As a result, either a positive or negative sign of the inflation coefficient is anticipated.

Panel data is collected annually in the period from 2004 to 2020 for eight Bangladesh, India, Nepal, Pakistan, Bhutan, Maldives, Sri Lanka, and Afghanistan are some of the SAARC nations. Unbalanced panel with at least 25 observations for each variable for each nation makes up the utilized panel. The information was gathered from a World Bank standard database.

4. ANALYSIS AND DATA INTERPRETATION

In this part, using the research method, starting with the mean test of the research variables, similarly, to examine the long-term relationships between the variables, the Kao cointegration test was used, recently, to separate the pooled and panel data from the Lamer F test, and after that, to examine the effects The constant and random effects of the Hausman test and finally the data have been analyzed by the generalized least squares (GLS) method of the research data.

4.1. Mean Test or Mana Test

Significance test is performed to prevent false regressions; variables must be significant to prevent false regressions. Otherwise, you should use the difference of variables, which are usually Mana. Data imprecision can have a serious impact on its behavior and properties if the variables used in estimating the model are unstable, while there may be no logical relationship between independent and dependent variables, the obtained coefficient can be erroneously very high and cause misguidance. The unit root test was used to confirm the significance.

Table 1: Unit Root Test Results

	Income		FDI		GDP		TO		INF	
	Level	1st	Level	1st	Level	1st	Level	1st	Level	1st
Lin-Levin	-14.88	-	-2.85	-2.85	-1.32	5.40	-1.70	5.18	-2.65	3.69
Prob	0.0000	-	0.005	0.005	0.09	0.0000	0.006	0.0001	0.006	0.0002
Im-Pesaran	-7.32	-	-2.56	-2.56	-0.04	-2.88	-0.03	-1.65	-0.03	-1.44
Prob	0.0000	-	0.005	0.005	0.48	0.002	0.04	0.003	0.04	0.002

We know that in the Mana test, the H_0 hypothesis shows the existence of a unit root or Mana, as can be seen in Table 1, the foreign direct investment and income variables are mean according to the Lin-Levin test, which means that

the probability is less than 5 percent and the gross domestic product is negative, which is negative with one order of differentiation.

4.2. Cointegration Test

In co-accumulation analysis, the existence of long-term relationships between the variables of gross domestic product, trade openness, inflation rate, foreign direct investment and income are tested. The co-accumulation method makes it possible to estimate the regression based on time series variables without fearing that it is false. The main point in the analysis of cointegration test figures is that many economic time series are insignificant, but in the long run, the linear combination of these variables may be insignificant. After performing the stationary test and knowing the existence of the unit root, the collective test is performed. In this study, the "Kao" collective test was used.

Table 2: The results of Kao Residual Cointegration

T-Statistic	Probability
- 5.621961	0.0000

According to the results of the Kao co-accumulation test, rejecting the null hypothesis indicates the co-accumulation between the variables. It is obtained from the results of the Kao test that there is a long-term equilibrium there is a correlation between the variables of gross domestic product, trade openness, inflation rate, foreign direct investment and income. Since there is a long-term relationship between the variables of the model, the model can be estimated without manipulating the variables.

4.3. Limer's F-test

After performing the collocation test, the question arises whether to examine the model based on the pooling data or whether the desired model should be estimated based on the panel data. That is, we must first specify that the regression relationship in the sample under study has a width of homogenous origins and a homogenous slope, or that the hypothesis of a width of common origins and a common slope among sections of the consolidated data model is accepted. To know these two cases of Limer's F test is used. If the probability level is greater than 5, then the panel data method is rejected and the pooling data method is used. If the probability level of this test is less than 5, the panel data method is used.

Table 3: The results of F-Test (limer)

Statistic	Probability
5.62	0.0001

According to Table 3 which shows the results of Limer's F test, the probability is less than 5%, so it rejects the pooling method.

4.4. Hausman Test

After it is determined that the data are not homogenous and the width of the data is not homogeneous, according to Lemer's F test, the fixed effect model should be tested against the random effect. For this purpose, the Hausman test is used, based on the Hausman test, the independence of the width error component from the origin and explanatory variables is tested. If the test result shows a probability of less than 5%, the H_0 hypothesis is rejected and the fixed effects model is fixed, but if the test result shows a probability of more than 5%, the opposite hypothesis (H_0) is confirmed, which indicates random effects.

In briefly, the H_0 hypothesis in the Hausman test recommends using the random method and the one hypothesis recommends using the fixed effects method.

Table 4: The results of Hausman Test

Statistic	Probability
31.157	0.0000

As it can be seen in Table 4 that the probability is less than 5% and the null hypothesis is rejected and the model has fixed effects. When the model has fixed effects, it means that the disturbance sentences are independent from each other and the variances are from it is also different because the model has random effects, so the model should be estimated based on random effects, because if the model has random effects and we mistakenly estimate it as fixed effects or pooling, then the estimation coefficients will still be without bias and remains consistent and thus the estimated coefficients are inefficient.

4.5. Autocorrelation test

Durbin-Watson (D-W) test is used to test the non-correlation of the residuals, which is one of the assumptions of regression analysis and is called autocorrelation. The preliminary results of the estimation show that the residuals are correlated, so to solve it, the method auto regression correction

uses first-order auto regression and autocorrelation between it is eliminated. DW calculated as 1.22 so there is no autocorrelation in the model.

4.6. Test of heterogeneity of variance

One of the important issues that we deal with in econometrics is the issue of variance and heterogeneity. Variance and heterogeneity means that in estimating the regression model, which is done using the ordinary least squares method, we first assume that all the sentences with errors have equal variances, and after we estimate the model, then using a series of methods and separations, we will examine this assumption, based on the Flimer and Hausman test, another question arises whether the model in question should be estimated by the ordinary least square method (OLS) or whether the research model should be estimated by the generalized least square method (GLS). To be examined, if the disturbance sentences are independent and have the same variances, the research model is examined by the ordinary least square's method, but if the disturbance sentences are independent from each other but the variances are different, then the generalized least squares method is used (GLS) or other dynamic methods are used. To choose one of these two methods, the variance of heterogeneity (LR) test is used. If $\text{Prob} > 0.05$, it indicates the variance of heterogeneity and should be determined by generalized least squares method or other dynamic methods should be estimated.

Table 5: The Results of LR Test

LR	Probability
34.45	0.0000

According to above table there is heterogeneity of variance in the model. Therefore, the method of generalized least squares (GLS) is used.

4.7. Estimation by generalized least squares method

If there is a problem of variance and autocorrelation in the model, the estimators that are obtained using the ordinary least squares method are not efficient, so the model should be estimated using the generalized least squares method. Ordinary least squares are that the generalized least squares method gives less weight to observations that have more dispersion and more weight to observations that have less dispersion, while the ordinary least squares method considers the same weight for all observations if the parameters of a regression model using the generalized least squares method, the error sentences are not related to each other and have the same variance.

Therefore, in order to estimate, we estimate the efficiency of the model using the generalized least squares method. Table 6 shows the results of the model estimation using the generalized least squares method.

Table 6: Model Estimation Results

Variables	Coefficients	T-Statistic	Probability
Intercept	1.760781	4.754586	0.0000
FID index	0.100238	-3.855550	0.0002
GDP	0.69E-07	2.408776	0.0184
R-Squared	0.816846		
Adjusted-R ²	0.797817		
F-Statistic	42.92641		
Prob	.0000		

According to the estimation results in Table 6, the variables of foreign direct investment, gross domestic product and income index have a positive and significant effect on the economic growth of the selected countries and it can be seen that the effect of these two variables is in accordance with the theory and The theoretical basis of the research is based on Table 6 with other variables being constant, whenever the foreign direct investment index increases by one percent, the GDP rate increases by 0.107 percent. Likewise, if the income rate increases by one percent, the growth rate the economy shows an increase of 0.58% also, if foreign direct investment increases by 1 percent, trade will be freed by 0.25 percent, as well as increasing one degree of foreign direct investment, the inflation rate will increase by 0.25 percent and finally all the variables are significant in terms of significance with 95% confidence.

5. Conclusion

Different and comprehensive theories have been presented in various economic fields, especially economic growth, different theories have been presented in economics, in the meantime, economic theories including classical, neoclassical and modern theories have been proposed by economists in their model of the relationship between income and capital. Direct foreign investment is described based on the total production function. Choosing each of the theories brings different consequences. Our most important goal in this research is to investigate the empirical analysis of the relationship between foreign direct investment and income in selected SAARC member countries during the period from 2004 to 2020, and to achieve this goal, we have estimated the data by using the generalization method of GLS findings. Paying attention to the estimation results in the model of the variables of direct

investment, foreign gross domestic product and income index have a positive and significant effect on the economic growth of the selected countries and it can be seen that the effect of these two variables is in accordance with the theory and theoretical foundations of the research as well as being constant. Other variables, whenever the foreign direct investment index increases by one percent, the GDP rate increases by 0.107 percent. Also, if the income rate increases by one percent, the economic growth rate increases by 0.58 percent also, if foreign direct investment increases by 1 percent, trade will be freed by 0.25 percent, as well as increasing one degree of foreign direct investment, the inflation rate will increase by 0.25 percent and finally, in terms of significance, all variables are significant with 95% confidence.

In addition, foreign direct investment has a positive and significant effect on income and gross domestic product in selected SAARC countries, Afghanistan, Bangladesh, Nepal, India, Pakistan, Bhutan, Maldives, and Sri Lanka, and foreign direct investment is one of the financing methods in developing countries. It is development and the capital stock is also an important factor in increasing the domestic production capacity and the more foreign direct investment increases; Whether this foreign direct investment is in the form of technology and technology transfer, which will improve the production process and increase growth, or whether it is in the form of educational investment, which will transform the simple workforce into skilled and increase the productivity and efficiency of the workforce in any case. It will increase economic growth.

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Chapter 19

A Conceptual Study on Implementation Problems and Solution Suggestions in Business Strategies ¹

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¹ This study is extracted from the Master Thesis titled as “Problems Encountered While Implementing Business Strategies: A Research In The City Of Afyonkarahisar

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ABSTRACT

INTRODUCTION

Successfully implementing strategies is vital for any organization, public or private. Strategy implementation can be perceived as a straightforward process at first glance; The strategy is created and implemented. Therefore, it is concluded that the practice consists only of allocating resources and changing the organizational structure. However, implementing the strategies is more complex and challenging (Aaltonen and Ikavalko, 2002: 415).

Although strategy implementation is integral to the strategic management process, it has found little place in the literature. When we look at strategic management books (Pearce & Robinson, 1988; Hill & Jones, 2008; David, 2012) and other authors who have published in this field (David, 1985; Davidson, 1987; Hillman & Hitt, 1999; Sveiby, 2001), most of them were concerned with the strategy planning process or the strategy formulation process and ignored the implementation part, which is in a sense the most critical phase.

Alexander (1991) suggested several reasons why there is so little room for strategy implementation: strategy formulation is more attractive than strategy implementation because people believe that anyone can do strategy implementation. However, since people are not entirely sure where the strategy implementation begins and ends and what it entails, and although there are generally accepted and frequently used models such as SWOT analysis, industry structure analysis, and BCG matrix in the strategy analysis and formulation phases, there are only a limited number of conceptual models in strategy implementation. They do not give the implementation part the value it deserves. However, organizations face enormous problems when implementing strategies.

According to the research conducted by Judson (1991), the rate of successful implementation of the strategies determined by the companies is as low as 10%.

Barlett & Ghoshal (1987) emphasized in their study that the failure of companies to achieve their goals is not because the environmental forces are not perceived well enough by the managers or the wrong strategy selection, that the employees know what to do without exception, and that the main problem is that the employees do not know how to make the necessary changes.

According to the study Creelman (1998) conducted on 272 companies in England, which supports the work of Barlett and Ghoshal, only one-third of the companies could reach all their goals. 8% failed to achieve any of their goals, 11% achieved only one, and 37% achieved only two goals.

Similarly, Corboy & O'Corrbui (1999) stated that approximately 70% of strategic plans and strategies are not successfully implemented.

Miller (2002) also concluded in his study that more than 70% of the newly formed strategies of the firms could not be successfully implemented.

Pella et al. (2013), in their empirical study to determine the reasons why the strategies could not be implemented successfully, revealed the most common problems in strategy implementation. Accordingly, the three most frequently encountered problems are; uncertain programs and action plans, the inability of management and employees to create innovative and improving processes to support implementation, and the inadequacy of information and communication technologies that monitor implementation.

In this study, the factors affecting the implementation of the strategies will be discussed, and the problems encountered in the implementation of the strategy will be revealed.

1. FACTORS AFFECTING THE IMPLEMENTATION OF STRATEGIES

In this section, the factors affecting the implementation of the strategies created by the companies will be examined under the headings of organizational structure, organizational culture, resource-based approach, leadership style, intra-organizational communication and the role of middle managers, respectively.

1.1. Organizational Structure

The determining factor in successfully implementing the strategy is the development of effective organizational structures that will carry the firm's strategy to superior performance. The organizational structure covers issues such as the job duties and responsibilities of the employees, the distribution of power, the decision-making processes within the firm, and the shape of the firm. At this point, the issues that the firm should consider while implementing the strategies are as follows (Okumus, 2003: 876);

- Clearly stating the changes of employees within the firm and at the decision-making stage,
- Indicating whether the information flow, coordination and cooperation between different functional units and management levels in the organizational structure is realized freely,
- The potential impact of the new strategy on informal networks, internal politics and critical partners,
- Negative attitudes of powerful groups within the firm towards the new strategy.

Another vital issue within the organizational structure is that employees understand the practice well, realize their duties and responsibilities, and actively participate in meetings, workshops and projects. The institutional focus in the implementation phase enables the formation of synergy between the units and contributes to achieving the company's goals and objectives (Yaprak et al., 2011: 185). However, restructuring within the organization can harm the implementation of strategies because it will take time for the new group of people to unite around a shared future, which may negatively affect the successful implementation of the strategy. In addition, the change in the duties and responsibilities of the people within the company may cause some uncertainties. This situation will again appear as a factor that may affect the implementation of the strategies.

Another issue that affects strategy implementation is that the chosen strategy is similar to the company's general goal, purpose and structure. If the employees perceive the strategy as irrelevant or meaningless, it will be challenging to implement. Therefore, strategies should be created in harmony with the organizational structure, considering the company's internal dynamics. These are (Freedman, 2003: 30);

- Matching the strategy with the firm's competitive advantage,
- The compatibility of the strategy with the fundamental processes and workflow,
- Matching the strategy with essential products and market segment variables,
- The compatibility of the strategy with the organization's culture and leadership style.

With organizational change, the perception that employees' skills or knowledge may be endangered can outweigh it. In such a case, employees' fear that their skills are insufficient in the new system or that they will lose their old status may lead them to resist the new structure. With the change, the way some work is done within the company will also change. This may lead to a reduction or change in the authority of some employees in their duties and responsibilities, leading to job dissatisfaction in those who hold this task. Therefore, the problems encountered in implementing strategies with organizational change are likely to be more people-oriented. In this case, the training to be given to the employees for the company is of critical importance for the successful implementation of the strategies. The newly created organizational structure should be explained to the employees in detail, the reasons for this change should be explained, and most importantly, the

necessary training and support should be given to the employees who think that they have lost their status in this new system and who think that their old knowledge will not be helpful in this new system (Hussey, 1996: 295).

Formalization indicates how the firm defines its organizational norms (Hall, 1982). Establishing standardized procedures, policies, and rules clearly states what employees should do under which conditions, thus eliminating uncertainty. In companies with a high degree of formalization, the probability of successful implementation of the strategy increases as the duties and responsibilities of the employees are clear (Clark, 2000).

On the other hand, centralized firms have a top-down management style, as the decision-making authority is concentrated in senior management. However, mid-level managers' ideas are significant both during the strategy formulation and implementation phase, and they directly contribute to the successful implementation of the strategy. Therefore, the probability of successfully implementing the chosen strategies in centralized companies is low (Yaprak et al., 2011: 186).

Since each sub-unit will aim to achieve its own goals and objectives in companies that adopt decentralization, it may deviate from the general objectives. Therefore, individual interests may be above the firm's. In this structure, the lack of coordination and interaction between departments is a significant weakness in strategy implementation (Yaprak et al., 2011: 186).

It is vital for the company that different and experienced employees from different departments come together to control and discuss the strategy process. Because each department knows its capacity, this group formation is interactively involved in implementing the strategy. This way, problems arising during the implementation phase can be solved immediately.

1.2. Organizational Culture

Organizational culture is a common understanding of how employees do things within the organization (Okumuş, 2003: 876).

Studies on organizational culture, especially Peters & Waterman (1982), stated that organizational culture is an essential factor that directly affects firm performance.

Lim et al. (2006) supported this view and stated that companies with learning organizations and innovative organizational structures are more advantageous than their competitors in today's world.

Craig & Douglas (2000) and Hamel (1991) similarly argue that organizations that learn more and faster than their competitors and strategic partners will be more successful and have a sustainable competitive advantage.

Because companies that have a culture that supports learning grasp and accept new and different ideas more quickly.

In some cases, strategic change may also require a change in organizational culture. In such conditions, companies should apply to training activities and give seminars at the point of adaptation to the new culture (Goshal et al., 1988). The value of training studies is better understood, especially when implementing strategies for acquiring a new company or merging with another company. Creating a common philosophy within the new organization and ensuring the integration of cultures will only be achieved through the training provided because it is likely that there will be a conflict between the cultures of the acquired firm and the acquiring firm.

According to Okumuş (2003: 876), the following variables related to organizational culture should be taken into consideration while applying strategies;

- The possible impact of the firm's culture and subculture on the strategy implementation process,
- The effects of organizational culture on communication, coordination and cooperation between different management and functional levels,
- The possible impact of the new strategy on the culture and subculture within the firm,
- Studies and activities that address the firm's general culture, subculture and potential changes.

1.3. Resource Allocation

The resource-based approach asserts that the tangible and intangible assets of the firm provide a competitive advantage. According to this approach, the firm ranks its essential resources and then subjects them to four questions to measure their importance. These; The extent to which the resource is valuable, scarce, non-imitable and non-substitutable. If the company's resources meet these four criteria, this resource will bring the company a competitive advantage in this market (Barney, 2001: 42).

The firm defines tangible assets as capital, equipment, machinery, etc., while intangible assets are defined as brand recognition, intellectual property, or the way of doing business etc. (Peteraf, 1993: 188).

In the resource-based approach, Amit & Shoemaker (1993), for the first time, divided the word "resource" into two different subsections, revealing the concepts of "resource" and "capacity". Previously, the word resource was perceived only as financial. However, a new type of resource called capacity has emerged, which is specific to the company and shows that resources are

used at the most efficient level. At this point, resources are defined as resources that can be traded and are not specific to the company (Makadok, 2001: 388).

With this distinction, the word competitive advantage has also left its place in the sustainable competitive advantage concept. Because not every company with resources can successfully turn them into a competitive advantage. However, companies that manage these resources will turn them into a sustainable competitive advantage.

The resources and capacities of the firm have critical importance in successfully implementing the strategies. When the relationship between the resource-based approach and strategic management is examined, it is seen that in the existing literature, the resource-based approach is mainly associated with the strategy formation phase, and the implementation is again ignored. In this context, Elango & Pattnaik (2007) stated that the transformation of the firm's capabilities and capabilities into networks directly contributes to the internationalization of the firm's strategy. Similarly, Peng et al. (2008) stated in their study that the resources and capacity of the firm are one of the three most essential precursors required in the strategy planning phase. However, these authors did not shed light on matching the firm's resources with the firm's external environment; at the same time, the mechanism that ensures the successful implementation of the chosen strategy remained unclear (Yaprak et al., 2011).

The firm should analyze its resources and external opportunities well and try to catch the best synergy between them. However, while the firm focuses on identifying market opportunities to make the best use of its resources, the opposite may also be the case; The firm may uncover opportunities in the environment but may realize that it lacks the resources to turn these opportunities into advantages, or may encounter the fact that the resources it has are not resources that will provide the firm with a competitive advantage (Olson et al., 2005). Therefore, while the strategies are being created, the opportunities offered by the industry in which the company is located should be determined first and then to what extent the company resources can turn these opportunities into an advantage. Thus, problems such as incorrect determination or distribution of resources encountered during the implementation phase will be eliminated.

Okumuş (2003: 877) listed the issues to be considered regarding the allocation of resources as follows;

- Procedures for the protection and allocation of financial resources allocated for the new strategy

- The necessity of knowledge and experience for the implementation of the new strategy
- Availability of sufficient time to complete the implementation process
- The impact of political and cultural issues within the firm on resource sharing

1.4. Leadership Style

Today, due to the globalizing economic structure, the conditions of competition are getting heavier; Enterprises or institutions that use the human factor best are ahead of their competitors. It should not be forgotten that a qualified workforce is the first source of power in achieving extraordinary profitability and gaining a competitive advantage.

Undoubtedly, one of the critical factors in the failure of the strategies is the active participation of the leader in the implementation phase. In empirical studies on strategy implementation, people who create strategies generally do not take the necessary responsibility by pulling themselves out of the process during the implementation phase (Alexander, 1985; Al-Ghamdi, 1998 Raps, 2005).

While leaders are responsible for making the firm's strategic plan and observing key performance indicators, they are also responsible for providing the practitioners with the necessary time, training and appropriate tools (De Feo & Janssen 2001).

The fact that employees have a common goal and see themselves as a valuable part of the organization depends on the attitudes and attitudes of the managers. Therefore, company leaders should be able to influence employees and enable them to work from the heart.

During the implementation phase, leaders must demonstrate management, motivation and leadership skills to employees. The critical point here is what kind of management style is chosen. Instead of a top-down and chain-of-command leadership style, Coulson-Thomas (2013) advocates a bottom-up management style that assists employees will more effectively achieve the company's goals. Coulson-Thomas states that such a management style will increase efficiency, reduce support costs, and increase response speed.

1.5. Internal Communication and the Role of Mid-Level Managers

According to empirical studies, the two most important factors affecting the successful implementation of strategies are the inadequacy of internal communication and the lack of participation of middle managers in the process

(De Feo & Janssen, 2001; Aaltonen & Ikavalko, 2002; Okumus, 2003; Freedman, 2003; Sterling, 2003; Raps, 2005; Speculand, 2009).

Internal communication is the mechanism that allows formal and informal messages to circulate among employees. Employees should be told what to do differently due to the strategy created. At this point, "Where am I in the implementation of this strategy, and what should I do?" questions must be answered by each employee. In addition, strategy implementers other than leaders should be introduced to the employees, and these people should be supported.

It should not be forgotten that the strategy cannot be applied without fully understanding it and cannot be grasped unless it is divided into action stages. Although strategies are usually created at the top of the organizational chart, implementation starts at the bottom and works its way up. Effective communication fills this gap and brings both phases together, ensuring the successful implementation of strategies. For example, When Rolls-Royce introduced a new strategy a few years ago, it created a "strategy process board" to spread new messages across the company. Thus, the company could transform its general ideas into concrete steps. The firm explained why the strategy is essential and what they expect to do differently. In addition, 75 managers were appointed, and more than 4000 training presentations were made worldwide. As a result of all these studies, the meaning of the strategy and how the employees should implement it were explained successfully (Speculand, 2009).

Aaltonen & Ikavalko's (2002) empirical study investigated how strategies are conveyed to employees, how they are interpreted and perceived by employees, and how this affects the strategy's success. As a result of the study, the majority of the participants stated that the biggest problem they encountered was that they could not create a common strategy perception within the company and that the employees did not understand the strategy the same way. However, despite the high level of strategy communication in most companies and the widespread use of verbal and written communication techniques, it is no coincidence that their biggest problem is communication. The fact that the general communication style in companies is top-down communication can be shown among the reasons for the emergence of communication problems.

Strategic communication does not guarantee successful implementation. Therefore, communication should be two-way, not one-way. Perceiving the strategy requires interpreting and questioning it. Internal communication should be two-way, bottom-up and feedback rather than linear and top-down. Thus, the

senior management can perceive the practical problems the practitioners face, and solutions can be produced (Alexander, 1985).

In support of this, Kaplan & Norton's (2001) study emphasizes that only 5% of the entire workforce in a typical organization fully understands firm strategies.

Mid-level managers are generally responsible for the continuation of the strategic information flow within the company and the perception of the strategies by the lower-level employees during the strategy implementation phase. Therefore, middle-level managers are the main actors in ensuring internal communication. These people have invaluable information about the company's success, as they know very well the upper-level expectations and the problems the lower-level employees face. Here, the moderation of these managers is critical to successfully implementing the strategy. Again, the people who will implement the two-way communication method are mid-level managers. They rationalize the feedback they receive from the lower level and present them to the senior management of the company. They must convey the decisions the upper management takes to the lower level. However, since the strategy is a process, most firms do not include mid-level managers in decision-making. Nevertheless, mid-level managers, who have precious information for the company, should benefit from their ideas at every stage, from strategy formation to evaluation. Thus, middle managers will see themselves as valuable within the company, and their work motivation will increase.

Employees must understand the strategies as well as own them. According to Giles (1991), the strategy cannot be successfully implemented unless the practitioners own the strategy. Similarly, Guffey & Nienhaus (2002) stated that there is a strong link between organizational commitment and employees' support for organizational strategies.

2. PROBLEMS ENCOUNTERED IN THE IMPLEMENTATION OF STRATEGIES

Strategy is the outcome of the collaborative determination of firm capacity and resources and the opportunities presented in the environment. However, implementing the strategy basically depends on supporting the existing organizational structure and processes. If the strategy, process and structure components are not combined correctly, poor performance is inevitable, even if the firm has rich resources. In this case, the firm should analyze its internal strengths and external opportunities well and try to catch the best synergy. While strategists focus on identifying market opportunities to make the best use of the firm's resources, the opposite can be true; The firm may uncover

opportunities in the environment but lack the resources to exploit those opportunities. This unique combination of strategy and building elements will help increase strategic performance.

2.1. Strategy Implementation Problem

In the empirical study of Al-Ghamdi (1998), according to the results of the survey on firms located in the Bradford region of England, it was revealed that at least 70% of the firms faced the following six implementation problems:

- The implementation takes more time than expected,
- Encountering fundamental problems that could not be determined before,
- Coordination of implementation actions is not effective enough,
- Competition activities prevent implementation,
- The critical implementation tasks and activities are not well-defined enough,
- Insufficient information systems tracking/monitoring the implementation.

Creelman (1998) listed the problems encountered in the implementation of strategies as follows:

- Practitioners do not understand strategies,
- Designing management systems according to operational control rather than strategic control,
- Personal goals and abilities do not match with the strategy,
- Basic processes are seen as unnecessary by strategy implementers.

In his study, Sterling (2003) revealed the real reasons for the failure of strategies and stated what needs to be done for successful implementation. According to him, strategies often fail for the following reasons:

Unexpected Market Change: The difference between the market conditions the firm envisages when creating the strategy and the market conditions it encounters when implementing it. Mainly in markets where product life cycles are short, unexpected and sudden changes may prevent the successful implementation of strategies.

Lack of Support from Top Management: Generally, senior managers think that strategy consists only of implementation and does not provide sufficient support for business implementation. However, senior management should actively participate in every step of the strategy and play an active role.

Effective Response by Competitors to Strategy: In today's world, where most markets are in a perfectly competitive environment, the strategies applied will naturally receive a response with a counter strategy. At this point, when

determining the strategy, the position of the competitors and the response to the strategy should be estimated, and the strategy should be created after all these are taken into account.

Insufficient Resources: Firms often cannot fully calculate the cost of the strategy created, which may result in resource depletion during the implementation phase. This problem may be encountered especially when implementing strategies such as integration strategies, intensive strategies and joint investment partnerships that require high capital.

Failures in Understanding Strategy and Communication: Employees often do not own strategies. For employees to embrace the strategy, making them a part of the strategy is necessary. There is a vast difference between reading and trying to understand the strategy, being a part of it, and being a developer.

Timing and Differentiation: Some strategies fail because they do not differentiate the company in the market. A good strategy should set itself apart from competitors in making a difference for its customers. Porter (1996) also proposes a three-step way for CEOs to create different strategies. First, understand the company's unique strengths, research the market to understand which positions are vacant, and focus on creating the strategy to fill these vacancies with these unique strengths of the firm.

Lack of Focus: Some companies try to offer everything to every person. However, with this approach, they have a focus problem and cannot make a difference. In this way, customer priorities often cannot be revealed. In such an environment, employees cannot focus on strategy and failure is inevitable.

Wrong Strategy Selection: It is impossible for the strategies created to be successful because the company misunderstands the changes in the market and customer demands.

Freedman (2003) stated the problems faced by companies during strategy implementation as follows:

Strategic Laziness: Most managers resist or do not prioritize change. This naturally limits the range of actions of companies.

Lack of Stakeholder Commitments: Company stakeholders are not included in the process. In particular, the absence of middle-level managers is of key importance in implementing the strategies in the processes.

Strategic Procrastination: Not focusing on results. This often starts with the CEO ignoring the implementation phase, spreading throughout the organization.

Strategic Uncertainty: Processes are progressing, but precisely who manages these processes is not clear. A structure in which action plans and responsibilities are not clear cannot be expected to be successful.

Strategic Isolation: Processes are progressing, but communication is ineffective. In this case, since interdepartmental communication is weak, there may be a disconnection between the strategy and its implementation, even if each department fulfils its duty incompletely.

Failure to Understand Processes: The lack of information about where the firm is going. Failure to continuously evaluate quantitatively and qualitatively for the critical signs that emerged while implementing the strategy will fail.

Enterprise Fatigue: Although many ongoing strategies and projects exist, none have been finalized.

Impatience: Strategies can take years to implement. However, because the impatience of the top managers, who think that the strategy will be implemented overnight, create the perception that the strategy will fail, the managers give up or abandon the strategy with the philosophy of "whatever you turn from loss is profit".

Not celebrating success: Ignoring or not rewarding success can hinder achieving core goals.

2.1.1. Problems Encountered in Growth Strategies

Growth can be defined as the quantitative and qualitative changes and developments that occur in the material and human elements that form the structure of the enterprise starting from a particular scale (Özgener, 2003: 138). In the growth process, businesses face many problems. Today, global competition, international economic integration, and rapidly developing information technologies make it necessary for businesses that want to grow successfully to be in constant dynamism. Growth in a thriving economy is a normal process for healthy and successful businesses. Most enterprises start as small enterprises and reach a specific size by passing through various stages. Many entrepreneurs want to grow their businesses from the first day they set up.

Nevertheless, this request often fails. Because businesses prefer unplanned growth by taking early steps before they can reach sufficient resources, workforce and experience to grow. Lack of qualified personnel and managers, inexperienced local entrepreneurs and incomplete knowledge of new business areas, low sales, high operating expenses, lack of capital, stocking problems, difficulties in collecting receivables, inefficient work, unstandardized and low-quality production, problems in the supply of quality raw materials, unnecessary fixed assets and, above all, wrong establishment location selection are named as other reasons for problems in growth strategies (Özgener, 2003: 139).

2.1.2. Problems Encountered in Diversification Strategies

Diversification is frequently used by businesses with more than one product range. From this point of view, today's holdings come to the fore as businesses that use diversification strategies very often, considering their product portfolio. The diversification strategy's most important benefit is reducing risk by changing resources within independent business units. The motivation for "utilizing economies of scope", which is based on the theories of the strategy literature in the field of industrial and organizational economics, is the motivation of organizations to produce different products together; He argues that they are spread across different product/service areas in order to spread production, advertising, distribution and management costs across various products and to benefit from skills and customer loyalty in these subjects. The motivation to benefit from economies of scope is one of the important factors in an organization's adoption of a diversification strategy, as it is directly based on economic foundations (Chang, 2006).

It can be said that the biggest problem faced by companies applying the diversification strategy is the agency problem. Opportunistic managers may spread organizations across different sectors to increase their financial income and reduce business risks. Thus, the diversification strategy that seems successful in the short run may fail in the long run.

Likewise, the strategic resource-based perspective, which suggests the motivation to exploit economies of scope, can only explain diffusion into interconnected areas. However, it is very limited in explaining that organizations operate in unconnected areas, so they cannot transfer their core competencies within the company (Wan, 2005). Therefore, it cannot be accepted as an underlying motivation for the diversification strategy in unrelated areas found in business groups.

2.1.3. Problems Encountered in Downsizing Strategies

Downsizing is a deliberate strategic decision to reduce the workforce to improve the organization's performance. Firms that can consider downsizing in the global competitive environment stand out as companies that ensure sustainability—rebalancing, redirecting, reorganizing, rationalizing, compressing, rebuilding, reshaping, revitalizing, consolidating, rightsizing, shrinking (Koçel, 2012, 435).

Although applying all these concepts eventually results in the downsizing of organizations, there are differences in their purpose, emphasis and reasons for their emergence. Downsizing an organization means reducing the number of

personnel, costs and processes with the conscious (proactive) decisions and strategies implemented by the business management (Koçel, 2012: 435).

The most important priority of the enterprises that decide to downsize should be to ensure that the remaining ones and those laid off during the downsizing are affected as little as possible. The success of the implementation to be made depends to a great extent on the extent to which the remaining people accept and adopt this decision. Employees often interpret downsizing as management incompetence. It also makes one think that the management sees its employees not as assets that can be invested but as expense items. Management must demonstrate that downsizing has been resorted to after several other methods have been tried (for example, freezing pay increases and bonuses and abolishing overtime). Therefore, downsizing should be resorted to as a last resort. Voluntary departures (such as early retirement) may be encouraged after other remedies have been tried. After these steps, mandatory separations can be made. With this approach, employees will understand that the company is trying to meet the needs of its employees as much as possible instead of reducing its expenses in the short term.

2.1.4. Problems Encountered in Joint Venture Strategies

A joint venture is a new firm that is created by combining the resources of more than one firm for a specific purpose, whose ownership, activities, responsibilities and financial risks are separate from the parent companies (Hall, 1984: 19). The activities of this new firm (such as determining production, marketing and management policies) are under the joint control of the parent firms, which are legally independent of each other.

The biggest problem encountered in joint venture strategies is that after the new structure is created, one of the companies ends the partnership by obtaining the information they want from the other partner. Because the most important reason for the partnership is the company's insufficient resources and intellectual capital. However, if firms see each other as competitors, the resources they will provide to the joint venture will be limited. This will hinder the success of the joint venture.

2.2. Requirements for Successful Implementation

Freedman (2003) created a list of five items to avoid implementation problems. These;

Improving internal communication: The most prominent companies today are those that ensure that their internal and external stakeholders' strategies are

fully understood. Thus, it is specified what each stakeholder should do during the implementation phase.

Doing the correct planning: Effective planning should be done before the strategy is put forward. The company should determine its resources well and make the plans realistic and accessible.

Establishing the Organizational Structure: Organizational structure should be arranged according to specific criteria to ensure strategic harmony. The firm's competitive advantage should be designed considering internal variables such as core business, decision-making authority, organizational culture and leadership.

Reducing complexity: According to research, 50% of companies revenue comes from the 5% product range. The firm should consider this fact and stop producing ineffective non-profitable products and focus on products that are more effective for the firm. Thus, the time and cost spent on the unprofitable 60% product range are eliminated.

Establishing the incident resolution system: This system is the rational process established for the perfect functioning of the strategy. In organizations where these processes are included, a common language is created for individuals and groups to work more effectively. So every employee knows what to do in which situations.

According to Sterling (2003), the firm must fulfil the following for a successful implementation:

- Linking organizational design and capacity with strategy,
- Establishing the strategy by considering the potential reactions of the competitors,
- Ensuring the participation of managers in the strategy development process,
- Ensuring consistent and continuous communication,
- Turning planning and budgeting into action,
- Ensuring observation and reliability,
- Performing symbolic actions (such as a birthday celebration),
- Reconciling information resources with the strategy,

De Feo & Janssen (2001) suggested a successful implementation formula consisting of ten steps:

- Creating the vision
- Establishment of the mission
- Development of key strategies
- Development of strategic goals

- Creation of values
- Dissemination of company policies through communication
- Ensuring the leadership of the top management
- Dissemination of goals
- Evaluation of processes with key performance indicators and
- Review of the process

Raps (2005) listed ten points of critical importance in strategy implementation as follows:

- Ensuring commitment and participation of senior management,
- Incorporating the valuable knowledge of middle managers into the process from the beginning,
- It should not be forgotten that communication is the most essential part of the implementation,
- Incorporating different views into the processes,
- identifying responsibilities and informing employees,
- Taking protective measures for those who prevent change,
- Addressing teamwork activities,
- Respecting the differences of individuals,
- Making use of supporting implementation instruments,
- The duration of unexpected events should be calculated in advance, and the strategy implementation process should be continued accordingly.

Speculand (2009) listed the mistakes that managers consider right when implementing strategy as follows:

- The thought that the most challenging part is over when you create the strategy (No, implementation is twice as tricky as the strategy creation process).
- The notion that most people resist change (no, on the contrary, most people are open to change if communicated correctly).
- The idea that everything depends on action (no, everything depends on taking the proper action).
- The notion that communication is all about ensuring people understand the strategy (no, employees should also know exactly what actions they need to take).
- The idea that what worked yesterday will work tomorrow (no, new strategies are needed every two or three years).
- The strategy should be revised twice a year. (no, the strategy should be revised at least twice a month).

In Alexander's (1985) study on the implementation of firms' strategic decisions, he stated the factors necessary for firms to implement strategies as follows successfully:

Communication: In implementing the formulated strategy, first of all, the new duties, responsibilities and jobs of the employees who will be affected should be clearly stated. In addition, the reasons behind why these activities have changed should be clearly and transparently stated. To do all this depends on communication in two ways. On the importance of two-way communication, it is crucial to analyze what has happened, deal with the problems that arise, and report what changes should be made in the implementation program.

Starting with a Good Concept or Idea: It is vital to choose a good strategy, namely, to formulate it. Because starting with a logical, inspiring and, most importantly, reasonable (applicable) strategy will lead employees to adopt this strategy and believe they can be successful, creating extra motivation for them. Thus, employees will not waste time on a strategy they do not believe in, and the probability of successfully implementing the determined strategy will increase.

Ensuring Employee Engagement and Involvement: The third suggestion is based on the first and second suggestions but is closely related to them. What is critical at this point is that the employees and managers affected by the strategy should be involved in the process from the beginning of the strategy formulation phase. However, suppose a few people develop the strategy. In that case, top management should not perceive potential conflicts from strategy implementers as surprising because key workers and affected groups did not participate in the formulation phase. Thus, there may be significant flaws in formulated strategies. It could be the other way around. If the strategies created by a few people are very successful, top management should see it as a big surprise.

Providing Adequate Resources: Businesses need different resources to determine, implement and evaluate strategies. These resources can be examined under four main headings. The most obvious of these is money, which can be considered a large part of most strategic decisions and comes to the fore as a basic need. Human resources are considered another resource. Human resource is one of the resources that can affect the strategy implementation positively or negatively. People's technical expertise is critical, especially concerning new strategic decisions, and stands out as another resource. "Time" can be shown as the last source. Since strategic decisions are long-term decisions that concern companies' future, sufficient time should be given to the strategy process.

Completing the chosen strategy within the specified time is an essential factor in the success of strategic decisions.

Develop an Implementation Plan: The successful implementation of a strategy depends on its planning at the implementation stage. This planning is done by detailing the work; it covers who will do it, what is happening and when it will be done. However, this elaboration should not always be followed strictly. Because if the implementation plan is unclear, this can provide some practical advantages to the business. Conversely, suppose the implementation plan is too detailed. In that case, it will be difficult for various functional departments to follow the plan, even if it is obvious that it needs to be modified. In addition, another task of this implementation plan is to try to identify possible problems that may arise instead of mindlessly believing that nothing will go wrong in the plan to be implemented and that alternative plans should be prepared for these potential problems. In other words, one should be proactive.

CONCLUSIONS

Contemporary strategic management; is a holistic system that includes planning, implementation and evaluation. The fact that the world has become a small village with technological developments has led to significant changes in how doing business. With these changes, the concept of strategy went through different processes and took the name of contemporary strategic management that we use today. At this point, when we consider that science progresses cumulatively, it should be accepted that each period has its characteristics rather than good-bad/old-new discussions. Strategic management provides a general roadmap for businesses and includes setting organizational goals, developing policies and plans, and allocating resources effectively to implement these plans successfully.

Looking at the strategy implementation phase, employees are involved in the process when putting the outputs from the planning or strategy formation process into action. Therefore, the enterprise's resources should be considered while creating the strategy, and the problems that may arise during the implementation phase should be tried to be estimated and eliminated before the problems arise, or an action plan should be prepared. In addition, uncertainties that may arise in the execution of processes should be eliminated. Active participation of employees in the implementation phase should be ensured, and new job descriptions should be made clear. Resistances arising at this point should be managed through appropriate training programs and strategy leaders.

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Chapter 20

Ethnic Entrepreneurship Models

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Produced from the doctoral thesis of the first author under the supervision of the second author.

ABSTRACT

Introduction

Ethnic entrepreneurship can be explained as a set of connections and regular interactions between people who share common national backgrounds or migration experiences. With the increasing participation of ethnic minorities in the labor market in advanced economies, parallel increases in business ownership have begun to be recorded and a new concept called "ethnic entrepreneurship" or "immigrant entrepreneurship" has emerged in the entrepreneurship literature. The fact that immigrants from different ethnic backgrounds tend to own their businesses in the countries they have migrated to for various reasons has drawn the attention of many researchers to the issue of ethnic entrepreneurship. The concept of ethnic entrepreneurship, which deals with the enterprises established by immigrants in the countries they have migrated to, has gained a different place in the entrepreneurship literature with the introduction of different cultural, economic, and structural differences. Many models have tried to conceptualize ethnic entrepreneurship, but no single model has been able to explain it completely. In this context, to explain ethnic entrepreneurship models more inclusively and clearly, the chapter examines structural, cultural, and social embeddedness, interaction, mixed embeddedness, and push-pull models.

1. Structural Model

The structural model assumes that the emergence of ethnic entrepreneurship in North America is historically linked to institutional discrimination, leading to a lack of employment opportunities for minority groups and the existence of a "cultural division of labor" in which unskilled immigrants are clustered in the lower strata (Chan & Cheung, 1985:143).

This model suggests that individuals are 'pushed' into self-employment when they do not have the same chances to be employed on the same terms as the local population, and on the other hand, they are 'pulled' from paid employment to self-employment because of their rewarding and autonomous position. The model contends that the circumstances in the host society determine ethnic participation in entrepreneurial activities (Ojo, 2013:39).

Labor market disadvantage forces many members of ethnic groups to find livelihoods in small businesses and self-employment. The success of ethnic groups in small businesses further accentuates social hostility and institutional discrimination. Increased social hostility leads to greater ethnic group solidarity, which then facilitates small business concentration (Chan & Cheung, 1985:143). Embedded in the structuralist model is the theory of disadvantage and location.

Disadvantage Model:

The so-called "disadvantage model" is embedded in the structural model. This theory sees entrepreneurship not as a sign of success but as an alternative to unemployment. The disadvantage theory tries to explain ethnic entrepreneurship in the light of the difficulties faced by minorities in the host country (Volery, 2007:38). According to Ram & Smallbone's Disadvantage model (2001), the concept of migrant entrepreneurship is said to arise from the context of disadvantage, where some migrant workers are subjected to labor market disadvantage and are pushed into entrepreneurship (Martínez et al., 2013:142).

Enclave Model:

Ethnic enclave refers to the concentration of people from the same ethnic group in a particular geographical area. At the same time, ethnic enclave provides incentives and opportunities for people of the same ethnicity to find jobs and self-employment in familiar communities (Lee, 2009:84).

This theory, another concept adopted within the structural model, provides various advantages for self-employment. For enclaves, the argument is that they lead to a market where ethnic groups can trade with each other in their preferred language, protecting them and giving them an advantage. On the other hand, it is also argued that enclaves can lead to excessive competition among entrepreneurs and have the effect of limiting entrepreneurial opportunities.

2.Cultural Model

This model is commonly known as the "Cultural Thesis". It is one of the earliest theories for why particular ethnic groupings are overrepresented among entrepreneurs. The cultural model, which took its cue from Max Weber's "The Protestant Ethic and the Spirit of Capitalism," published in 1958, asserts that Catholics have not demonstrated a particular propensity to adopt the economic rationality that is characteristic of Protestants. According to the cultural model, some ethnic groups are more entrepreneurial because immigrants infuse the host community with their traditions and beliefs. The tendency of migrants toward self-employment is influenced by a variety of factors, including social networks, work ethic, specialized skills, religious convictions, and family relationships (Saleh, 2017:18). The Middleman Minority theory and the supply-side strategy are also integrated into the cultural model.

Theory of Middleman Minorities

Middleman minorities are thought to contribute to the expansion of the economy of the host nation in various parts of the world. For example, Chinese in Southeast Asia, Armenians in Turkey, Asians in East Africa, Syrians in West Africa, Jews in Europe, Japanese, and Greeks in the US are more likely to engage in entrepreneurship. Based on other middleman minority theory studies in the literature, Bonacich (1973) developed the middleman minority theory (Saleh, 2017:13). Middleman minorities are ethnic entrepreneurs who trade between the elites of society and the masses.

Supply Side Approach

According to the supply-side perspective, entrepreneurship is explained by racial and class resources. Material possessions like property or wealth, as well as "bourgeois values, attitudes, and knowledge" (Valdez, 2003:6), are class resources that are connected to ethnic groups.

The mechanisms of social exclusion and marginalization are mostly addressed on the supply side. Traditional assimilation models frequently speak of a single economy in which minorities begin at the bottom and rise over time until they are accepted by society (Masurel et al., 2002:244).

3. Social Embeddedness Model

The social embeddedness model confirms that entrepreneurs do not operate in a social vacuum but are embedded in various social networks that they use and manipulate for economic purposes. Given that entrepreneurs are closely associated with a wide network of actors through various social relationships, entrepreneurship can also be seen as a fertile field where the concept of social embeddedness is held and developed. In this context, the term social capital is used. As such, social capital is an important prerequisite for economic success, but not a guarantee (Rath & Kloosterman, 2000:670). People are a part of larger social structures through intimate connections and networks of connections that are characterized by mutual trust, enforced standards, and expectations. This strategy's only emphasis on the supply side of entrepreneurship can also be considered as a shortcoming (Ojo, 2013:42).

4. Interactive Model

According to the interaction model, developed by Waldinger et al. (1990), the emergence of an ethnic business community cannot be founded on a single factor that contributes to an ethnic group's entrepreneurial success. Instead, a complex relationship between opportunity structures and group resources

underlies the success of an ethnic venture. These two factors influence the techniques that an ethnic entrepreneur must use to establish a successful company in a foreign setting (Saleh, 2017:18). Market conditions, property access, labor market conditions, and institutional and legal frameworks make up opportunity structures. Opportunities frequently arise as a result of the growth of a new ethnic population. These communities have specific needs that only coethnics can satisfy. The demand for and potential niche market for ethnic items increases with the degree of cultural diversity between the ethnic minority and the host nation. Whatever the niche market's size, the prospects it presents are constrained. Access to open markets, often used by local entrepreneurs, is hampered by high entry barriers (Volery, 2007:34). Embedded in the interaction model is the ethnic market niche and demand-side theory.

Ethnic Market-Niche Theory

The premise of the ethnic market niche theory is that immigrant/minority entrepreneurship concentrates on market niches and, thus, on "ethnic strategies." The so-called "interaction, ethnic business development model" is reflected in this philosophy. The combination between opportunity structures and ethnic features gives rise to ethnic strategies. According to the ethnic market niche theory, immigrants start their own businesses to discover alternatives to the conventional employment opportunities available in unappealing industries. The interplay of ethnic group features and opportunity structures leads to ethnic strategies that open up specialized market opportunities for immigrant entrepreneurs (Halkias, 2017:9).

Demand Side Approach

The demand-side approach is based on the distribution of activities in manufacturing and especially service industries, the emergence of demand for ethnic products, the formation of clusters in local markets, and the segmentation of consumer markets (Masurel et al., 2002:244).

On the demand side, new market niches have been created that have been favorable for several recent ethnic shifts, including the shift to 'flexible' production and various changes in consumer tastes. Looking at the entrepreneurial process, these valuable connections are known to be highly effective in satisfying potential customers. Escaping niche markets, on the other hand, often requires negotiating other barriers in the opportunity structure and mobilizing scarce resources that are unusually hard to find for such entrepreneurs (Kloosterman, 2000:39).

On the demand side, ethnic entrepreneurs serve a predominantly ethnic clientele. However, opportunity structures for Minorities also develop outside their ethnic enclaves and some of them manage to "get a foothold" in the main market that meets the needs of the majority of the population. Demand side problems are related to low levels of perceived need or lack of interest in seeking external assistance (Aydemir & Sahin, 2012:95).

5. Mixed Embeddedness Model

The mixed embeddedness model is an institutional approach that is socially constructed and entrepreneurs perform economically. From a cultural perspective, embeddedness is a process by which people of the same ethnicity form an awareness of the ethnicity involved, which determines their customs, habits or norms, decisions, and behaviors. From a structural perspective, embedded networks can be characterized by dependency, reciprocity, interdependence, autonomy, and power relations in terms of control over both economic and social relations.

From an institutional perspective, embeddedness relates to accessibility to agents, educational and training institutions, incubators and innovation centers, market organizations, business associations, and business practices that regulate specific markets (Sofer & Schnell, 2002:57). The mixed embeddedness model is a more advanced version of the interaction model and infuses entrepreneurship into ethnic networks and broader markets and institutions. According to the mixed embeddedness model, ethnic entrepreneurship is significantly influenced by the local economic structure and legal-institutional issues. The national economic climate varies greatly, providing various opportunities depending on the area. Local economic structure and ethnic community features both affect local influence (Ojo, 2013:45).

The mixed embeddedness model is based on three assumptions:

- Opportunities should not be blocked by too high entry barriers or government regulations,
- An opportunity should be recognized as one that can generate sufficient returns, from the perspective of a potential entrepreneur,
- An entrepreneur needs to recognize an opportunity concretely.

The main weakness of this model is that it is still at an experimental stage (Volery, 2007:35). Ethnic entrepreneurship theories are summarized in terms of their structure, focal points, and limitations in comparison with Table 1 below.

Table 1. Ethnic Entrepreneurship Models

Theoretical perspective	Primary focus	Limitation	Structure
Structural Model	Ethnic entrepreneurs are embedded in various social networks that they employ and use for economic purpose.	Focus on individual patterns due to selection structural narrow focus	Disadvantage Theory, Settlement Theory (Hedged Market hypothesis)
Cultural Model	Individual adaptation of the culture that leads to the action	The individual entrepreneur's focus on adhering to structural structures according to individual preferences and thus on cultural homogenization.	Middleman Min. Theory, Supply-side approach
Social Embeddness Model	Ability to provide benefits related to players' social structures, networks and memberships	Social capital and social network theory have difficulty tracing embedded social relationships in binary settings, especially when they can be reconfigured and reconfigured to suit advantages.	Social capital, social networks
Interactive Model	Complex interactions between group resources and opportunity structures	At the political-institutional level, we don't have much to say about ethnic entrepreneurship. focusing primarily on the limits and economic opportunities brought about by market forces. such as failing to address the rapid international shifts in the performance of ethnic entrepreneurs.	Structure of opportunity: market circumstances; access to real estate; Group Resources: Demand-side strategy, ethnic strategy, resource mobilization, and ethnic market
Mixed Embeddedness Model	The overall business climate for ethnic firms is significantly shaped by regulatory frameworks. Different immigration and labor laws may have an impact on ethnic minorities, putting obstacles in the way of potential ethnic entrepreneurs.	It lacks historical perspective. It cannot explain the large differences in the concentration of interethnic entrepreneurship among immigrant groups in the settlement countries. Diaspora / transnational entrepreneurship cannot rationalize.	Broader economic and institutional context

Reference: Ojo, 2013: 49

Table 1 above examines the theories of ethnic entrepreneurship in the literature, comparing them in terms of primary focus, limitation/constraint, and constructs. A synthesis of the reviewed models is presented in Table 2.1, including structural, cultural, interactional, social, and mixed embeddedness. The theories of entrepreneurship described in the literature are diverse, yet complementary in some way. Each model attempts to explain different aspects of this multifaceted complementary structure, as can be seen from the table above.

6. Push-Pull (Advantages-Disadvantages) Model

The model, which is also used in the literature as "push-pull", "advantages-disadvantages" or "effect-response", is one of the important models for analyzing changing populations and migrants. The model argues that the reasons for migration and migration are that people can improve their living conditions through migration. Factors such as modernization and development of transportation means, easier communication, and globalization have caused thousands of people from different cultures to seek better opportunities in education, employment, the standard of living, etc. (Pan, 2019).

The Push-Pull model was introduced by Everett Lee in his 1966 article "A Theory of Migration". In his push-pull model, Lee identified four main push-pull factors that will form the sociological basis of the migration phenomenon: the place of residence, the intended destination, the obstacles encountered, and individual factors. The four main factors created by Lee constitute the functioning and components of the push-pull theory (Aydemir & Şahin, 2017).

According to Lee's model, in every area, numerous factors keep or attract people to that area, and other factors tend to repel them. Lee shows these factors as + and - signs in his diagram. Again, in Lee's model, the "O" represents other factors that people are indifferent to. Some of these factors affect most people in the same way, while others affect different people in different ways (Lee, 1966). Although the PushPull model has been used in the literature to explain the phenomenon of migration and immigrants, it has also been used to explain entrepreneurial motivation in the ethnic entrepreneurship literature, and hence in minority entrepreneurship.

Conclusion

The concept of ethnic entrepreneurship can be briefly defined as "business ownership by immigrants or members of ethnic groups" (Valdez, 2002: 4). Ethnic enterprise, on the other hand, refers to "a business in which at least 51% of the ownership is held by someone from an ethnic minority or immigrant background" (Cormack and Niessen, 2002: 12). There are different approaches to ethnic entrepreneurship, which is becoming increasingly important in advanced economies. Most studies have focused exclusively on entrepreneurs and have mainly investigated the entrepreneurial tendencies of particular groups and their pathways to entrepreneurial success. Although all the models discussed in the chapter are used and discussed in the ethnic entrepreneurship literature, none of them alone is sufficient to explain ethnic entrepreneurship. In this context, a combination of structural, cultural, social embeddedness, interaction, mixed embeddedness, and push-pull models discussed in the chapter can better explain the concept of ethnic entrepreneurial motivation.

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Chapter 21

An Actor-Centered Approach to the Relationship between Public Administration and Politics: Administrative Leadership and Change

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Abstract

Public administration, unlike many other social sciences, is a relatively newly established discipline. In addition, it has similar research topics with many well-established scientists. For both reasons, it has some disagreements with the disciplines it is associated with. The phenomenon of leadership is at the forefront of the disagreements between politics and public administration. In this study, both the political and administrative dimensions of the leadership phenomenon are discussed. The main argument of the study is that although the leadership phenomenon has a political character in its essence, public administrators can also be leaders within the framework of the new management approach. Of course, the leadership attributed to public administrators is not leadership in the sense of government, but leadership with boundaries. As a result of the evaluations, it has been understood that the survival of institutions depends on their ability to respond to the need for change that arises instantly, which can be realized under the guidance of a strong leader.

Introduction

The relationship between public administration and politics goes back to the idea that public administration is a separate discipline. Due to the socioeconomic changes taking place in the world (Dreyfus, 2014, p. 20; Dudley, 2008, p. 222), the increased workload of central governments and the services (Anbarlı Bozatatay & Kızılkaya, 2016, p. 610; Dreyfus, 2014, pp. 34–35; Öztürk, 2017, p. 11; Poggi, 2014, pp. 94–95) they must provide has brought this separation to the forefront. This increase has led to the complexity of the administration, necessitating the division of labor and specialization. In short, the separation of public administration and politics is a natural result of changing conditions (Weber, 2012b, pp. 393–396). However, this separation does not mean that the two disciplines have moved away from each other; rather, they remain intertwined (Sager & Rosser, 2009, p. 1144).

In the study, it was adopted that public administration and political disciplines did not move away from each other after the separation, but rather their cooperation with each other gradually strengthened. This growing cooperation was analyzed from an actor-centered perspective. In this context, public administrators, namely bureaucrats, were identified as the research object, and their roles in the public administration reform process were focused on.

Sure, what is meant by public administration reform is New Public Management. While there are many reform trends, it can be argued that in almost all liberal democracies over the past few decades, New Public Management has guided reforms (Çiner, 2021, pp. 6–7; Hood, 1991, p. 3, 2016, p. 749). In other words, New Public Management has been the blueprint for reform policies of many governments (Otenyo & Lind, 2006, p. 503; Peters, 2018, p. 324). Additionally, it can be said that the New Public Management reforms have an essence that supports the interaction between public administration and politics.

The study was structured within the framework of the assumptions and claims. To this end, first, the emergence of the discipline of public administration, i.e., the distinction between politics and public administration, was examined. In the first part, a historical narrative was adopted to explain how public administration turned into a bureaucratic mechanism, or, in other words, a machine, after the separation. Additionally, the structural features of the bureaucratic administration were described in detail.

The second part started with the problems or criticisms that emerged with the spread of the bureaucratic organizational style. Although the bureaucratic administration style increased productivity at an incredible level in the early periods and gave impressive results (Bennis, 2016, p. 305), it also revealed many problems arising from its mechanical structure, which ignores the human factor,

namely “emotions”. Therefore, in this new era, efforts were made to sensitize the bureaucratic structure to emotions and humanize the bureaucratic machine. In brief, in the second part, instead of the understanding of impersonality, the process of centering on humans and their emotions and gaining a political character was explained.

After considering the human characteristics of public employees, in the third part, it was argued that public administrators/bureaucrats, unlike civil servants, should have responsibilities not only in administrative but also in political dimensions. Its main arguments are based on the basic principles of the New Public Management paradigm, such as customer-oriented, outcome-oriented, performance-oriented, entrepreneurial, competitive, and taking responsibility/initiative (Al, 2007, p. 50; Altıntaş, 2003, p. 7; Barzelay, 2001, p. 2; Demirkol & Bereket Baş, 2015, p. 43; Eren, 2001, p. 127, 2003a, p. 86, 2003b, p. 67; Eren & Durna, 2007, p. 116; O. Gökce & Kutlu, 2002, p. 76; O. Gökce, Kutlu, & Gökce, 2001, p. 21; D. Osborne & Gaebler, 1992; S. P. Osborne & McLaughlin, 2002, p. 9; Sobacı, 2014, p. 63). In short, it was explained that administrative leadership should also encompass a political dimension.

In the last chapter, the responsibilities of the leader after the individual were accepted as a leader with his/her human qualities and political-administrative aspects were discussed. One of the most important responsibilities comes from leading the transformation that resulted from the New Public Management reforms (Bovaird & Loeffler, 2016, p. 19). It does not seem ontologically possible for this leadership to be fulfilled by public administrators in the classical Weberian understanding of administration (G. Gökce, Şahin, & Örselli, 2002, p. 47). Because the classical Weberian understanding of administration emphasizes the “leadership of the law” (Albrow, 1970, pp. 41–43; Rudolph & Hoeber-Rudolph, 1979, p. 196), not human.

The Separation of Politics-Administration, and *be*-Mechanized

The separation of politics and public administration has been defended by many for a couple of centuries ago. Although controversial (Walker, 1989, p. 510), the separation is generally based on the 1887 article “The Study of Administration” by the US President (between 1913 and 1921) and scholar T. W. Wilson (Çiner, 2021, p. 10; Levitan, 2001, p. 4). This is likely because Wilson was President of the US, and the US was experiencing the Progressive Era (Clements, 1994; Gould, 2013, p. 3; Walker, 1989, pp. 511–512).

From the point of view of the subject of the study, leaving the controversial situation aside, the following statements in Wilson's article are very important (1887, pp. 209–210):

The field of administration is a field of business. It is removed from the hurry and strife of politics; it at most points stands apart even from the debatable ground of constitutional study... The object of administrative study is to rescue executive methods from the confusion and costliness of empirical experiments and set them upon foundations laid deep in stable principles.

As it can be understood from the above statements, according to Wilson, the administration should switch from the operating style of politics and even constitutional law, as it is a technical and practical process, to a different operating style, which should be business-like. However, it cannot be said that Wilson sees the administration as a mere machine.

In Wilson's words (1887, p. 210):

But it is, at the same time, raised very far above the dull level of mere technical detail by the fact that through its greater principles, it is directly connected with the lasting maxims of political wisdom, the permanent truths of political progress.

The article was written in an era where the state assumed responsibilities in many areas for the post-Civil War national development of the US (Gould, 2013, p. 3). As it can be understood from the expressions in Wilson's article (1887, pp. 210–212), the administration, in an era where the responsibilities of the state have grown so much, the policies and laws should be created by the politicians, and the public administrators should implement the policies in line with the decisions of the politicians. However, according to *du Gay* (2000, p. 115, 2002, pp. 177–178), Wilson defends the idea that the administration should stay away from the corrupt politics of the parties and that the decision-making and policy-making processes should be left to the administration. Peters (2009, p. 9), on the other hand, claims that Wilson's views are not about the internal management of the administration, but about the role sharing between the political system and the bureaucracy.

Although the idea of *everything is political* (Lockerd, 1994; Nancy, 2002) was not adopted in the study, the perception of politics changed and expanded after Wilson. In this context, actions such as decision-making, policy-making and implementation, vision and mission determination can be evaluated under the umbrella of politics (Pollitt & Bouckaert, 2011, pp. 161–162, 2017, pp. 165–166). Therefore, it should be said that Wilson (2016, p. 13) evaluated the separation of

politics-administration at the center of neutrality and separation from the daily policies of political parties.

In the 1950s, several academics, such as von Mises (2010, pp. 65–69), who made serious criticisms of modern bureaucracy (Kaufman, 1969, p. 3), also emphasized the necessity of bureaucracy to prevent arbitrariness and partisanship and to establish a rational, impartial, and democratic administration (Levitan, 2001, p. 8). However, in addition to the political party restriction, it was also argued that bureaucracy should be restricted in policy and decision-making processes and that the administration was only responsible for executing the decisions taken under the guidance of politics (du Gay, 2000, p. 89, 2002, p. 76; Goodnow, 2016, p. 26).

Bureaucracy, which was previously defined as an impartial decision-making and execution process separated from politicians/party politics, was later defined as the state's machine room (Hague & Harrop, 2004, p. 290) or a social machine (Bennis, 2016, p. 305). To put it more clearly, at the beginning of the 20th century, the view that bureaucracy was a machine made up of mechanical wheels, based on laws and rules, without soul, only following orders from above, had become widespread (Weber, 2012a, pp. 323–326, 764, 2012b, pp. 336–342).

In summary, the validity of the separation of bureaucracy–politics, which was formulated as decision-making and its implementation in line with the decisions made, had been subjected to serious criticism since the day it was put forward. In other words, the validity of the ideal-type bureaucrat and administration approach based on specialization, rules, written documents, the separation of public-private life and the principle of impersonality had been questioned (Eryilmaz, 2013, pp. 60–63; Öztürk, 2017, p. 15; Waldo, 2016, p. 204).

The Humanization of Administration, and *be*-Political

The classical Weberian understanding or classical administration approach described in the previous title, like Elton Mayo, has been accused by many people of being inhuman, and it has been claimed that employees can also engage in irrational behaviors (Hodgetts, 1997, pp. 28–29; Mayo, 1915, 1923, 1930). In this context, the separation of politics and bureaucracy does not seem possible due to humanitarian reasons, or it seems quite difficult. Today, although there are different opinions and disagreements about the scope-direction-content of the politics-bureaucracy interaction, the existence of politics-bureaucracy interaction is accepted.

In this case, the point to be noted is that the position and/or function of the bureaucracy historically differs over time. In this context, Kaufman (1969, p. 3) stated that the US bureaucracy oscillates between three values:

“representativeness, politically neutral competence, and executive leadership”. According to Kaufman, reform and re-organization programs sometimes evolve towards representation, sometimes towards impartiality, and sometimes towards leadership.

However, Kaufman (1969, p. 4) also made the following assessment:

But in that century of building professional bureaucracies and executive capacities for leadership, the need for new modes of representation designed to keep pace with new economic, social, and political developments did not arouse equal concern. Partly for this reason, and partly because the burgeoning of large-scale organizations in every area of life contributes to the sensation of individual helplessness, recent years have witnessed an upsurge of a sense of alienation on the part of many people, to a feeling that they as individuals cannot effectively register their own preferences on the decisions emanating from the organs of government. These people have begun to demand redress of the balance among the three values, with special attention to the deficiencies in representativeness.

When considered in the context of Kaufman's statements above, the criticisms such as public services are not appropriate and inclusive (representation), are ideologically or partisan shaped (impartiality), due to public employees' refusal to take responsibility cannot be carried out in a timely, efficient, and effective manner (leadership), are more understandable.

Various theories have been put forward to minimize these and similar problems. One of them is the theory of representative bureaucracy (Kingsley, 1944). The theory argues that the bureaucracy should be a small copy of society and that all relevant segments should take part in the process while creating policies. This makes it possible to make the right decisions, to carry out the implementation smoothly, completely, and by purpose, and to be truly accountable (Krislov, 2016, p. 523).

Another theory in terms of the bureaucracy-politics relationship belongs to Rosenbloom (1983), who examines public administration through the separation of powers. According to the theory, public administration, which is directly related to the executive-legislative-judicial powers, respectively has developed within the administrative, political, and legal classification corresponding to these three powers, and in a historical process, and continues to show it cyclically. The

theory defines the administrative dimension as a pure management job away from politics, the political dimension as taking an active role in policymaking, and the judicial dimension as various personnel relations such as administrative legislation and disciplinary investigation. In addition, the theory also states that one of these dimensions in public administration has come to the fore over time (Rosenbloom, 1983, p. 225, 2016, pp. 631, 645–646).

Administrative Leadership

Regardless of the scientific field, it is very difficult, and in some cases impossible, to illuminate a phenomenon from all angles. Similarly, from the point of view of today's management paradigm, it is understood that the theories discussed in the above title can only explain a certain part of the phenomenon, but the points that cannot be enlightened are the majority. At this point, it is thought that the synthesis of Kaufman's executive leadership and Rosenbloom's legislative-political dimension will explain the phenomenon better. To put it more clearly, this proposed synthesis supports the facts that public administrators-bureaucrats have a political role, play an active and leading role in the formulation and implementation of public policies, and lead the employees of institutions and units.

Since the examination of the role played by bureaucrats from the beginning to the end of the public policy processes exceeds the scope of the study, this topic focuses on the leadership dimension. The reason why special attention is given to leadership in the bureaucracy-politics relationship is that contrary to the traditional Weberian definition of a public servant (Peters, 2009, p. 9), the postmodern paradigm, namely New Public Management, understands an actor who is entrepreneurial and does not hesitate to take initiative (Ateş, 2013b, 2013a; Özmen, 2013; Parker & Bradley, 2004).

It should be said that the concept of authority is at the core of leadership discussions. Authority, defined as the leader's capacity to encourage followers to obey, makes it possible to redefine reality/phenomenon and direct employees in this direction to obtain certain results (Prethus, 2001, pp. 454–455, 462). It can be said that this definition of authority has aspects like Weber's conceptualization of charisma and that both conceptualizations center on the leaders and the characteristics of the leader (Uysal-Sezer, 1993, p. 4).

This power of the leader, who can direct his followers systematically and persuade them to cooperate for a certain purpose when necessary, does not originate from his previous successes but originate from the trust and belief in him/her (Demir & Düşün, 2015, p. 252). It is possible to redefine the concept of charisma, which Weber brought to the literature, as the ability of persuasion,

thanks to the individual's knowledge, personal experiences, cultural environment, and education (Itzhaky & York, 2003, p. 372; Jermier, 1993, p. 221).

It is stated that the leader, without the need for charisma in the transcendental sense (even without any charismatic feature), can only direct the changes through interaction-communication methods, persuade his/her followers, and motivate them to act by the purpose (DiTomaso, 1993, p. 266). Sure, it should be noted that this expression does not correspond to an ordinary and low-level interaction of communication, it is a high-quality interaction. In this context, high-quality dialogue increases the interaction between people and allows authority to be established over individuals, like the effect of charismatic authority (Kakabadse, Kakabadse, & Myers, 1996, pp. 379–380).

However, to avoid misunderstanding at this point, it should be reminded that although it is included in Weber's typology of authority, the type of authority that he advocates and builds on traditional administration is legal-rational authority, not charismatic authority. That is, according to Weber, authority should be based on laws and rules, not on personal qualities (Eryılmaz, 2013, pp. 64–65; Peters, 2009, p. 9).

Administrative Leadership and Change

It is frequently claimed in the literature that a leader can achieve change/transformation in varying degrees from top-to-bottom or vice versa (Bass, 1999; Gasper, 1992; Humphreys & Einstein, 2003). According to these claims, leaders can change the actions or discourses of their employees or followers, as well as lead to institutional-structural changes (Avolio, 2004, p. 1558). To put it more clearly, leaders can cause soft results such as changing the organizational behavior of individuals, and sharp and revolutionary results such as changing the organization of the institution or the government when viewed in the political dimension (Peters & Helms, 2012, p. 27).

Northouse defines this type of leadership as transformational leadership and explains it as follows (2018, p. 263):

An encompassing approach, transformational leadership can be used to describe a wide range of leadership, from very specific attempts to influence followers on a one-to-one level, to very broad attempts to influence whole organizations and even entire cultures. Although the transformational leader plays a pivotal role in precipitating change, followers and leaders are inextricably bound together in the transformation process.

In addition, in the context of administration and democracy, especially in transformational leadership there are also serious criticisms that the direction and content of the change take place in line with the leader's unilateral wishes, that the views of the employees are not considered that it contains too much personal judgment and that it is anti-democratic, elitist, and even despotic in this respect (Allix, 2000; Körösényi, 2005, p. 359).

Although there is some justification for the criticisms; It should also be kept in mind that actions against the law, and democratic and social values can be prevented by the operation of control mechanisms (Eren, 2006, p. 258; Eryılmaz, 2013, pp. 180–184), where there is no imposition on individuals, where followers or employees can be persuaded by the leader's communication skills without any pressure (Bell, 2014, p. 91; Karkın, 2004, pp. 56–57). In short, it is not true to say that ontologically leadership has a negative effect (Bass & Avolio, 1993, pp. 65–66).

Leadership, which is formed by taking criticisms into account and supported by effective and functional control mechanisms, is one of the best and most accurate answers to the need for change. For example, developing liberal democracies need the speed and mobility provided by leadership to realize institutional transformations, due to the slow work of representative democracy and related democratic procedures and the numerous reform packages to be realized (Peters & Helms, 2012, p. 27).

However, giving responsibility to the leadership institution for change does not mean that change must start from the top. Similarly, there may be situations where the demand for change does not come from the grassroots, where the grassroots does not have a say in the exchange program. However, it is more appropriate to adopt a method under the leadership of the leader to create a change program that is appropriate and consistent with the needs, to implement this program smoothly and completely, and to evaluate the results and take the necessary measures (Dumas & Beinecke, 2018, p. 870; Fernandez & Rainey, 2006, p. 171; Moran & Brightman, 2000, pp. 67–68).

It is even said that although the change that comes from the top and is directed is a peaceful revolution, the revolution from below involves violence (Richter, 2001, p. 464). Of course, these analogies may involve peace and violence in the literal sense of the word, or whether the process of change should be calmer, and consensus-based. However, it should be noted that not meeting the demands for change from the bottom will not lead to peaceful results as historical experiences such as the French Revolution have shown.

There are various peaceful methods that the leader or top management uses to manage change. One of these methods is the social learning method. The social

learning process should be managed by leaders or top managers, and an innovative culture should be established by making employees adopt the actions, information, and techniques required for change, and by making the necessary policies, structures, and management system possible (Hatch, 2011, pp. 352–353; Korten, 2001, p. 487). In other words, the leader is expected not only to manage change by giving orders to his/her team but also to prepare both his employees and him/herself for change with theoretical and practical techniques (Schein, 2010, pp. 365–366) by doing what needs to be done for change with them (Barnett, 2001, pp. 498–499).

In addition, it should not be forgotten that the style adopted by the leaders should be compatible with the cultural values of the country, institution, or its employees. To the direction, the leader or management staff should know the institution well and observe the cultural characteristics of the institution well. Then, action should be taken with a leadership style suitable for this cultural structure. For example, an innovative, entrepreneurial, and visionary leadership style should be adopted in a flexible cultural structure, while in a culture dominated by a hierarchical structure, employees should be coordinated, monitored, and directed (Hartnell & Walumbwa, 2011, pp. 228–229).

Today, rapidly changing socioeconomic conditions have made it necessary to make quick decisions according to the needs of the people. It is obvious, with its assumptions incompatible with today's reality that the traditional public administration paradigm that is, the central, static, rigid, and inhumane, procedures and rules system in which individual initiative is almost nonexistent (Albrow, 1970, pp. 41–43; Eryılmaz, 2013, pp. 71, 79–82), cannot be applied in the postmodern era where citizen satisfaction is kept in the foreground (Ateş, 2013b, 2013a; Öztürk, 2004, pp. 16–17).

Contrary to the Weberian understanding of bureaucracy (G. Gökce et al., 2002, p. 47), the New Public Management paradigm, acting with the fact that impersonality is not possible, allows both to take precautions against the personal deficiencies of the employees and to systematically manage the employees for a specific purpose. In this understanding, where management, not administration (Altıntaş, 2003, p. 7), is adopted, formal or informal structures and rules are rearranged by leadership (Hughes, 2014, pp. 171–172).

Conclusion

In the study, it was argued that in the postmodern era, public administrators should be entrepreneurial, citizen/customer/user/beneficiary centered, have responsibilities in certain issues, such as politicians, and be able to lead their institutions and also produce policies in line with the target determined by the

politicians. In short, the Weberian classic (old fashion) bureaucracy-politics dichotomy is rejected in the study, and instead, it is suggested to redefine bureaucracy by accepting its political dimension.

The political dimension of the bureaucracy, on the other hand, consists of two parts: the formulation, implementation, and direction of the policy and the fulfillment of the leadership task within the institution. Apart from these, bureaucracy has many political aspects, from its relations with non-governmental organizations to its relations with the military bureaucracy. However, only the two dimensions mentioned above were examined in this section. In future studies, examining other dimensions will be very useful for the discipline of public administration.

Why leadership was accepted as a political dimension in the study can be asked. The reason for this is that like the way politicians channel the masses to a certain point, it is also a political action for managers to channel their employees towards certain goals in line with the decisions taken, with basic qualities such as decision-making and initiative. In short, it can be said that leadership, which was previously only seen as a feature of politicians in the classical public administration paradigm, has become a feature of appointed public administrators within the framework of ethical values such as responsibility, accountability, and transparency (Çiner & Karakaya, 2013, p. 72) with New Public Management.

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Chapter 22

Mythical Language, Allusions and References in Edgar Allan Poe's "The Raven"

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Abstract

Structuralism is associated with signs and signification process. Structuralism realizes and establishes implicit and explicit meaning in written, spoken and visual texts. Structural analysis is based on signifier and signified. The concept of signifier and signified are improved by Saussure (2011) and it plays a significant role in literary texts in terms of constructing meaning. Based on structural point of view, the concept of myth interacts implicit and explicit signification in language.

The term of mythical structuralism is associated with system of communication and mythical references and allusions establish meaning. In this sense, the concept of myth is a mode of signification and it can be explicit and implicit in the texts. From this point of view, mythical structuralism is analyzed in Poe's "The Raven" in order to explore and realize mythical allusions and references in the poem. Saussure's theory of signs (2011) Barthes' semiotic theory (2010) and interpretations of signs are used in order to reveal implicit and explicit meaning in other words hidden, conceal linguistic pattern in the poem. The study concludes that the concept of myth is considered as signification process and it can be implicit and explicit structures or patterns in text and language. Based on this, Poe uses mythical language, references and allusions in order to establish meaning in the poem.

Key words: mythical structuralism, signs, signifiers, signification process, denotation, connotation,

Introduction

Poe is considered as one of the greatest poets in 20th century (Kevin and Hayes, 2014). Edgar Allan Poe is an American poet and he is an significant figure in American Romantic Movement. Poe establishes horror and gloomy context in his Works in terms of mystery and the macabre (Zimmermen,2005).

In this sense, he is seen as mysterious poet and his work reflect wild and imaginative aspect of life. Poe deals with dark, strange and wild aspect of human life and existence (Kevin and Hayes, 2014). Denotatively and connotatively horror, a world of terror, troubled mind, fear, sadness, and death dominates his work. Based on this, linguistic point of view, Poe uses dark and troubled words in order to reflect inner conflicts of human nature. From this perspective “ The Raven” can be considered as one of the powerful poems among his poems. (Kevin and Hayes, 2014).

The “Raven” includes cultural and mythical references. The poem tells a story about a man who is suffering for recent death of his lover (Tate,1968). At December night when the narrator in his chamber, a raven is seen repeatedly on the door and the window. First, the narrator thinks that visitor causes a noise but later he is surprised to see raven when he opens the window. The raven looks seriously and the narrator stated to talk with raven, but the raven can only utter “nevermore” (Tate,1968).

As the narrator continues to talk with the raven in other words bird, he loses sense of reality. He asks hopeless questions to the raven. One of his question whether he and his beloved Lenore will be together in heaven. The raven answers his question with “nevermore”. The bird repeated this response for his hopeless and despairing questions. The repeated answer in other words response signified that his dark, gloomy thoughts and feelings are ultimate true. He grows angry to the raven and he calls the raven a devil. In the end of the poem, The “Raven” is still seen and it is sitting. The narrator’s soul reflects sorrow and insanity and he states that his inner world and soul will be doomed “nevermore”. In this sense, this study tries to reveal semiotic features and signification process in the selected poem in terms of myth.

Theoretical Framework

The concept of semiotics is based on the Greek word and it focuses on the study of signs (Eco,1976). Semiotics deals with linguistic and non linguistic in other words verbal and nonverbal components of language. The sign reflects a word, and a voice and it can be a notion (Eco,1976). Based on semiotics, the meaning is established and realized by means of signifiers and signified. The signifier is considered as a graphic form of words, letters and it does not deal with

context in other words it is out of context. the signified reflects idea either real or imaginary (Moriarty,1991). The concept of signs include physical objects. In this sense, postures and gestures and letters are examples of signs. (Saussure, 2011). Barthes theory (2010) focuses on signs and their associations of myth. According to Barthes, (2010) semiotics focuses on how people interpret the things in other words signs. In this sense, the meaning is divided into two categories these are denotation and connotation. Denotation is descriptive and literal meaning but connotation reflects beliefs, ideologies and cultural framework of a particular society and a group. It can be stated here that denotation level of meaning is seen as closed meaning and it is based on primary meaning (Barthes,2010). On the other hand, connotative meaning reflects implied, hidden and uncertain meaning in this sense connotative meaning reflects many interpretations (Barthes,2010). Based on this, according to Barthes semiotic theory (2010) myth is considered as language, and it is seen as communication and it employs message (Moriarty,1991).

The signs represent shared values, ideologies and beliefs of a specific culture, society or group. This is considered as second order of meaning and it named as myth (Barthes,2010). On the other hand, the first order of meaning reflects denotation of the word in other words lexis, this is explicit, and literal meaning of the word. It reflects dictionary meaning and definition. It can be stated here that the denotation meaning of the word reflects literal dictionary meaning of the word. Connotations is beyond literal meaning. It is associated with personal and cultural or ideological references (Moriarty,1991). For example, the word “black” denotes a color in other words it denotes physical form of the color but it can be also used to explain sadness, dark and death as a connotative meaning (Skard,1946). From semiotic point of view, the myth is considered as facts, values and ideologies of culture, society and communities (Barthes,2013).

The concept of myth reflects universal meaning and myth is associated with the capitalist cultures. In this sense, myth can be considered as cultural power (Barthes,2013). In this sense, semiological study focuses on meanings (explicit and implicit meaning) and they exist in system of communication and signification process. According to semiotics, each item, everything in the the universe can be seen as a sign for example the sound of “cat” can indicate happiness, the signature can indicate acceptance and the image of Marx can reflect a sign of socialism (Moriarty,1991).

Based on this communication is seen as multi layered and language is based on sophisticated systems of signification. Signs can shape and reshape human beings’ perceptions and point of view and a sign reflects personal and collective assumptions the concept of myth reflects hidden sophisticated aspect of culture

and the political identity in this sense the second level system conveys ideologies, values and beliefs (Barthes,2013). As implied before, the second level systems interact with connotation meaning of the word, metalanguage and finally myth. From this point of view, myths are related to systems of signification and it is explored by communication and they indicate social symbols and collective consciousness (Boer,2011).

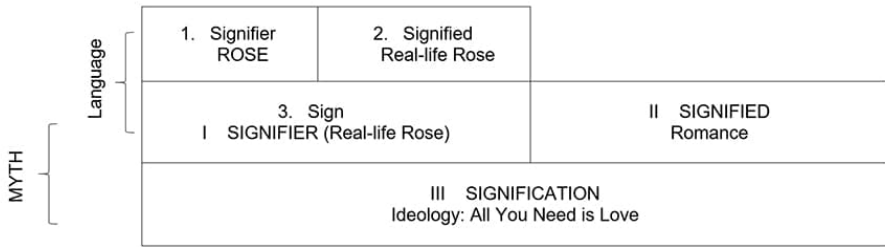
In this sense, myths are in second level systems of signification and they are established and shaped by meaning and its form. The first level systems of signification contains direct assumptions. On the other hand, the nature of myth can be seen as fragmented. It can be stated here the concept of myth can be considered as natural, common sense and it is taken for granted in a particular community or a group in broader sense society (Boer,2011)

Based on this, myth can convey social, political, cultural and historical assumptions. On a relevant note, the concept of myth can be internalized by the people and they can shape and reshape collective unconsciousness. The myth can be evaluated and perceived in context and it conveys meaning (De Man,1990). It can be stated here, the term myth reflects universal and natural meaning, common sense and taken for granted meaning and cultural symbols and indexes convey connotation meaning and it is normalised by the capitalism (Boer,2011). The term of myth can indicate power and power struggles and it is normalised and taken for granted in history. Based on this, semiotics studies sign and it studies produced and construction of connotation and the connotation meaning related to myth meaning (De Man,1990).

In this sense, myth meaning reflects internalized references and allusions based on individual and collective domain. Myth meaning includes hidden assumptions, symbols and the term of myth is based on aspects of society and its political in other words ideology. Based on this, the myth can be seen as a cultural landscape of particular society and a group (De Man,1990). In this sense myth has many functions because it includes hidden and cultural assumption.

It can be stated here, Saussure (2011) and Barthes (2010) establish their own semiotic model in order to explore and reveal hidden mechanics of language and their theories try to reveal hidden definitions that are taken for granted in the society or community. The concept of myth indicates the communication and the message and it is the form of the signification. The first order of language is denotative level in a broader sense, cultural meaning of the lexis is named as myth (Barthes,2006). For instance, the "rose" denotes the plant and its connotation is romantic love or passion and its myth meaning is the ideology of love or romance. The signification process of the word rose is shown in the diagram.

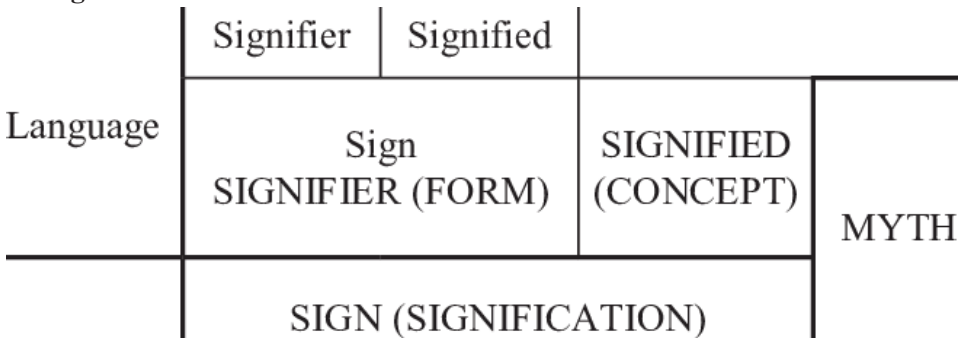
Figure 1



Barthes Signification Process- Signification Process of the Word Rose (2010)
taken <https://media-studies.com/barthes/>

Everything can be considered as a myth if it is produced by discourse because it is perceived by its essence message. The myth can be employed as a message by means of different kinds of representation (Barthes,2006).

Figure 2



Barthes Signification Process (2010) taken <https://media-studies.com/barthes/>

Written discourse, spoken discourse visual discourse such as cinema and photo. mythical language reflects values, and beliefs and ideologies (Barthes,2010). In this sense, signs and their meanings and assumptions may have cultural references. The myth can convey political and cultural message and meaning. This study tries to analyze myth, mythical allusions, cultures and archetypes based on mythical structuralism. It can be stated here, myths and legends are considered as structural propositions (Chandler,2007). Semiotic pattern is encoded in structural premise and it is connected by means of signification process and sign, signifiers and signified are linked (De Man,1990).The signification process can be seen as implicit and explicit sense. Mythical structure is based on repertoires of myth and cultural associations. (Eco,1976).

Myth is seen as unexplained structure of language and it includes several dimensions of meaning in any text, language and code system. Myth is based on particular linguistic references and context. The concept of myth constructs meaning and it produces history. Based on this myth can be seen as a form of structure and it is associated with hidden aspect of language (Moriarty,1991). Language has deep structure and it has internal linguistic codes. Based on this, our perception of the world does not stem from our perception or five senses. We perceive and understand the world inborn structures of human consciousness. We perceive and cope with the world by means of human innate human consciousness. Structures of language is an innate form and it is based on human consciousness and unconscious minds and it establishes over a course of the time (Chandler,2007). In this respect, myth can be seen as a type of speech and structure and it plays an important role in signification process. mythical link and mythical speech can disappear in the course of time and other mythical link and speech can take place and they can become the part of signifying process (Moriarty,1991).

In this sense, there are too many facts in the world (Allen,2003). Myth is a system and it is established by means of semiological chain. It is the second order of semiotic system (Barthes,2010). The modern application of structuralism is beyond physical realm, languages and norms. It is based on collective unconsciousness and it is experienced by means of culture (Leigh, 2011). In this sense, Carl Jung is an important figure in mythical structure in terms of unconsciousness and psychic model. The collective unconsciousness and the experiences are seen in every individual and these experiences are reshaped and recreated in literary works. (Leigh, 2011) In a sense, everything reflects archetypes that encoded in our unconsciousness (Culler,2002). The concept of myth reflects meanings. Myth meaning is seen as socially accepted linguistic codes. These mythical meanings are not fixed and they can be in different form in other societies, communities and contexts. Mythical meaning can be seen as lived experience and it is a social product (Wiseman,2016). Myths can be seen in any society and community but some myth and its meaning are passive and they do not active roles in the sign system and process but this linguistic situation does not mean that they are dead. Myth and dream are in collective unconscious mind and they explore main and core ideas and they are the integral parts of human beings (Barthes,2010). The compare and contrast of myth from different culture explores universal archetypes. These are images, symbols and structures. They establish culture in the course of time (Rowland,1990).

The myth meaning explores human life. In a sense, the denotation meaning turns into connotative meaning final it becomes myth meaning

(Allen,2003). Myth meaning is based on values and beliefs in a community (Dobson,2005). Barthes focuses on the orders of signification. The first order signification is denotation, second order signification is connotation. As it is known, denotation reflects literal meaning but connotation reflects social conditions, culture and personal associations (Barthes,2010). Myths are constructed by cultural and personal in other words connotative meanings and they are accepted as true, fact in a society (Allen,2003).

Based on Barthes' semiotic theory (2010) myth is seen as second order or signification process. Literal, primary or dictionary meaning is expressed at linguistic or syntax of language or it is called as first order, particular and cultural meaning is explored at the second order in other words mythological level (Barthes,2010). The signifier is seen as meaning at the level of language, at the level of myth the concept of the signifier is seen as form and the concept of signified is seen as mental concept. In this way, the myths can be explicit in linguistic medium and people can easily recognize and realize them (Barthes,2010). In the course of time, the myth becomes socially accepted codes and norms. Even though, sometimes they can be hidden and latent and it reflects connotative meaning in art, literature in this case people try to reveal hidden meanings of myth (Morden,2016).

Analysis of Poe's "The Raven"

The poem will be analyzed based on intertextual and mythical allusions and references. From this perspective Poe's Raven is analyzed in a semiotic form through signification process, sign, signifier and signified in order to reveal implicit and explicit mythical allusions and references. From the semiotic perspective any language includes cultural, social and ideological contexts encoded in signification process (Douglas,1953). Semiotic perspective is used in this study in order to reveal cultural, social and ideological and mythical allusions because semiology deals with social domain. The dark and melancholy context dominates the poem (Gale,2015). The death of Lenore, the narrator's beloved is the central topic of the poem. In this sense, it is considered as melancholy poem. In a sense, the concept of grief is the basic emotion in the "Raven" the narrator is full of sorrow and he is suffering from his lost love, Lenore. At the beginning of the poem the narrator tries to get rid of sadness, by the end of the poem the narrator is full of sorrow, and he feels that he never deals with this grief because he is captivated by his sadness. As it is mentioned before the concept of grief captivates narrator's inner being. "The Raven" symbolizes grief, sadness. Connotatively, it represents dark tone of the poem. In the end of the poem, the reader can see the raven as the personification of evil, dark, death, melancholy.

The raven's cry "nevermore" connotes harsh realities of world, and unquestionable truth. "The Raven" dominates the narrator and the bird connotes dictatorial behaviour. It becomes supernatural messenger in this sense it is a sign of irrationality (Barry,1999). Even though, as readers, Lenore does not visible in the poem but we can understand that Lenore is the narrotor's beloved, her pysical presence (denotatively) does not appear in the text at language level but her soul (connotatively) dominates the whole text. Lenore is depicted as ideal maiden in this sense the concept of maiden can be considered as Virgin Mary and it is mythical allusions of Christian and Biblical references. The narrator thinks about her death and he wants to see her again. These irrational thoughts connote despair and madness (Frye,1951).

Based on mythical references and allusions, "The Raven" reflects different cultures and stories associate with death. In "Ovid's Metamorphoses" Apollo is the god of prophecy the White raven is sent to his beloved as a spy. In the end, Apollo is angry with raven and he changes its color into black (Frye,1951). In Poe's poem the black raven is used. In a sense, Ovid's Metamorphoses" and Poe's raven constructs binary opposition (White and black) as a mythical allusion. The white connotatively represent innocent and beauty but black represents dark, decay and death (Skard,1946). In this poem, connotatively, the "Raven" represents picture of death.

"Once upon a midnight dreary, while I pondered, weak and weary (Poe,2016, Line 1).

The word of weary is used for particular reason. The raven is seen at midnight in December (Poe,2016, Lines 1 and 7). The concept of midnight and December sign of dark and magic in many cultures. (Kadhim,2022). In this respect, midnight and December can be seen as mythical allusions and references in the poem.

Tell me what thy lordly name is on the night's plutonian shore (Poe,2016, Line 47). This is another mythical allusion in the poem. the usage of mythical allusion Pluto, God of underworld constructs horror and fear setting in the poem. The night's Plutonian shore connotatively represent hell and it represents eternal sorrow. (Wallach,1992).

Is There Balm in Gilead? (Poe,2016, Line, 89).

The "Balm in Gilead" can be seen as mythical allusion as Christian and Biblical references (Frye,1951). The salvation through the messiah is used as a Christian and Biblical references and mythical allusion (Walker,2014). Connotatively, it represents after life. the pharese "nevermore" connotatively implies that the narrator does not escape harsh realities of the world. The raven is a semiotic tool and it indicates many meanings and interpretations. Based on thi, the raven connotatively represents death, decay, dark, melencholy and the

narrator's inner sense in other words inner being. The narrator asks whether he sees his beloved Lenore again and again but raven's answer is always "nevermore". Denotatively, it is the opposite of " forever", connotatively it represents despair and hopeless and eternal suffering of the narrator in broader sense it is the eternal suffering or sorrow and despair of human being in universe (Edwards,2011).

The "Raven" has mythical allusions. In Norse mythology Odin has two ravens and their names are Huginn and Muninn, the denotative in other words word for word translation Huginn is " logical thought, logic, " on the other hand the denotative meaning of Muninn indicates memory" (Frye,1951).

The Raven's response is " nevermore" can be considered as poetic devices and it connotatively represents logic, it indicates that it is impossible to see death people again, in a sense, it reflects sadness and gloomy (Edwards,2011).

The narrator's queastion connotatively based on emotions, feelings (whether he sees his beloved again or not). In this sense, at mythical level, the binary opposition (logic versus irrationality) is established by means of connotative and denotative dimension of raven. As it is implied before Lenore's status as "sainted maiden and rare maiden". In this sense, connotatively these words represent Virgin mary, Christian and Biblical references are constructed by the connotative and denotative meaning of maiden (Frye,1951). As critical readers, we see that the poem starts "once upon a time." This narrative represents fairy tales, legend stories (Wallach,1992).By using "once upon a time" can be seen as mythical allusion in the text. The concept of "December", "midnight" reflect myth of gothic. In this sense, gothic oriented mythical allusions such as dark, fear, coldness gloomy atmosphere are established by these words.

As mentioned before, the "Raven" plays an important mythical allusions and references in the poem. Poe uses communicative aspects of animal, in this sense zoo semiotics is used in the poem (Watzlawik,2017). The raven is a bird and it connotes darkness, fear, sadness, never ending pain in the poem. Based on this, raven as a bird represents the concept of lost rather than win. The setting "chamber"also indicates the eternal suffering of the narrator. Chamber is considered as index of coffin, death and hopeless (Watzlawik,2017). Denotatively Lenore is physically dead but connotatively the chamber represents narrator's internal death (Kevin and Hayes, 2014). Based on this, the "Raven" contains Greek culture mythical allusions and references. Based on this, Nepenthe can be considered as mythical allusions it is mentioned in Homer's ancient epic the Odyssey according to Greek mythology, it is offered in order to get rid of memories (Graf,1993). In this sense, it connotes ancient drug and the narrator wants to drink it in order to get rid of his sadness (Nagy,1992).

The bust of Pallas Athena can be seen as mythical allusion in the poem and it reflects the greek goddess of wisdom (Graf,1993). In this sense, the raven sitting on the bust of “Pallas, Athena” and it represents logic and wisdom (Morden,2016). The night’s Plutonian shore is considered as mythical references and allusions in this sense it indicates underworld and roman God and death (Harrison, 1924). In the poem, the narrator’s beloved is dead and it represents Lenore, his lost beloved love.

“Balm in Gilead” is another mythical allusion and it indicates a region in ancient palestine (Puhvel,1987). It has healing qualities in ancient time. The narrator uses this mythical references in order to find out this answer: whether he escapes from sorrow and eternal suffering and find in peace in his inner world.

Aideen can be considered as mythical reference in the poem. Denotatively it represents the word of Eden, the garden of eden, paradise. (Harrison, 1924) This religious mythical reference is used in the poem because the narrator asks whether he sees Lenore in heaven again or not. In mythical language, paradise represents innocence, purity and it reflects Lenore’s innocence in the poem. In the poem, the raven responds “nevermore” as mentioned before, denotatively it represents opposite of forever, connotatively it represents hell and eternal suffering (Zimmermen,2005).

Conclusion

This study indicates that the poem includes mythical language and allusions and references. The bust of Pallas reflects wisdom in ancient Greek and the raven is sitting on the bust of Pallas in this sense, the “Raven” connotatively represents logic and wisdom (Rowland,1990).

The Nepenthe erases harsh memories in mind in ancient time and it is used as mythical reference in the poem (Leigh, 2011). The Balm of Gilead is medical and healing lotion of ancient Palestian (Morden,2016). Aidenn is used as a biblical and religious mythical references and it represents heaven and paradise. Raven is used as a mythical references and it reflects Norse mythology (Nagy,1992). Gothic features and its mythical references such as decay, darkness, fear and death are used in order to construct the narrator’s inner being and internal death. The raven connotatively represents mythical allusion of death, dark and despair. To conclude, based on semiotic point of view, myth, mythical allusions and references are used in the poem in order to establish implicit and explicit meaning in the poem. The mythical allusions, references reveal the collective unconscious of human being in the poem.

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Chapter 23

How Does Structural Change Affect Economic Growth?

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Introduction

Structural changes in employment and production stem from disparities in productivity movement or demand within and between economic segments, along with the advent of new sectors and the fading of old ones. Notable shifts have taken place, highlighted by the diminishing of primary sectors and the rise of current ones, steered by the transfer of economic resources. This reallocation can either hasten economic development by relocating resources to sectors with heightened value-addition or decelerate it by diverting to sectors with lesser or constant productivity. The roots of structuralism are attributed to the pursuits of classical economists. Smith (1776) posited that the primary catalyst for alterations in the economic composition is the division of labor. This involves fragmenting a compound chore into more focused tasks, aiming to boost productivity by honing the abilities of the workforce, efficiently harnessing resources, and promoting innovation. Ricardo (1817) highlighted that as non-renewable resources become limited or escalate in price, producers will opt for resources that are regenerative or producible, instigating shifts in the overarching framework of the economy. Marx (1885) contended that with economic expansion and capital amasses, the manner of production and distribution of goods should be modified to sustain economic equilibrium and progression. Rostow (1960) posits that for an economy to move from one level of development to the next, a prerequisite or a take-off initiative is essential. Certain sectors often play as catalysts to stimulate investment and self-sustaining growth. Gershenkron (1962) posited that economic development doesn't follow one specific pathway. Lewis (1954) stated that as the economy grows, excess labor in the primary sectors will move to newer ones, and this change will go on until each labor cache in routine sectors is drained. This progression is influenced by the "big push" and the discrepancies across sectors. Furthermore, Rosenstein-Rodan (1943, 1961) and Nurkse (1953) contended that consistency across economic sectors and deliberate coordination of investment and production was vital for continuous economic growth. Hirschman (1958) posited that allocating funds to key sectors has the potential to trigger a multiplier effect, instigating enhancement and development throughout the whole economy. Chenery and Taylor (1968) indicated that nations displayed diverse economic growth paths determined by their individual traits. Hoffman (1931, 1958) contended that as the economy grows, the distribution of consumer goods versus capital goods transforms, eventually reaching a stage where both sectors nearly approach a similar share of the overall yield. Kuznets (1961, 1971) highlights the marked effect of technological innovation on the economic upswing. He asserted that structural variations stem from fluctuations in the income elasticities of demand, prompting

the transfer of workers among industries, rearrangements in the spatial positioning of the people, and the rise of urban areas. These transformations can propel growth by detecting novel needs and encouraging more inventive actions. Rosenberg (1963) asserts that the absence of a cohesive domestic capital goods sector limits the development of a technological platform, which future technical advancements is built upon, explaining why underdeveloped economies don't flourish. The main motivation of this paper is, to some extent, to shed light on the relationship between structural change and some macroeconomic variables.

Structural change and productivity growth

The literature on economic development has highlighted the importance of structural change as a key element of development. Countries that are able to diversify away from traditional products and agriculture are more likely to experience higher productivity and income growth. This shift in labor and resources toward modern economic activities is a crucial factor that distinguishes successful countries from unsuccessful ones. The speed at which this structural transformation occurs is also an important determinant of economic success. McMillan et al. (2014) found that in Africa, structural change was a negative contributor to overall productivity growth between 1990 and 2000, but became a positive contributor to productivity growth after 2000. The outcomes for the period 2000 onward show a notable difference in Africa compared to those reported in the original version of McMillan and Rodrik's paper in 2011. de Vries et al. (2015) suggest that despite the rapid changes in Africa's economic structure, the effect on aggregate growth has been different compared to the past. Additionally, the shift towards service sectors has not been as productive as desired, with productivity levels falling behind global standards. A new technology gap has also emerged in both manufacturing and services, which further adds to the challenges of achieving sustained economic growth in Africa. Diao et al. (2017) emphasized the importance of understanding the complex drivers of structural change in Africa and cautioned against simplistic views that focus solely on industrialization as a path to growth and development. Haile (2018) revealed that growth in both Burkina Faso and Benin was fueled by static structural change, but a dynamic loss has fairly offset this evolution in Benin. In contrast, structural change contributed less to evolution in Côte d'Ivoire. Furthermore, while displaced agricultural laborers in Asia tend to move into higher-productivity manufacturing sectors, most displaced agricultural workers in Benin, Burkina Faso, and Côte d'Ivoire transferred to low-productivity service activities. The general evaluation of the prevailing literature reveals mixed

findings regarding the nexus between structural change and aggregate labor productivity evolution, which raises the need for new evidence.

Structural change and investment

As economies accumulate more capital, there's a natural inclination towards industries that are heavily capital-dependent. This accumulation not only changes the balance between labor and capital but also sparks a metamorphosis towards a more capital-heavy production structure. However, limited structural variety can present obstacles, demanding a comprehensive approach that combines capital accumulation, policy alterations, and technological evolution. Investments in both tangible and human capital, bolstered by technological development, are imperative to steer an economy from a primary reliance on labor to one that leans more towards capital. At its core, the dynamic between structural transformation and investment moves is fundamental to the trajectory and wellness of an economy's expansion journey. Berthelemy and Soderling (2001) found that the narrow degree of structural heterogeneity in Africa led to macroeconomic disorder and inefficiencies, which hampered the region's initial phase of growth. They also noted that whereas capital accumulation was the primary source of Africa's extended evolution in the 1960s and 1970s, gains in TFP became the main driver of it in the 1980s and 1990s due to a low investment rate. Ju, Lin & Wang (2009) argue that the industrial structure of the economy tends to shift towards more capital-intensive industries as capital accumulates. They contend that continued economic evolution occurs when an economy's industrial structure is aligned with its capital endowment level. This means that a country with abundant capital should focus on developing capital-intensive industries, while a country with a relative shortage of capital should focus on developing labor-intensive industries. Acemoglu and Guerrieri (2006) argue that the accumulation of capital leads to a change in the relative prices of labor and capital, which in turn drives the structural transformation of the economy towards more capital-intensive production. This process is often referred to as the "capitalization" of the economy and is thought to be an important driver of economic growth and development. Missio, Jayme Jr, and Oreiro (2015) explained that a narrow degree of structural heterogeneity limits sustained economic growth by limiting the production structure of an economy to a small but dynamic core of economic activities, such as primary exports, with only a few related manufacturing and service sectors. They noted that the process of overcoming structural heterogeneity requires a combination of factors, including physical and human capital accumulation, structural transformation, macroeconomic policy adjustment, and continuous technology upgrades. These factors work together to

promote sustained economic growth and development by ensuring a balanced mix of economic activities and a diversified production structure. Lucas (1993) and Krugman (1994) recognize the need for investment in physical and human capital, as well as technological progress, in order to promote sustained economic growth by moving from labor-intensive production to a more capital-intensive one.

Structural change and consumption.

Structural change and consumption are closely intertwined, molded primarily by the shifting patterns of consumer desires as a society's income escalates. In the initial phases, when income is limited, households predominantly invest in core essentials like food, resulting in a strong demand for labor in fields like agriculture. However, as prosperity grows, buying patterns change. Households begin to diminish their spending on fundamental commodities and emphasize more on superfluous goods, causing a rising demand in the industrial domain. This evolution persists as consumers further fine-tune their inclinations, which catalyzes the rise in the service sector and highlights a clear structural evolution in the economy. The connection implies that with the rise in a society's income, the concentration goes from agriculture to manufacturing and eventually culminates in the service sector. However, the precise display of these shifts is contingent upon various determinants, including customer desires, technological breakthroughs, and disparate growth velocities in product areas. Foellmi & Zweimüller (2008) argued that changes in consumer demand are the main driving force behind structural transformation. In a low-income society, households typically spend a larger portion of their income on basic goods, including food, which creates a greater demand for labor in the agricultural sector. As society grows wealthier, consumers tend to spend a lower proportion of their income on basic products and much more on non-basic products. This shift in consumption patterns leads to an increase in demand for manufactured goods, which in turn creates employment opportunities in the manufacturing sector. As society matures and consumers' preferences shift towards more advanced wants, the service sector tends to grow, leading to a further transformation of the economic structure. Engel's law states that rising per capita income is associated with a significant decline in food budget share as well as a significant decrease in agricultural employment share. Kongsamut et al. (2001) argue that in order for an economy to exhibit the Kaldor facts, the parameters of preferences and technology must be very precisely calibrated. They refer to this as a "knife-edge" condition, meaning that even small deviations from the optimal parameters can lead to significant departures from the balanced growth path. Ngai and Pissarides

(2007) argued that if households derive their utility from a consumption composite that is a weighted average of different goods, and the weights are fixed over time, then the Kaldor facts can be satisfied even if the different goods experience different productivity growth rates.

Structural change and energy demand

Energy anchors the expansion of economies, steering their structural changes. As economies mature, there's an intrinsic transformation in their energy consumption trends, driven by alterations in industrial emphasis, technological innovations, and socio-economic changes. Conventional energy staples such as wood, coal, and oil might dominate, but as sectors advance and cityscapes burgeon, the need for more effective and eco-friendly energy types swells. Zeroing in on electricity, its emergence indicated a profound transformation in energy consumption. In landmark moments like the second industrial revolution, electricity emerged as a foundation for economic expansion, catalyzing a shift from agricultural societies to manufacturing hubs. Its wide acceptance enhanced production efficiency, expandability in industrial setups, and metamorphosis in workforce interactions. As industries such as manufacturing amplified, there arose a heightened demand for positions geared toward electrically-powered tasks. Moreover, the adaptability of electricity affected other segments, from distribution networks to commercial activities, transforming the core makeup of economies. Gagli et al. (2019) acknowledge that electricity played a crucial role in the second industrial revolution that occurred in the early twentieth century. They also note that many developing countries are currently investing significant amounts of resources into this versatile technology, in order to achieve economic transformation and structural change. Moreover, they found that electrification played a major role in the overall shift from agriculture to manufacturing in the U.S. during the period 1910-1940. David and Wright (1999) found that electricity played a major role in the rapid growth of total factor productivity (TFP) during the 1920s, accounting for about half of the five-fold increase in TFP growth. They argue that the widespread adoption of electric power allowed for more efficient and flexible production, leading to significant productivity gains. Electricity allowed factories to operate on a much larger scale. When factories increased their scale of production due to the availability of electricity, there were positive spillover effects on sectors such as distribution and trade. Moreover, the demand for labor shifted towards less skilled workers, such as clerical, managerial, and semi-skilled operative workers, who could operate the new capital goods and energy sources. This allowed for greater specialization of labor and increased efficiency in the production process. Moreover, it led to an increased incentive

for workers to move into the manufacturing sector and this is the key aspect of the structural transformation (Gray, 2013). Li et al. (1990) suggest that two major factors can cause changes in aggregate energy intensities in the manufacturing sector: the intensity effect and the structural effect. The former refers to changes in individual industries' energy intensity, whereas the latter refers to changes in production structure over time. The structural effect can take two forms: shifts between more and less energy-intensive manufacturing groups, or changes in production composition among industries within a particular group.

Structural change and international trade.

Some studies have found that structural change is a key mechanism through which international trade affects economic development. However, other studies have argued that international trade plays only a limited role. McMillan and Rodrik (2011) argue that the mien of structural change on evolution is conditional on the export pattern of a country, and in particular, on the degree to which a country relies on natural resources for its exports. Sposi (2015) demonstrates how advanced economies' input-output structures differ systematically from those of developing economies. These disparities affect how resources are reallocated between rich and poor economies. Cravino and Sotelo (2019) show that the skill premium rises as a result of trade-induced structural change in manufacturing, especially in developing countries. However, according to Świącki (2017), differential productivity evolution is the most significant ingredient in explaining the structural change, more so than international trade and other mechanisms. Similarly, Kehoe et al. (2018) find that the decline in employment in the U.S. goods-producing sector was primarily due to increased productivity in manufacturing, rather than trade deficits.

Structural change and inflation.

Ouedraogo et al. (2023) indicate that the rise in inflation in many countries in Sub-Saharan Africa, exacerbated by the Covid-19 pandemic and fluctuations in commodity prices, has put pressure on firms to adjust to rising costs. The adjustments may include laying off workers, reducing businesses, shuttering offices, and freezing hiring, all of which could negatively impact job creation and increase youth unemployment. They found a non-linear nexus between job creation and inflation in Sub-Saharan Africa. Moreover, they revealed that when inflation rates are very high, above 14 percent, then there is a negative correlation between job creation and inflation rate. The negative mien of inflation on job creation is not limited to a particular sector or exchange rate regime. Moreover, they found some differential miens depending on the type of products. For

example, an increase in fuel prices tends to have a more negative effect on job creation than an increase in food prices. Furthermore, they revealed that the negative mien of inflation on job creation is more pronounced in countries with weak or no structural reforms. More investigations are required for a clearer understanding of inflation dynamics utilizing different variables such as private sector savings which significantly correlated with inflation as revealed by Telek and Miçoooğulları (2022), and the regulatory impact of institutional quality variables (Miçoooğulları, 2022).

Structural change and environmental degradation

López (2003, 2007) argues that many middle-low-income economies have undergone a structural change that is associated with increased environmental degradation, along with poor efforts to combat poverty. López argues that the decrease in productivity in traditional agricultural activities can lead to a shift in labor from the agricultural sector, which in turn decreases the opportunity cost of labor in that sector. This can create a "perverse structural change" in the economy, where the labor force shifts away from the sector where it is most productive, exacerbating poverty and environmental degradation. The result of this "perverse structural change" is a shift to sectors with lower or stagnant wages and less favorable economic trends. López contends that the degradation of natural resources and the exclusion of the rural poor from obtaining natural resources are two key factors that contribute to the rise of perverse structural changes. Some of the dynamics that cause the mentioned factors are the exodus of rural communities, environmental externalities, and demographic expansion.

Conclusion

Structural change profoundly impacts several facets of economic evolution. It's fundamental for a country's performance improvement and wealth escalation, particularly when diversifying from conventional commodities. As economies amass capital, they instinctively drift towards industries heavy on capital, transforming the labor-capital relationship and advancing toward a capital-centric production paradigm. However, challenges emerge when structural variety is limited, demanding a combination of capital amassment, policy adjustments, and technological progressions. As societal income rises, consumption tendencies transition, shifting from a reliance on primary goods and supporting labor needs in farming to a preference for non-essentials and the surge of the industrial sector. Over time, this further accelerates the growth of the service domain. Energy, serves as a revolutionary force, directing societies from an agrarian base to a manufacturing stance, boosting efficiency, and transforming labor relations. The

connection between structural transformation and international commerce is complex, with the character of a nation's exports, determining its progress direction. Regions like Sub-Saharan Africa exemplify how inflation can impact firms' strategies, potentially impeding employment expansion. In sum, the interaction between structural transformation and diverse economic aspects accentuates the importance of an all-encompassing grasp of adept policy formulation. Further exploration is paramount to comprehend the nuances of economics and structural evolutions.

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Chapter 24

House Allocation Problems and The Serial Dictatorship Rule

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Abstract

We consider the well-known house allocation problems, that is, a finite set of indivisible objects has to be allocated to a finite set of agents, each of whom has preferences over the objects. An outcome of a house allocation problem is a matching that specifies which house is assigned to which agent such that each agent gets exactly one house. A rule is a function that associates a matching for each house allocation problem. We consider the serial dictatorship rule for house allocation problems. We study some nice properties (Pareto optimality, strategy-proofness, group strategy-proofness, non-bossiness, neutrality, consistency) that are satisfied by the serial dictatorship rule by revisiting proofs or providing examples.

Keywords: Consistency, House allocation, Neutrality, Non-bossiness, Pareto optimality, Serial dictatorship, Strategy-proofness.

JEL Classification: C78, D47, D70.

1. INTRODUCTION

Consider a faculty that is moving to a new building and each faculty member has preferences over all offices in the new building. The problem is how to allocate offices in the new building to faculty members such that each office is assigned to exactly one faculty member. This is a problem of allocation of indivisible objects to a finite set of agents without monetary transfers, and it is generally assumed that indivisible objects are “houses”. This problem is called the **house allocation problem** (Hylland and Zeckhauser, 1979).

A house allocation problem consists of a finite set of agents and a finite set of houses such that each agent has strict preferences over houses. We note that all houses are vacant in a house allocation problem, i.e., no house is occupied by an agent. An outcome of a house allocation problem is a matching, and a matching specifies how houses are allocated to agents such that each agent gets exactly one house.

A rule (mechanism) is a function that associates a matching to each house allocation problem. The **serial dictatorship rule** is the most famous rule that have been studied in the literature for house allocation problems. Given a house allocation problem and an ordering over agents, the serial dictatorship rule assigns a matching as follows: the first agent in the ordering chooses her favorite house, the next agent in the ordering chooses her favorite house among houses that is not chosen previously, and so on. The resulting matching determined by the serial dictatorship rule is such that a house is assigned to the agent who chooses it.

We consider some properties of the serial dictatorship rule. These properties are Pareto optimality, strategy-proofness, group strategy-proofness, non-bossiness, neutrality, and consistency.

A matching for house allocation problems is Pareto optimal if there is no other matching at which no agent is strictly better off without hurting other agents. A rule for house allocation problems is Pareto optimal if it always assigns Pareto optimal matchings. Svensson (1994) showed that the serial dictatorship rule satisfies Pareto optimality.

A rule for house allocation problems is strategy-proof if no agent can get better house by misrepresenting her preferences. When an agent misrepresent her preferences (i.e., she lies about her preferences rather than telling her true preferences) and obtains a better house, we say that she manipulates the rule. Strategy-proofness of a rule means that no agent can manipulate it. Svensson (1994) showed that the serial dictatorship rule satisfies strategy-proofness. The coalitional version of strategy-proofness is called group strategy-proofness. A rule for house allocation problems is group strategy-proof if no group of agents can manipulate it.

Another property that we study is non-bossiness (Thomson, 2016). A rule for house allocation problems is non-bossy if no agent brings about a change in the assignment of other agents without a change in her assignment. Svensson (1999) showed that the serial dictatorship rule satisfies non-bossiness.

A rule for house allocation problems is neutral if the allocation of houses does not depend on the names of houses. Svensson (1999) showed that the serial dictatorship rule satisfies neutrality.

A rule for house allocation problems is consistent if it is the case that after an assignment of houses to agents by the rule, if some agents leave with their assigned houses then the rule allocates remaining houses to remaining agents as before. Ergin (2000) showed that the serial dictatorship rule satisfies consistency.

Some of the properties that we study in this paper characterize the serial dictatorship rule for house allocation problems. Svensson (1999) showed that a rule satisfies strategy-proofness, non-bossiness, and neutrality if and only if it is a serial dictatorship rule. Ergin (2000) proved that a rule for house allocation problems is Pareto optimal, neutral, and consistent if and only if it is the serial dictatorship rule.

We study the serial dictatorship rule in this paper. For the studies of other rules for house allocation problems, we refer to Abdulkadiroglu and Sönmez (1998), Balinski and Sönmez (1999), Ehlers and Klaus (2004; 2006; 2007; 2014; 2016), Ehlers et al. (2002), Ergin (2002), Gale and Shapley (1962), Kesten (2006; 2009), Doğan and Klaus (2018), Kojima and Manea (2010), Pápai (2000), and Kojima and Ünver (2014), among others.

The rest of the paper is organized as follows. We introduce the basic notions and house allocation problem in Section 2. The serial dictatorship rule is defined in Section 3. Properties of the serial dictatorship rule are studied in Section 4. Section 5 concludes and have some remarks for other problems of allocation of indivisible objects to individuals based on different ownership rights, e.g, housing market (Shapley and Scarf, 1974) and house allocation problem with existing tenants (Abdulkadiroglu and Sönmez, 1999).

2. HOUSE ALLOCATION PROBLEMS

Let $I = \{1, 2, \dots, n\}$ be a finite set of agents and H denote a finite set of m houses. For simplicity we assume that the number of agents is equal to the number of houses, i.e., $n = m$. Moreover, houses in H are different. Each agent $i \in I$ has a complete, transitive, and antisymmetric preferences R_i over houses H .¹

¹ A preference relation of agent i , R_i , over H satisfies *completeness* if for each $h, h' \in H$, $hR_i h'$ or $h'R_i h$, it satisfies *transitivity* if for each $h, h', \hat{h} \in H$, if $hR_i h'$ and $h'R_i \hat{h}$, then $hR_i \hat{h}$, and it satisfies *anti-symmetry* if for each $h, h' \in H$, $hR_i h'$ and $h'R_i h$ imply $h = h'$.

That is, each agent has strict preferences over all houses (since a house in H are different from other houses in H). For an agent $i \in I$ and houses $h, h' \in H$,

- $hP_i h'$ means that agent i *strictly prefers* house h to house h' , and
- $hR_i h'$ means that $hP_i h'$ or $h = h'$ that agent i (*weakly*) *prefers* house h to house h' .

We note that since each agent $i \in I$ has strict preferences over H , for each $h, h' \in H$ with $h \neq h'$ we have either $hP_i h'$ or $h'P_i h$.

For an agent $i \in I$ and her preferences R_i , we denote the best (top-ranked) house of agent i (with respect to R_i) by $top(i, R_i)$. For instance, for an agent $i \in N$ and $h, h', \hat{h} \in H$, $[R_i: hP_i h'P_i \hat{h}P_i \dots]$ means that agent i 's best house is h (since $top(i, R_i) = h$), then agent i would like to be assigned house h' and then of house \hat{h} , and “...” means that remaining houses are ordered in any way.

For each $i \in I$, let $\mathcal{R}_i(H)$ denote the set of all strict preferences of agent i over H , and $\mathcal{R}^I = \prod_{i \in I} \mathcal{R}_i(H)$ denote the set of all preference profiles of agents in I . A list of agents' preferences $R = (R_1, \dots, R_n) \in \mathcal{R}^I$ is called a preference profile.

Given a preference profile $R \in \mathcal{R}^I$ and a subset of agents $\hat{I} \subseteq I$, the restriction of R to \hat{I} is denoted by $R_{\hat{I}} = (R_i)_{i \in \hat{I}}$. Moreover, $R_{-\hat{I}} = R_{I \setminus \hat{I}}$ and $R_{-i} = R_{I \setminus \{i\}}$.

Definition 1: House Allocation Problem

A house allocation problem, or simply a problem, is a triplet (I, H, R) , where I is a finite set of n agents, H is a finite set of n houses, and $R \in \mathcal{R}^I$ is a preference profile. When I and H are fixed, a preference profile $R \in \mathcal{R}^I$ denote a house allocation problem.

Given a house allocation problem, the outcome is a matching showing that how houses are assigned to agents such that an agents is assigned to one house.

Definition 2: Matching

A matching for a house allocation problem (I, H, R) is a function $\mu: I \rightarrow H$ such that each agent $i \in I$ is assigned to a house $h \in H$, i.e., for each house $h \in H$ we have $|\mu^{-1}(h)| = 1$.

Given I and H , let $\mathcal{M}(I, H)$ denote set of all matchings. Given a matching μ for a house allocation problem (I, H, R) and an agent $i \in I$, $\mu(i) \in H$ denotes the house agent i is matched to under μ . For each agent $i \in I$ and matchings μ, μ' , since every agent only cares about her assigned house, we have $\mu R_i \mu'$ if and only if $\mu(i) R_i \mu'(i)$.

Definition 3: Rule (Mechanism)

A rule (mechanism) ϕ is a function that associates with each problem (I, H, R) a matching $\phi(I, H, R)$.

Given a problem (I, H, R) , an agent $i \in I$, and a rule ϕ , $\phi_i(I, H, R)$ denotes the house that agent i is matched to at matching $\phi(I, H, R)$.

3. Serial Dictatorship Rule

Let $f: \{1, 2, \dots, n\} \rightarrow I$ be an ordering of agents, i.e., $f(1)$ denotes the first agent in the ordering, $f(2)$ denotes the second agent in the ordering, etc. We note that the ordering of agents f is exogenously given. For the example of faculty members that are moving to a new building, f can be an ordering over faculty members according to their seniority levels.

We now define the **serial dictatorship algorithm based on an ordering of agents f** .

Input. A house allocation problem (I, H, R) and an ordering of agents f .

Step 1. The first agent in the ordering of f , $f(1)$, chooses her best house over all houses H .

Step 2. The second agent in the ordering of f , $f(2)$, chooses her best house among all houses which are not assigned in step 1.

In general, at Step k we have the following:

Step k . The k th agent in the ordering of f , $f(k)$, chooses her best house among all houses which are not assigned in previous steps (i.e., not chosen by the first $k - 1$ agents in the ordering of f).

In the last Step, we have the following:

Step n . The n th agent in the ordering of f , $f(n)$, chooses the unique house which are not chosen by any one in previous steps.

Output. The algorithm stops after Step n . Hence the algorithm stops when each agent has chosen a house and no house is left. The outcome of the algorithm is the matching at which each agent is assigned the house that she chose in the algorithm. We denote the house in H that agent i obtains in the serial dictatorship algorithm by $\phi_i^f(I, H, R)$.

The Serial Dictatorship rule based on the ordering of agents f , φ^f , associates with each house allocation problem (I, H, R) the matching determined by the serial dictatorship algorithm.

Let $\varphi^f(I, H, R)$ denote the matching that is obtained by the serial dictatorship algorithm for the house allocation problem (I, H, R) based on the ordering of agents f .

Example 1: The Serial Dictatorship rule based on an ordering of agents

Let $I = \{A, B, C, D, E\}$ be a set of agents, $H = \{h, h', \bar{h}, \hat{h}, \tilde{h}\}$ a set of houses, the preferences of agents $R = (R_A, R_B, R_C, R_D, R_E)$ over houses are as follows:

$$\begin{aligned} R_A: & \tilde{h}P_A h'P_A hP_A \bar{h}P_A \hat{h}, \\ R_B: & h'P_B \bar{h}P_B hP_B \hat{h}P_B \tilde{h}, \\ R_C: & \tilde{h}P_C hP_C \hat{h}P_C h'P_C \bar{h}, \\ R_D: & \tilde{h}P_D \hat{h}P_D h'P_D \bar{h}P_D h, \\ R_E: & \bar{h}P_E \tilde{h}P_E hP_E \hat{h}P_E h'. \end{aligned}$$

Let the ordering of agents f be as follows: $f(1) = C$, $f(2) = A$, $f(3) = B$, $f(4) = E$, and $f(5) = D$.

We now apply the serial dictatorship algorithm based on the ordering f to the house allocation problem (I, H, R) .

Step 1. Agent C , the first agent in the ordering, chooses her best house \tilde{h} .

Step 2. Agent A , the second agent in the ordering, chooses her best house among all houses $H \setminus \{\tilde{h}\} = \{h, h', \bar{h}, \hat{h}\}$ that are not assigned in step 1, that is house h' .

Step 3. Agent B , the third agent in the ordering, chooses her best house among all houses $H \setminus \{\tilde{h}, h'\} = \{h, \bar{h}, \hat{h}\}$ that are not chosen in previous steps, that is house \bar{h} .

Step 4. Agent E , the fourth agent in the ordering, chooses her best house among all houses $H \setminus \{\tilde{h}, h', \bar{h}\} = \{h, \hat{h}\}$ that are not chosen in previous steps, that is house h .

Step 5. Agent D , the last agent in the ordering, chooses the house \hat{h} which is not chosen in previous steps, i.e., $H \setminus \{\tilde{h}, h', \bar{h}, h\} = \{\hat{h}\}$.

The algorithm stops after step 5, and the resulting matching is $\varphi^f(I, H, R) = \mu$ where $\mu(A) = h'$, $\mu(B) = \bar{h}$, $\mu(C) = \tilde{h}$, $\mu(D) = \hat{h}$, and $\mu(E) = h$, that is, the serial dictatorship rule (with respect to ordering f) assigns the matching μ for the house allocation problem (I, H, R) .

4. PROPERTIES OF THE SERIAL DICTATORSHIP RULE

We now introduce some properties that are satisfied by the serial dictatorship rule. We first define a well-known efficiency condition, Pareto optimality.

Definition 4: Pareto Optimality

A matching μ is **Pareto optimal** for problem (I, H, R) if there does not exist another matching μ' such that for each $i \in I$, $\mu' R_i \mu$ and for some $j \in I$, $\mu' P_j \mu$. If such a matching μ' exists then we say that μ' Pareto dominates μ . Let $PO(I, H, R)$ denote the set of all Pareto optimal matchings for the problem (I, H, R) . A rule ϕ is **Pareto-optimal** if it only assigns Pareto-optimal matchings, i.e., for each problem (I, H, R) , $\phi(I, H, R) \in PO(I, H, R)$.

The Serial Dictatorship rule is Pareto optimal, i.e., it chooses a Pareto optimal matching for every house allocation problem with respect to any ordering. Let (I, H, R) be a house allocation problem and f an ordering of agents. Let the serial dictatorship rule with respect to f assigns matching μ for this problem, i.e., $\varphi^f(I, H, R) = \mu$. We now show that μ is Pareto optimal. Suppose not. Then there exists another matching μ' , $\mu' \neq \mu$, that Pareto dominates μ . Since $\mu' \neq \mu$, there are some agents who are assigned different houses at μ' than at μ . So, the set of agents who are assigned different houses under the two matchings is non-empty, that is $\{i \in I \mid \mu'(i) \neq \mu(i)\} \neq \emptyset$. Consider the first agent $f(1)$ in the ordering of f . Since $f(1)$ chooses the best house for her among all houses in the serial dictatorship algorithm, she is assigned her best house at μ . This implies that agent $f(1)$ must be assigned the same house at μ' , otherwise she would be worse off at μ' contradicting that μ' Pareto dominates μ . So, for agent $f(1)$ we have $\mu'(f(1)) = \mu(f(1))$. Consider the second agent $f(2)$ in the ordering of f . Agent $f(2)$ chooses her best house among all houses in $H \setminus \{\mu(f(1))\}$ that are not chosen in previous step. This fact, together with $\mu'(f(1)) = \mu(f(1))$, implies that agent $f(2)$ must be assigned the same house at μ' . So, we have $\mu'(f(2)) = \mu(f(2))$. Continuing with the same way we conclude that every agent must be assigned the same house at μ' . This contradicts that some agents are assigned different houses at μ' than at μ . So, there does not exist another matching that Pareto dominates μ . Hence, μ is Pareto optimal.

We now define strategy-proofness that means no agent can benefit by misrepresenting her preferences.

In the following definition, the preference profile $R \in \mathcal{R}^I$ denote the true preference profile and that R_i is the true preferences of agent i , i.e., $R = (R_i, R_{-i})$. When agent i misrepresents her preferences by announcing R'_i then the preference profile is (R'_i, R_{-i}) .

Definition 5: Strategy-proofness

A rule ϕ is **strategy-proof** if for each problem (I, H, R) , each agent $i \in I$, and each preference relation $R'_i \in \mathcal{R}_i(H)$, $\phi_i(I, H, R) R_i \phi_i(I, H, (R'_i, R_{-i}))$.

In order to apply the serial dictatorship rule, the preferences of agents over all houses have to be known. One way to obtain agents' preferences is to let that each agent announces her preferences (or each agent reports her preferences to the central agency that will run the algorithm). Strategy-proofness of a rule means that no agent can obtain a better house by misrepresenting her preferences. That is, for an agent i , she obtains the house $\phi_i(I, H, R)$ by announcing her true preferences under rule ϕ , and if she misrepresents her preferences as R'_i she then obtains the house $\phi_i(I, H, (R'_i, R_{-i}))$ under rule ϕ , and that the house $\phi_i(I, H, R)$ is weakly preferred to the house $\phi_i(I, H, (R'_i, R_{-i}))$ by agent i according to her true preferences R_i . So, by misreporting her preferences, agent i either gets the same house as she reports truthfully (i.e., $\phi_i(I, H, (R'_i, R_{-i})) = \phi_i(I, H, R)$) or she gets a worse house, i.e., $\phi_i(I, H, R) P_i \phi_i(I, H, (R'_i, R_{-i}))$. We say that **agent i manipulates rule ϕ** if she gets a better house by misreporting her preferences, i.e., $\phi_i(I, H, (R'_i, R_{-i})) P_i \phi_i(I, H, R)$. Rule ϕ is strategy-proof if no agent can manipulate it.

The serial dictatorship rule is strategy-proof, that is no agent can obtain a better house by unilaterally misreporting her preferences. Consider the first agent in the ordering, she is already getting the best house for her under the serial dictatorship rule, so she cannot obtain a better house by misreporting her preferences. This is also true for every agent in the ordering. That is, for the k th agent in the ordering for any $k \in \{1, 2, \dots, n\}$, when it is her turn in the algorithm to choose a house, she chooses the best house for her among all houses that are not chosen in previous steps. So, she cannot obtain a better house than she gets in the serial dictatorship algorithm by misrepresenting her preferences. Hence, the serial dictatorship rule is strategy-proof.

We now define group strategy-proofness which is a coalitional version of strategy-proofness. Group strategy-proofness means that no subset of agents can manipulate the rule by misreporting their preferences.

Definition 6: Group Strategy-Proofness

A rule ϕ is **group strategy-proof** if for each problem (I, H, R) , there is no group of agents $\tilde{I} \subseteq I$ and no preference profile $\tilde{R}_{\tilde{I}} = (\tilde{R}_i)_{i \in \tilde{I}}$ such that

- for all $i \in \tilde{I}$, $\phi_i(I, H, (\tilde{R}_{\tilde{I}}, R_{-\tilde{I}})) R_i \phi_i(I, H, R)$, and
- for some $j \in \tilde{I}$, $\phi_j(I, H, (\tilde{R}_{\tilde{I}}, R_{-\tilde{I}})) P_j \phi_j(I, H, R)$.

When a group of agents $\tilde{I} \subseteq I$ coordinate among themselves and announces $\tilde{R}_{\tilde{I}} = (\tilde{R}_i)_{i \in \tilde{I}}$, then the reported preference profile is $(\tilde{R}_{\tilde{I}}, R_{-\tilde{I}})$. We say that **group \tilde{I} manipulates rule ϕ** by announcing $\tilde{R}_{\tilde{I}}$ if no agent in the group is worse off (i.e., for all $i \in \tilde{I}$, $\phi_i(I, H, (\tilde{R}_{\tilde{I}}, R_{-\tilde{I}})) R_i \phi_i(I, H, R)$) and some agents in the group are better off (i.e., for some $j \in \tilde{I}$, $\phi_j(I, H, (\tilde{R}_{\tilde{I}}, R_{-\tilde{I}})) P_j \phi_j(I, H, R)$). Rule ϕ is group strategy-proof if no group of agents can manipulate it.

The serial dictatorship rule is group strategy-proof, that is no group of agents can manipulate it by misrepresenting their preferences. This is because of the facts that agents have strict preferences over houses and when it is the turn of an agent in the serial dictatorship rule she chooses the best house for her among the all houses that are not chosen in previous steps.

Remark 1: (Group strategy-proofness implies strategy-proofness)

It is clear that if a rule is group strategy-proof then it is strategy-proof. That is, if a rule cannot be manipulated by a group of agents then it cannot be manipulated by a singleton agent. However, the converse is not true, i.e., a strategy-proof rule might not be group strategy-proof.

We now define non-bossiness property. A rule is non-bossy if an agent cannot change the allocation of other agents without changing her own allocation (Thomson, 2016).

Definition 7: Non-bossiness

A rule ϕ is **non-bossy** if for each problem (I, H, R) , each $i \in N$, and each $R'_i \in \mathcal{R}_i(H)$, $\phi_i(I, H, (R'_i, R_{-i})) = \phi_i(I, H, R)$ implies that $\phi(I, H, (R'_i, R_{-i})) = \phi(I, H, R)$.

The serial dictatorship rule is non-bossy. When an agent changes her preferences but her assigned house does not change under the serial dictatorship rule, then the assigned houses of other agents do not change as well.

Consider a problem (I, H, R) and an agent i such that she is the k th agent in the ordering of f , i.e., $f(k) = i$ for some $k \in \{1, \dots, n\}$. Agent i changes her preferences to R'_i and gets the same house in the serial dictatorship rule, i.e., $\phi_i(I, H, (R'_i, R_{-i})) = \phi_i(I, H, R)$. Note that nothing changes for every agent whose ordering is smaller than k in the serial dictatorship algorithm since these agents choose their houses before agent i . So, the serial dictatorship algorithm assigns the same houses to these agents at problems (I, H, R) and $(I, H, (R'_i, R_{-i}))$, that is, for all agent j such that $f^{-1}(j) < k$ we have $\phi_j(I, H, (R'_i, R_{-i})) = \phi_j(I, H, R)$. Since agent i obtains the same house when

she changes her preferences, the set of available houses (houses which are not chosen in previous steps) for agents whose ordering is greater than k does not change in the serial dictatorship algorithm for the problem $(I, H, (R'_i, R_{-i}))$. So, every agent whose ordering is greater than k chooses the same house in the serial dictatorship algorithm, i.e., for all agent j such that $f^{-1}(j) > k$ we have $\phi_j(I, H, (R'_i, R_{-i})) = \phi_j(I, H, R)$. Hence, $\phi(I, H, (R'_i, R_{-i})) = \phi(I, H, R)$, that is, the serial dictatorship rule is non-bossy.

We define neutrality which means the names of houses do not matter. We first introduce some notation.

Let $\tau: H \rightarrow H$ be a permutation of houses. When μ is an allocation for a house allocation problem (I, H, R) , then μ^τ is defined as follows: for each $i \in N$, $\mu_i^\tau = \tau(\mu(i))$. When $R_i \in \mathcal{R}_i(H)$ is preferences of agent i and a permutation τ is applied to houses, then R_i changes accordingly to $R_i^\tau \in \mathcal{R}_i(H)$ such that for each $h, h' \in H$,

$$hR_i^\tau h' \Leftrightarrow \tau^{-1}(h)R_i\tau^{-1}(h').$$

When $R = (R_1, \dots, R_n) \in \mathcal{R}^I$ is a preference profile, then $R^\tau = (R_1^\tau, \dots, R_n^\tau) \in \mathcal{R}^I$.

Definition 8: Neutrality

A rule ϕ is **neutral** if for any house allocation problem (I, H, R) and any permutation of houses $\tau: H \rightarrow H$, we have for any $i \in N$, $\phi_i(I, H, R^\tau) = \tau(\phi_i(I, H, R))$.

A rule is neutral if it is independent of the names of houses. That is, a rule ϕ assigns the house $\phi_i(I, H, R)$ to agent i for the house allocation problem (I, H, R) . When the names of houses change by τ , then the original problem becomes (I, H, R^τ) and the rule ϕ assigns the house $\phi_i(I, H, R^\tau)$ to agent i . The rule ϕ is neutral if for each $i \in N$ we have that $\phi_i(I, H, R^\tau) = \tau(\phi_i(I, H, R))$.

We now show how preferences of agents and the allocation for the serial dictatorship rule change accordingly under a given permutation of houses. Recall Example 1, where $H = \{h, h', \bar{h}, \hat{h}, \tilde{h}\}$. We consider the permutation $\tau: H \rightarrow H$ where $\tau(h) = \hat{h}$, $\tau(h') = \tilde{h}$, $\tau(\bar{h}) = h$, $\tau(\hat{h}) = h'$, and $\tau(\tilde{h}) = \bar{h}$.

The permuted preferences of agents $R^\tau = (R_A^\tau, R_B^\tau, R_C^\tau, R_D^\tau, R_E^\tau)$ are as follows:

$$\begin{aligned}
 R_A^\tau: & \bar{h} P_A^\tau \tilde{h} P_A^\tau \hat{h} P_A^\tau h P_A^\tau h', \\
 R_B^\tau: & \tilde{h} P_B^\tau h P_B^\tau \hat{h} P_B^\tau h' P_B^\tau \bar{h}, \\
 R_C^\tau: & \bar{h} P_C^\tau \hat{h} P_C^\tau h' P_C^\tau \tilde{h} P_C^\tau h, \\
 R_D^\tau: & \bar{h} P_D^\tau h' P_D^\tau \tilde{h} P_D^\tau h P_D^\tau \hat{h}, \\
 R_E^\tau: & h P_E^\tau \bar{h} P_E^\tau \hat{h} P_E^\tau h' P_E^\tau \tilde{h}.
 \end{aligned}$$

Remember that the ordering of agents f is $f(1) = C$, $f(2) = A$, $f(3) = B$, $f(4) = E$, and $f(5) = D$.

When we apply the serial dictatorship algorithm to the problem (I, H, R^τ) with respect to the ordering f , the first agent $f(1) = C$ chooses house \bar{h} at Step 1, the agent $f(2) = A$ chooses house \tilde{h} at Step 2, the agent $f(3) = B$ chooses house h at Step 3, the agent $f(4) = E$ chooses house \hat{h} at Step 4, and the last agent $f(5) = D$ in the ordering chooses house h' at Step 5. Thus the serial dictatorship rule assigns the matching μ^τ for the problem (I, H, R^τ) , where

$$\begin{aligned}
 & \text{for agent } A, \varphi_A^f(I, H, R^\tau) = \mu_A^\tau = \tilde{h} = \tau(h') \text{ where } h' = \mu_A = \varphi_A^f(I, H, R), \\
 & \text{for agent } B, \varphi_B^f(I, H, R^\tau) = \mu_B^\tau = h = \tau(\bar{h}) \text{ where } \bar{h} = \mu_B = \varphi_B^f(I, H, R), \\
 & \text{for agent } C, \varphi_C^f(I, H, R^\tau) = \mu_C^\tau = \bar{h} = \tau(\tilde{h}) \text{ where } \tilde{h} = \mu_C = \varphi_C^f(I, H, R), \\
 & \text{for agent } D, \varphi_D^f(I, H, R^\tau) = \mu_D^\tau = h' = \tau(\hat{h}) \text{ where } \hat{h} = \mu_D = \varphi_D^f(I, H, R), \\
 & \text{and} \\
 & \text{for agent } E, \varphi_E^f(I, H, R^\tau) = \mu_E^\tau = \hat{h} = \tau(h) \text{ where } h = \mu_E = \varphi_E^f(I, H, R).
 \end{aligned}$$

We now define *consistency* of a rule that means if some agents leave a house allocation problem with their allocated houses, then the rule allocates the remaining houses among the remaining agents in the same way as in the original problem. We first introduce some notation and the reduced problem.

For an agent $i \in I$ and a subset of houses $\hat{H} \subseteq H$, let $R_i^{\hat{H}}$ denote the restriction of R_i to subset of houses \hat{H} , that is, for any $h, h' \in \hat{H}$, $h R_i^{\hat{H}} h'$ if and only if $h R_i h'$. For a subset of agents $\hat{I} \subseteq I$ and a subset of houses $\hat{H} \subseteq H$, let $R_{\hat{I}}^{\hat{H}} = (R_i^{\hat{H}})_{i \in \hat{I}}$ denote the restriction of preference profile R to agents in \hat{I} and houses in \hat{H} .

Given a problem (I, H, R) and a matching μ , when a subset of agents $\hat{I} \subseteq I$ leave with their allocated houses $\hat{H} = \cup_{i \in \hat{I}} \mu(i)$ under μ , the set of remaining agents is $\tilde{I} = I \setminus \hat{I}$ and the set of remaining houses is $\tilde{H} = H \setminus \hat{H}$. Then, $(\tilde{I}, \tilde{H}, R_{\tilde{I}}^{\tilde{H}})$ is a *reduced problem* of (I, H, R) .

Definition 9: Consistency

A rule ϕ is **consistent** if for any house allocation problem (I, H, R) and any leaving of subset of agents $\hat{I} \subseteq I$ together with their allocated houses under ϕ , $\hat{H} = \phi_{\hat{I}}(I, H, R)$, then for the reduced problem $(\tilde{I}, \tilde{H}, \tilde{R})$, where $\tilde{I} = I \setminus \hat{I}$, $\tilde{H} = H \setminus \hat{H}$, and $\tilde{R} = R_{\hat{I}}^{\hat{H}}$, we have for each agent $i \in \tilde{I}$, $\phi_i(I, H, R) = \phi_i(\tilde{I}, \tilde{H}, \tilde{R})$.

We note that when the serial dictatorship algorithm is applied to the reduced problem $(\tilde{I}, \tilde{H}, \tilde{R})$, the ordering $f_{\tilde{I}}$ which is restricted to the set of remaining agents is used. The ordering of remaining agents does not change at $f_{\tilde{I}}$, i.e., for any agents $i, j \in \tilde{I}$, $f(i) < f(j)$ if and only if $f_{\tilde{I}}(i) < f_{\tilde{I}}(j)$.

We now show that the serial dictatorship rule is consistent. We first consider the case that one agent is removed from problem with her allocated house.

Consider a house allocation problem (I, H, R) , an ordering of agents f , and an agent i such that $f(k) = i$ for some $k \in \{1, \dots, n\}$, i.e., agent i is the k th agent in the ordering of f . In the serial dictatorship algorithm for problem (I, H, R) , agent i chooses house h at step k which is not chosen in previous steps, and then the rule assigns house h to agent i , i.e., $h = \varphi_i^f(I, H, R)$. When agent i leaves problem with house h , the reduced problem is $(\tilde{I}, \tilde{H}, \tilde{R})$ where $\tilde{I} = I \setminus \{i\}$, $\tilde{H} = H \setminus \{h\}$, and $\tilde{R} = R_{\tilde{I}}^{\tilde{H}}$. Consider an agent $j \in \tilde{I}$ such that the ordering of agent j is greater than k in the ordering f , i.e., $f^{-1}(j) > k$, then agent j chooses a house after agent i in the serial dictatorship algorithm for problem (I, H, R) . When we consider the reduced problem $(\tilde{I}, \tilde{H}, \tilde{R})$, when it is the turn of agent j in the serial dictatorship algorithm, since $f^{-1}(j) > k$, the set of available houses that are not chosen in previous steps are same. So, agent j chooses the same house in the reduced problem. Hence, nothing changes for every agent whose ordering is after agent i , that is, the set of available houses are same for the original and reduced problems for those agents and each of them chooses the same house at the two problems. Consider an agent $j \in \tilde{I}$ such that the ordering of agent j is smaller than k in the ordering f , i.e., $f^{-1}(j) < k$, then agent j chooses a house before agent i in the serial dictatorship algorithm for problem (I, H, R) . Since, $f^{-1}(j) < k$ and j does not choose house h in the original problem (I, H, R) , the set of available houses in the reduced problem is equal to that of in the original problem minus the house h . The house that agent j chooses in the original problem is available in the reduced problem and agent j chooses the same house in the reduced problem. So, every agent whose ordering is before agent i is allocated the same house at the two problems by the serial dictatorship rule.

When a group of agents is removed from a house allocation problem with their allocated houses, we consider it step by step such that at each step only one agent in

the group leaves with her allocated house. Then, by the above argument, removing one agent with her allocated house does not change the allocation of remaining houses to remaining agents at each step. So, the removal of a group with their houses does not change the allocation of remaining agents, i.e., the serial dictatorship rule is consistent.

Recall Example 1. Consider that agents B and C leave from the problem (I, H, R) with their assigned houses under the serial dictatorship rule. That is, $\hat{I} = \{B, C\}$ and $\hat{H} = \{\bar{h}, \tilde{h}\}$, where $\varphi_B^f(I, H, R) = \mu(B) = \bar{h}$ and $\varphi_C^f(I, H, R) = \mu(C) = \tilde{h}$.

Then the set remaining agents is $\tilde{I} = I \setminus \hat{I} = \{A, E, D\}$ and the set of remaining houses is $\tilde{H} = H \setminus \hat{H} = \{h, h', \hat{h}\}$, and the preferences $\tilde{R} = R_{\tilde{I}}^{\tilde{H}}$ is as follows:

$$\begin{aligned} \tilde{R}_A &: h' \tilde{P}_A h \tilde{P}_A \hat{h}, \\ \tilde{R}_D &: \hat{h} \tilde{P}_D h' \tilde{P}_D h, \\ \tilde{R}_E &: h \tilde{P}_E \hat{h} \tilde{P}_E h'. \end{aligned}$$

We consider the ordering $\tilde{f} = f_{\tilde{I}}$ which is the restriction of f to \tilde{I} , so $\tilde{f}(1) = A$, $\tilde{f}(2) = E$, and $\tilde{f}(3) = D$. When the serial dictatorship algorithm is applied to the reduced problem $(\tilde{I}, \tilde{H}, \tilde{R})$ with respect to ordering \tilde{f} , the first agent A in the ordering chooses house h' in the first step, the second agent E in the ordering chooses house h in the second step, and the last agent D in the ordering chooses house \hat{h} in the third step. So, $\varphi^{\tilde{f}}(\tilde{I}, \tilde{H}, \tilde{R}) = \tilde{\mu}$, where $\tilde{\mu}(A) = h'$, $\tilde{\mu}(D) = \hat{h}$, and $\tilde{\mu}(E) = h$. See that for each agent in $i \in \tilde{I}$ we have $\varphi_i^{\tilde{f}}(\tilde{I}, \tilde{H}, \tilde{R}) = \varphi_i^f(I, H, R)$.

Remark 2: (Consistency implies non-bossiness)

If a rule is consistent then it satisfies non-bossiness. Consider a rule which is consistent, and an agent in a given problem such that this agent changes her preferences and obtains the same house that she gets in the original problem under the rule. When we remove this agent with her assigned house from the problem at which she has changed preferences, then the rule assigns the remaining houses to remaining agents as it does in the original problem by consistency. Hence, the rule makes the same assignment for the two problems, i.e., the rule satisfies non-bossiness.

Remark 3: (Strategy-proofness and nonbossiness are equivalent to group strategy-proofness) Pápai (2000) showed that a rule satisfies strategy-proofness and nonbossiness if and only if it is group strategy-proof.

5. CONCLUSION

We consider house allocation problems and the serial dictatorship rule. A house allocation problem consists of a finite set of agents and a finite set of houses such that each agent has strict preferences over houses. An outcome of a house allocation problem is called a matching, and a matching specifies how houses are allocated to agents such that each agent obtains one house. The serial dictatorship rule is one of the most studied rules in the literature for house allocation problems. For a given house allocation problem and an ordering of agents, the serial dictatorship rule assigns the first agent in the ordering to her best house, the second agent in the ordering the best house for her among all houses which are not assigned in previous steps, and so on, that is each agent in the ordering is assigned to her best house among the available houses.

We consider some properties that are satisfied by the serial dictatorship rule. These properties are Pareto optimality, (group) strategy-proofness, non-bossiness, neutrality, and consistency. We provide the formal definitions of these properties and explain that the serial dictatorship rule satisfies these properties.

There are other problems of allocation of indivisible objects to a set of agents based on the ownership rights of houses. The one that we consider in this paper is the house allocation problem (Hylland and Zeckhauser, 1979) at which all houses are vacant and hence we can say that all houses are collectively owned by the set of agents.

Another problem is the housing market (or house exchange problem) introduced by Shapley and Scarf (1974). In a housing market, every agent owns a house and hence every house is occupied by an agent (i.e., there is no vacant house). A matching for a housing market is the reallocation of houses among agents. The famous rule for a housing market is **Gale's top trading cycles rule** which is defined by Shapley and Scarf (1974), and is attributed to David Gale. Studies of the top trading cycles rule are Roth and Postlewaite (1977), Roth (1982), Bird (1984), Ma (1994), Sönmez (1999), Svensson (1999), Takamiya (2001), Morrill (2013), Ehlers (2014), and Pycia and Ünver (2017), among others.

Another problem is a hybrid of house allocation problem and a housing market, that is called the house allocation problem with existing tenants (Abdulkadiroglu and Sönmez, 1999). Each house in this problem is either occupied by an agent or a vacant house. Abdulkadiroglu and Sönmez (1999) introduced the **YRMH-IGYT** (you request my house I get your turn) **rule** for this problem, which belongs to the class of top trading cycles rules for house allocation problems with existing tenants. For studies regarding the house allocation problems with existing tenants, we refer readers to Abdulkadiroglu and Sönmez (1999), Sönmez and Ünver (2005; 2010), Ekici (2013), and Karakaya et al. (2019), among others.

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Chapter 25

The Consequence of Unavoidable Foreign Deficit: Facing a Stabilisation Program

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ABSTRACT

INTRODUCTION

This plan has been prepared as a series of deciduous measures after the economic stress in 1977-1978 got denser, and by adding the missing points it turned to be a major of a long -termed policies of the economy. The main property of these policies is that, the prices for goods and services occurring freely in the market will give a major direction to the economy. Thus, prices will determine the consumption, production and investments, and more importantly the market itself will neglect the abnormal affinity from the balance prices in the long term. So, the government itself will not manipulate the market, but only control the money supply and will not increase the amount of public expenditure more than the production. Till 1970s it was thought that the growth in economy can be provided by the public income and expenditure. But the crisis experienced with unemployment and the acceleration of inflation gave birth to a new idea: the government should not employ fiscal policies, but only monetary policies. By the wide usage of banknote, the developments related to demand for money had a noticeable importance on the economy. Another idea after the Second World War was that, the economic policies which developed countries are applying can also be valid for developing countries. Free-market fans thought this could be possible "anywhere and anytime". Because even if there is inflation, limiting the money and credit supply, improving the budget deficit and similar measures like decreasing the total demand won't present an obstacle for the application of these policies. Nevertheless, some economists think that the policies in a developed country won't be useful for a still developing country's economic structure.

A set of measures needed to be applied after January 1980. Measures like limiting money growth and credit supply and the budget expenditure, devaluation, increasing the prices of basic goods, increasing the interests and limiting the revenue/fee amount were necessary to finding external credits (from IMF).

A – PRICING

The period of pricing started after the plan in 1980, and got importance after leaving it to the market conditions. Thus, the pricing will be determined by the conditions of the market depending on demand and supply. Whilst analyzing the pricing process, the policies are analyzed due to presenting an income to the "goods and services" markets and "labor and capital" markets and becoming the determining factor of the external value of TL.

Commodity and services market: The primer reason for the desire to leave the commodity and services prices to be determined by the market conditions is to prevent the occurrence of double-price fact. In and after 1978, the stock and trade

of the produced industrial commodity became very profiting, and thereby two different prices occurred in the market. One of these prices was the valid price in the market, and the other in the black-market. This difference caused benefit. "So, the government stopped to control the prices by abolishing the commission, and increased the prices of goods and services produced in public sector around %100-400 (Kepenek & Yenturk; 1994: 198)". Nearby the concept of basic goods had been limited; coal, fertilizer, all commodity and services except electricity, railways & sealine carriage and public institutions had been licensed for pricing their commodity and services. Even though they were licensed, since SEE administrations had been stated, government could take his own option whilst the pricing process. The prices of goods and services of SEE will be determined by the related institutions, and this will clear the big service deficit, and also, the need of resource transfer from the national budget will be prevented. But among all of these, free market prices were a major problem of the SEES. Because SEES were not profiting of technological or economic activities. "The profit in scene" was coming only from the high prices.

If left single, besides for the commodity and services not provided by the SEE's, the liberation of prices will not be enough for the active usage of the resources. As a serious probability, mentioning the monopolistic applications, problems in production technology, supply usage and distribution in the developing countries, plans depending on the liberation of prices may not work. Neo-classic economy suggests that active usage of the resources cannot be effective in the economies including monopolistic applications. If it is obvious that only the liberation of prices cannot provide the effective usage of the resources, and if there is no magic way to increase the amount of production, then it is clear that the main problem is; the limited domestic production will cause new increases in prices. Imports are another branch of the liberation in prices. The commodity produced domestically with a cost much above of the global prices should be imported (by imports, national production will stop and this will cause unemployment possible leading to a social disease, so the amount of imports should be determined according to these factors). We should not forget that depending on the determination of the variable global prices and since they are changing, active usage of the resources may not be provided anytime.

Finally, domestic production can compete with the external market only by providing the quality norms after a determined education period. Labor and capital market: By the 24th of January program, determining the prices of the production factors like labor and capital (wages and interests) is left to the market.

Wages: Within the 24th of January program, there are 3 major reasons for the low wages.

- 1-) To stimulate the investments by increasing the amount of profit,
- 2-) To lower the domestic production cost for increasing the competitive power of commodity which are imported.
- 3-) To limit the domestic demand and increase the imports of the goods which are not domestically sold.

Shortly, by the low wages, it is aimed that high profit amounts will increase the investments and the factors of cost-domestic demand will increase exports. It seems that the second point is an aim for setting the wages low, but the cost of production can be lowered by increasing the production technology, by organizing of production and by setting domestic measures. The desired decrease in production costs couldn't be realized only by low wages, because the amount of labor within the production cost was only about %15-20.

Interests: A plan like these major acts should have left the determination of the interests due to the conditions of the market. The validity of the liberation of interests seems possible institutionally, but not possible in application.

The amount of the interest depends on supply and demand of the capital. We should not forget that if the banks increase the interests for the reserves, an increase of savings accounts, bank resources and resources will occur in the banks and to increase the interests only for increasing the bank's reserves has a positive effect. But the banks' income from the credit interests should be more than the interests they pay for the savings account, only then preliminary requirement of profit can be provided.

Within production, trade and other service sectors, by using the credits, a profit more than the amount of the interest should be made. Thus, the interest rate acting as the price of the capital determines the investment resources and operating capital costs.

High interest rates cause the capital to shift to areas in which less amount of capital is needed. The plan of 24th of January suggests low prices for the labor and revenue, and aims investments less dense due to capital. Thus, more labor, less capital will be used. But the relation between labor & capital is not that elastic. So, increasing the interests will direct the production to denser labor areas, and prevent settling dense capital investments which force the technological improvements. Another desire with the high interest rates is the external bank capitals. But to realize this, some kind of a guarantee should be provided.

If we summarize, by increasing the interest rates, the aim is to increase the resources of the banks. Also, by the increase of the investment and operating costs, production can give birth to less dense capital industries. In long term, this can be an obstacle for a production using dense technology & capital.

The external change of the value of TL: By the application of the plan, the value of TL decreased with an amount of %48,62 (1\$-47,80 TL to 1\$-71,40 TL). Since 1% of July 1981, these decreases or devaluations became frequent. Whilst changing the exchange rate continuously, the aim was to lower the difference between the legal and black-market values of TL, find external credits and to stimulate external workers to bring more exchange to Turkey. So, determining the exchange rate, the value of TL would be decreased more than the domestic amount of price increases, and exports would be increased. Also, by continuous devaluation, the aim was to lower the prices for exports and stimulate an increase in exports. If exports were a fact only depending on the prices, an increase in exports can be made by continuous devaluation. And this proves us that; devaluation has a negative effect on exports. Because imports mainly consists of raw and investment commodities, and the increase in their prices also increases the total costs. Shortly, in long term devaluation can increase the amounts of exports. But there is no positive effect of devaluation in countries where the industrial investments and production are depending to imports (Ozer; 1986: 133). Finally, it is decided that the plan will support the labor and production related to agriculture.

B – FREE MARKET ECONOMY

i) External Pressure

It was the time for the repayment of the debt by the end of 1979. If they are not postponed, they couldn't be paid back, and the economy would stop. IMF, World Bank and OECD were strong enough in a bargain, and set a pressure against Turkey to turn external with the conditions of the free market, and this pressure was maximized before the decisions of 24th of January. The increase of oil prices in 1979 brought the thought of a similar possibility of increase in 1980, and even the income from the exports will not pay the bill of oil. Also, Turkey had lost his credibility in international monetary market, and couldn't want new credits from trading financial institutions. Even OECD gave 253,7 million US dollars of 989,3 million US dollars which was previously announced in 1979 that would be given to Turkey. Saudi Arabia rejected Turkey's application for credit. Turkey even couldn't take official credits without the approval of IMF. Thus, for the aim of opening the economy by the free market economy, the decisions known as the 24th of January plan was made. By this plan, Turkey's desire was to provide credit from the World Bank's structural harmony program, but the conditions for this credit approved by the World Bank were very tough. Turkey could only benefit from the credit program by 17 political promises, and they were (Kazgan; 1988: 337):

Policies on foreign trade and foreign exchange:

1) The external value of TL will be devaluated due to the difference of the domestic and foreign inflation rates to minimize the difference instantly

2) Imports will be liberated and industry will not be protected by tariffs and quotas

3) Exports will be stimulated and private sector will be in a major position; institutional support will be provided by exports subsidies and foreign capital will be stimulated policies on production sector

4) Price subsidies given to the sectors will be abolished

5) All production sectors will be free for foreign capital

6) Institutional regulations will be made plan of public investments

7) Energy production will be in a major position; non-profitting projects will be stopped by an elimination among the projects

8) SEE' s will re-arranged to profit; they will not be a problem for the budget Mobilization of resources

9) Government will arrange the expenditure from the budget, interests will be arranged to stimulate the savings

10) Institutional progress will be made to obey the basic rules of debt management

Turkey also made other promises for postponing of the loan repayments to OECD countries and a deal with IMF, because Turkey wanted to sign a 3-year termed stand-by deal with IMF covering 1980-1983 (later the term of this deal had been lengthened till the end of 1984). The promises to IMF were:

1) It will be provided that Turkish economy will increasingly turn into a free market economy.

2) To stop inflation, strict monetary policies will be applied, limits for credits will be set for this aim

3) Oil prices, basic prices of agricultural products, SEE prices will freely be determined by these institutions

4) Public expenditure will be limited, but energy investments won't be affected.

5) Rates of interests will be increased and conditions of competition will be provided in financial market.

6) Revenue problems will be solved within the perspectives of the coming economic program.

7) Rate of exchange will be adjusted to provide competition for Turkey, and following the external assistance liberation will be set.

8) Loan management will be carried out carefully, loans with expired dates won't increase

9) Government will continuously seek the advice of IMF about the possible economic regulations.

Thus, these decisions were set to provide credit from IMF, OECD and World Bank after 24th of January and possibly provided a basic point for the new government which took the mission by 6th October 1983 within the decisions made on 29th December. After all of these promises and decisions, 2,6 billion \$ in 1980, 2,26 billion \$ in 1981, 1,76 billion \$ in 1982, 1,87 billion \$ in 1983 were taken as program credits. Within 5 years, credits of 3,29 billion \$ from OECD, 1 billion \$ from IMF, 1,3 billion \$ from World Bank has been used. Also, Saudi Arabia made a credit help of 400 million \$, from Islamic Development Bank 340 million \$, from OPEC fund 400 million \$ and from European Residential fund 400 million \$ were the other credits. The stand-by deal made with IMF had been completed by 1984, and Turkey's success had been approved by IMF. Thus, Turkey could borrow credits from international banks and capital markets again.

ii) Domestic Pressure

Nearby the external pressure, domestic pressure had increased for opening up the economy external. Some business enterprises were desiring the minimization of the public manipulation within the economy, and nearby credits from OECD were getting late and there were problems with debt repayment, also any trade credits couldn't be found from the international free market; so, these all made a sum to maximize the domestic pressure. The economic crisis and the public economic methods applied during 1978-1979 did not give any chance for growing and finding a place in the global market for the small-scaled firms. So, these firms were captured one by one by the bigger groups like Koç, Sabancı and Eczacıbaşı which first came in scene in 1960's and made progress in the 1970's. Also, Turkish banks needed to open up (correspondences and representatives) because of the Turkish people living and working abroad, and the construction companies working in the middle east. 1978 happened as a dramatic year for exporters; food-drink sector exports decreased by %25.4, leather-fabrics by % 22.8, chemistry industry by %29.1, non-metal mines by %42.4 and tools exports decreased by %33.9. Because of the war between Iran and Iraq, the need for import among the other middle east countries has increased, and Turkey was trying to export anything to these countries, besides Turkey was trying to set good relations with the Arabic countries depending on the membership for the Islamic Conference. Finally, Turkey succeeded to get credit from the Islamic bank in

1979. By these days, imports were affecting domestic inflation in two ways. Firstly, the close-fitting inflation of imports was rapidly increasing. And secondly, production has decreased depending on the lack of commodity imports, and this was stimulating the domestic inflation. Also, there was an amount of imports nearly about 4,5-5 billion \$, and it was thought that the real amount was much bigger than this if black-market mentioned. By 25th January, the decisions announced found support from the major capital groups. Even positive evaluations had been made in the newspaper of this group. The same group announced a positive report even after 4 years. But primarily the Chambers Association, workers and small-average scaled businessmen were not thinking so. By 1987, problems with financing and combined bankruptcies, and worker's complaints of their revenues summed into workers acts. Finally, the large-scaled capital groups which were writing positive reports started to criticize the government.

C – THE PERIOD OF OPENING UP

The major step of opening up the economy was the import substitution industrialization strategies. The main aim of these strategies was to provide domestic industrialization able to produce the goods previously imported. Turkey firstly managed the domestic production of consumer goods. Within the first years, domestic demand for food, textiles, clothes could be provided by national industry. After the first stage consisting of the domestic production of consumer's commodities, the second stage was to produce durables. These kinds of strategies are aiming to protect the domestic market against the external competition, to stimulate industrial investments, to strengthen the domestic demand by income and fee policies and includes overvalued exchange rate policies.

During this period, policies of absolute protection had been applied, and this means to ban the imports of anything without comparing the cost or quality whenever the national production can provide the domestic demand of it. It is known that the imports of some commodity had been obstructed by customs taxes and quotas. The most important aim of opening the economy was to improve the foreign trade deficit, since problems experienced whilst external payments were important ingredients of the crisis. This problem would be solved out by increasing exports. Increasing exports was depending on factors like the pricing process, macro policies and devaluation. Especially the pricing process and fiscal policies due to limit effective demand aims to increase exports. Also increase in prices and decrease in labor income will provide exports of the production. Also, continuous devaluation will lower the prices of the exported goods compared to external monetary unit and assist ease in sale. Because improving the trade deficit

depends on the sum of exports and imports price elasticity being bigger than 1 (Marshall-Lerner condition). Another way to increase exports was to stimulate the exporters. So, firstly the license given to exporters about holding foreign exchange had been widened. The imports taxes due to the supply for the production aiming exports were cancelled. Financial support has been provided for exporters under the name of credit subsidies and tax redemption. With founding free areas, ease in operations has been provided. These eases are all financial, short-termed and deciduous measures. But the main point to focus on were the problems depending on the production and exports of industrial goods and long termed problems consisting of production costs. For the validity of the program, also measures about imports should be decided, and firstly liberate imports. Thus, foreign capital within the country would increase, companies producing goods domestically would progress to provide the same quality conditions as the external companies, the ones who couldn't manage that would stop production. At least, these regulations will protect the consumer. Of course, the liberation won't happen suddenly, national production companies would be warned before that happens and they could progress themselves and provide quality conditions within a period of time, because sudden liberation of imports could lower the amount of domestic production enormously and increase unemployment (Paiva,2013: 130). Even nowadays, countries supporting the idea of liberation in foreign trade protect a part of their domestic industry.

D – KEY POINTS OF THE PROGRAM

There are 5 keys of the program. The first is liberating the economy and minimizing the government sector. The second is the new regulations on fees and syndical acts. The third is the liberation of interest rates and the control of inflation. The fourth is liberation in exports and imports. The fifth is the liberation of the foreign exchange market and prices.

i) Liberating the Economy and Minimizing the Government Sector

Three measures were taken for this end:

First measure provides a decrease in the public manipulation about goods and Services. For this reason, the decision of publicizing the mines due to 24th of January program and the monopoly in tobacco has been abolished. In February 1984 (after decisions of 29th of October), the government has arranged two types of sale for providing new financial resources and minimize the public sector. The first was the "income share" bonds retributed to the income of the public institutions sold to public (this had been first applied in 1985). The second was

to sell profit-aiming state enterprises by bonds or completely (and this had been applied in 1987).

The second way was aiming to minimize public manipulation determining the prices of goods and services. After the decisions of 24th of January, prices were left to free market. Firstly, the committee related with determining the prices-controlling and co-ordination was abolished. SEEs were set autarchic to determine their own prices. The list of basic and critically important goods has been decreased to a few topics. After the decisions of 29th of December, SEEs were split into two as "aiming-profit" and "serving-public" ones. Permitting the "aiming-profit" SEEs to determine their own prices provided the determination of the prices in the free market and decreased the need of support from the national budget. Also, after the decisions of 29th of December, the control of the prices in the domestic market had been tried to control with liberation in imports. Because it was thought that the liberation in imports can act similar to the public control of the prices.

The third way was to decrease public taxes. As an example, the unrelated taxes taken from capital income has been decreased to a much by lowering. Related taxes were added with SEE prices increases and the total tax had been divided into VAT (by 1985) and other related taxes. Thus, the aim was to increase the benefit of the private business-enterprise and to provide economic growth.

ii) New Regulations on Fees and Syndical Actions

After 12th of September, a law had been prepared on "refreshing the contracts expired whenever it is necessary for the public". And a referee committee was founded. With these, the aim was to solve the right for collective bargaining. Because activities of some worker unions and confederations had been banned and strike and lockout rights had been postponed by the committee of national security. The major referee committee was refreshing the expired contracts and the revenues were determined by the military committee. According to the principles of the new organic-law, new law on worker unions, mass-contracts, strike and lockout were in act, and the worker unions had a time of 6 months for re-organization.

After the national election made on the 6th November, activities of the worker unions were liberated and the option for strike and lockout came in scene again by 1984. A "co-ordination committee" to determine the basic principles of the strategy of mass contracting and to determine the increases in prices or to bring the revenues up to the maximum had been founded (but since it was crosswise due to the deal of international workers foundation, it was abolished by a decision on 9th April 1987).

iii) Liberation of Interest Rates and the Control of Inflation

Interest rates present a key price and the aim was to leave the determination of the rates and thus provide the interest rates' shift from negative to positive and to control the inflation by this way. Since 1st June 1980, this aim to liberate the interest rates had been done by determining the maximum administration. So, termed savings-accounts and credit limits would be determined by the related banks due to free bargain method. Also, the manipulation on the demand and supply freely operating in the fund market done by the Association of the banks has been abolished.

Regulations were made for exporters to borrow money with relatively low interests. Also, banks were permitted to emit certificate of deposits, but this was abolished by another decision on 12th June 1983. Besides limiting the liberties in the fund market, the banking system was re-arranged. The opportunity to determine the interest rate for the savings- accounts had been left to the ministry of finance. A strict control to the banks has been stated and the amount of credit they've given and the amount of savings-accounts they could collect has been limited. Interests on credits have been liberated. IMF limited credit age from the national central bank to the public sector by June 1980. Also, after this, IMF continued to control the money supply by limiting the net domestic assets (Çakıcı et al., 2003:139-167).

iv) Liberation in Imports and Export

Factors like imports and exports strongly affecting the exchange market have been liberated. Some regulations for this aim are; decreasing the deposit and stick taxes, decreasing the number of commodities within the quota, abolishing certification and minimizing the licenses as possible they can be. For liberation of imports, firstly the (average) customs tax amount has been decreased from %76.3 to %45.9 (but still remained %100 or more than this for many industrial products). After this, a decision was made to decrease the indirect public controls. The imports made from the quota list were %19.2 of the total by 1979, but later this amount decreased to %1. As another step, the banned imports of some commodity (except drugs, guns etc.) were permitted, and a serious decrease in administrative bureaucracy control has been provided. Also, the public control has been abolished nearly completely, and a stimulation system has been provided. Customs taxes and similar requirements for the extra products or package of the exported commodity had been abolished. The interest rates for the exports credits have been lowered. Institution tax has been decreased. By continuing the real devaluation of TL, exports were stimulated and this was the most noticeable development of the period.

v) Liberation of the Exchange Market and Prices

To make TL "convertible", the determination of the price of the exchange in the free market was desired. For this aim, exchange rate system turned into a controlled alternating daily rate system determined by the national central bank by May 1981. After this, the value of TL would be determined by the national bank, doing this by opposing to the difference between external and domestic inflation, calculating the effects of the changes within the terms of trade and whether stimulating exports and limiting imports. But soon after the 29th December decisions, commercial banks were permitted to determine exchange rate.

Commercial banks could determine the rate of exchange with a margin more or less compared to the "major rate" determined by the national central bank, but by 1 July 1985, they were forced to alternate the rate within %6 (more or less) of the "major rate". Later depending on speculations, this margin had been lowered to %1, and more after the determination of exchange rate had been done only the central bank. The controls and bans on the foreign exchange had been decreased, and in-law regulations had been completely abolished. All banks had been authorized to hold exchange position, and the amount they can hold had been increased. Also, by 29th December decisions, companies were liberated to operate with exchange. Every citizen had been permitted to hold foreign currency, own and use accounts of foreign exchange, and perform capital exports by cash. But exports of capital was only possible within a limit determined.

Excess amounts of capital exports needed to be approved by the council of ministry. External individuals were liberated to buy bonds of Turkish companies, and external companies were permitted to invest in Turkey or open correspondent offices in Turkey. Time limit within travelling abroad had been abolished. The amount of foreign currency permitted for going abroad had been increased. Finally, the trade done by the clearing deals with the Eastern Countries had been decided to be done using free exchange.

E- FOREIGN CAPITAL

The idea "economic growth depends on external resources" was the main reason for the support provided to private capital investments. One of the main assumptions of the program is that foreign capital will solve the problems ranging from balance of payments deficits, insufficient savings to transfer of technology.

i) Expecting Foreign Capital

The arrangements of management and law done by the program majority effected the stimulation of the expectation of foreign capital. The perspectives of

the program were trying to stimulate the inflow of foreign capital and widen the area they will affect. Firstly, to provide an ease within bureaucratic operations, a foreign capital perspectives law has been prepared, and depending on it, the office of foreign capital related to the ministry of prime was authorized to operate within the services previously provided by many of the ministries and SPO. Also, by the decisions due to the laws stimulating foreign capital and a law of the perspectives, ease had been provided for foreign capital to operate within banking, agriculture, and tourism sectors. By the regulations made for searching oil, %35 of the amount of oil found by foreign firms was permitted to be exported.

ii) Increasing the Supply of Foreign Capital

Effective stimulation, refreshing old laws and even stating new regulations were only some of the measures stated to increase the supply of foreign capital. The reasons for acting so were to lower the effect of the decrease within public investments, to accelerate the supply of new technologies, to limit foreign loans, and finally provide a case for the industrial sector due to opening of the economy.

By founding the general directorate of Free ports and subordinating it to the prime ministry in 1983, Mersin and Antalya Sea Ports had been announced free ports, and the main principles on possible operations had been summarized into law by 29th of May, 1985.

Turkey accepted two types of liquidation to change his commercial debt out of guarantee into capital supply, the first way was to repay in TL, and the second was a 10-year termed repayment with an interest of %7.5 due to US dollar. The right for oil search consisting of %35 considered above has been increased to %45, but the search & operations should be far from the coast. Foreign capital applications had been authorized to the office of foreign capital related to the prime ministry. Also, depending on this authorization, the office of foreign capital stated the option to take part within the domestic investments, to own bond papers of Turkish companies, have correspondent offices in Turkey and to have the right for buying real estate for external institutions or individuals not living in Turkey (Michalet & Brochier & Llau; 1981: 443).. For the ones living in Turkey, ease for exchange has been provided for foreign investments and payee/debt status.

F – MACROECONOMIC POLICY

There are two major points to focus on whilst analyzing the macroeconomic policies related to the decisions of 24th January 1980. These are the limitation of the public sector and the most suiting increase in prices.

i) Limitation of the Public Sector

Financial and monetary policies are applied for providing total balance of demand and supply. The major desire is to stop inflation by limiting demand. And demand can be limited by limiting money supply and public expenditure. The usage of fiscal and monetary policies shows the idea that "price increases are caused by excess demand". But within a developing country, an increase in supply (production) should be observed.

Another basic perspective within the program was to oppose the growth of the public sector and SEEs by limiting the range of related operations, thus provide an accelerating growth in private sector. This idea had no basically background but at least it was aiming to stimulate economic growth depending on the private sector by limiting the effect of the public sector, and a possible economic growth due to the private sector was strictly depending on unification with foreign capital.

ii) Most Suitable Price Increases

The importance of price increase rate lies in the perspectives of the mentioned program which took prices as the basis. Within the program, price increase rates had been decreased, and a proper increase had been seeking. Analyzing the price indicators, we clearly see that the program has related the increase in production or the profiting of the investments to these indicators. By fiscal and monetary policies, effective demand and inflation will be held within a proper limit, and this will provide profit and stimulate the investments for production. The validity of these ideas is also related to less-profiting off-production economic operations from the production. In this period, the structure of the market and the options of distribution have a major importance. Thus, an increase in production providing profit related to the most suiting price increase rate can only be possible if there are many production units and an effective distribution is possible (Tugen;1997: 171). In Turkey, the production and market structure of the sectors (except agriculture) can modify their distribution and sale option to a more profiting condition. Thus, the most suiting price increase rate may possibly not affect production but may turn distribution and sale options to a more profiting condition, and this can cause an increase in prices.

Proper price applications as an ingredient of the political stabilizing programs are depending on limiting the demand within a range by fiscal and monetary policies and providing production with so valued price increases. National production can be a function of the most suiting price increase, but because of the structure of production and market, this can turn head over feet. If the opposite is valid, the program cannot hold the price increases within the desired limit, and

also cannot control the acceleration of inflation. Thus, the structures of production and markets within developing countries like Turkey, finding the most suiting price range is a slight possibility.

G – QUALITATIVE PERSPECTIVES OF THE PROGRAM

We can analyze the qualitative perspectives either domestically or externally. External perspectives: the economists of the World Bank and IMF had some desire and expectations from Turkey. Primarily, they were thinking that Turkey should not struggle for heavy industries, but for labor dense production methods. Thus, production costs could compete with foreign prices. So, national industrial production should not be protected from foreign competition, and public industrial manipulations shall not be done. So, mistakes done by non-profiting investments like steel and petrochemical industries won't be repeated. Finally, it's been seen that the measures within the mentioned economic program were the first steps for a long-termed permanent economic growth. The structural aims of the program were to close-fit the public sector, liberating capital & labor markets due to demand and supply, and more liberal conditions among domestic and foreign market. Measures were set due to the effects of continuous devaluation and economic developments were left to the conditions of the market. Moreover, lethal resources needed for industrialization were related to the conditions of the market and a possible question would arise soon; "will industrialization occur?" (Haller; 1974: 267). This question had another perspective depending on wages and related topics, and these were the domestic perspectives of the transformation.

Domestic perspectives: The change due to the perspectives of the program had two major effects; wages and other effects related to this fact like income share, reproduction and long-termed development options.

Wages had been decreased after leaving the determination process to the conditions of the free market. A Turkish worker with the same qualification compared to the one working in a developed country was getting a lower wage. The low revenue policies applied due to the program had some results. The first of these was the limitation of the syndical rights of the workers. Another result was that depending on low revenue policies, qualified and specialized workers were migrating to developed countries. This fact is known as "brain migration" and results with lack of labor. Thus, labor is a production factor and since it's been affected by the decrease of the revenue, it causes social effects.

CONCLUSION

By the free market economy within this period, some tenured persons and companies had occurred. These tenures later got denser turning nearly into a "national mercantilism". Also, the highness of real interest rates led the private sector to limit their investments and this fact effected investments related with direct production negatively. Production industries are vitally important for preparing the economy for the future, but new increases in capacities within these production industries couldn't be made, and foreign capital could only support the sector of services like tourism, banking and trade, not industrialization. The private sector could not create plus capacity within industrialization, and the exports portfolio was only consisting of a few common topics; and this was a clear contradiction in "external growth with free market economy". Turkey failed in the effort to liberate interest rates and exchange price since institutional background was missing. Liberation of imports went on, but the excess amount of luxury imports was the major proof for the unfair share of income. Within economy, administrative decisions, rate of inflation, interest rates and the conditions of the market were vague. The vanishing of the small-scaled companies leaving their places to large-scaled companies was another result related with growing external within free market, since the increase in the interest rates and income prices brought these companies to the final, and a monopoly risk was arising. Another result was the increase in SEEs aiming to save drawn companies. Much of the banks and companies were saved in this way. By 1987, it had been announced that these were going to be sold, but no income had occurred from this sale; this turned to be a donation more than a sale. By the sale of profiting SEEs to the private enterprise, deficit was paid by the public, and the benefit was shared between some groups, and this effected income share negatively.

Up to 1984, Turkey properly repaid the movements, thus succeeded to borrow large- scaled credits from international banks and capital markets, but by the end of 1987, faced problems in movement repayments depending on excess external movements made rapidly. Turkey was the fifth among the NDC countries which could not repay their movements, and that was the reason for serious political concessions. The critical position in these foreign debts were depending on some definite reason: movements were in different monetary units, and of the total goods exports was directed to pay the interest repayments, and increasingly borrowing credit with shorter terms and higher interests were some of the reasons.

The most noticeable success of this period is that Turkey succeeded to pay the half amount of the foreign debt interests with increasing exports, not limiting imports only by depending on to own sources. There are two ways for proper

repayment of foreign debt. The first is to increase exports, and the second is to decrease current account imbalance. This was a relative success for Turkey, but it costed a great decrease in the real effective rate of TL within the economy. Also, the increase of the interest rates whilst the exports were increasing, caused the exporter to have a bigger share from the income, and high rated tax redemption stimulated "imaginative" exports and citizens lost their exchange. Despite these negative factors, the increase in exports and the decrease in current account imbalance should be noted as successes of this period. At least, the increase in exports provided the non-used capacity to begin production. Inflation couldn't be decreased due to the program in this period (except 1980). Only with the relative decrease of oil prices and the rate arrangements, inflation negatively accelerated, and increased again by 1987.

Evaluations done by depending on the budget lost their meanings because of more than 100 off-budget funds after 1984. These were not controlled by TBMM and associated with domestic debt and the increase in emission, they effected the financial balance negatively. As a difference compared with the previous period, there was not a stand-by deal with IMF, thus no external control of monetary emission was made, and this fact accelerated the increase of emission. By the end of 1987, the increase in prices accelerated, since the investments were done in non-profiting areas like energy, transportation, communication, residence etc. These investments were not fertile; thus, no consumable product could be presented to the market compared with the investment, and this was creating inflationist price increases. Nearby the increases of the prices of SEE products turned into a heavy non-direct taxing, and price increases have accelerated. Agriculture and construction sectors got more active in this period, and the rate of industrialization and GSMH increase rate have increased. But these developments costed increasingly borrowing foreign credit and problems related with it. The non-used capacity amount has increased from %62.1 to %76 in 1981, and nearby industrialization has increased about 3.7 points compared to the previous period. This was a factor increasing the competitive power but since non-used capacities were a habit among sub-production branches and real interest rates were very high, thus industrialization couldn't be active.

Within sub-production branches, only textile industries producing for exports and cement, clay, cement instruments industries (for Infrastructure and mass residence projects) got investment incitement certificate and increasement in capacities were only observed among these. Even the accelerating production increase and the new rights for workers, workers on revenue-fee, agricultural producers, and little-scaled businessman lost real income in this period.

By the increase of unemployment in 1987, share income became negative for revenue class. Then, the agricultural producers and the revenue-feed workers which nearly make about %80 of the active population couldn't benefit from the increasing production, and the increasements in production and the income loss of these workers swift to the ones out of this set or to external world.

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Chapter 26

Innovative Human Resource Management

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ABSTRACT

INTRODUCTION

In the 21st century business world, factors such as globalization, intensifying competition, and rapid technological advancements necessitate businesses to embrace innovation and adapt to change. Achieving and sustaining an innovative culture requires management's awareness and determination, as well as the internalization of innovative practices, approaches, and norms by employees, making them an integral part of the organizational fabric. This necessitates a collective mindset shift for both management and employees (Koster and Benda, 2020).

In the context of human resources management, which focuses on aligning organizational goals with employee goals, the perspective differs significantly from the traditional focus on production and products. From determining product features and emphasizing aesthetics to highlighting functions even before production, the human perspective encompasses everything that facilitates customer acceptance. In essence, the value of the idea is paramount, rendering the product insignificant without it. Consequently, human resources are deemed valuable, rare, inimitable, and irreplaceable. Therefore, businesses must prioritize human resources management to remain competitive (Rasool et al., 2019).

It is essential to acknowledge that satisfying the external customer without satisfying the internal customer, referred to as the employee, is ultimately futile. Therefore, companies naturally expect high performance from their human resources. What sets them apart is their approach to harnessing the innovative potential of human resources. One aspect explored in this study is the impact of human resource practices on employees' innovativeness. From this perspective, this study examines innovative human resources management and analyzes its relationship with job performance and job satisfaction.

CONCEPTUAL FRAMEWORK

Classical human resources management typically provides a structured workflow plan to fulfill specific functions and ensure coordination within the system. In contrast, innovation-oriented human resources management exhibits a more dynamic and proactive approach. This agility focuses on adapting internal elements to effectively respond to the ever-changing external environment in a timely and appropriate manner (Som, 2008). The primary objective is to maximize employee efficiency, as their value is crucial for performance. However, the key aspect lies in understanding how employees can attain such performance. This is where the concept of job satisfaction comes into play. Numerous studies have revealed a positive relationship between job

performance and job satisfaction, indicating that performance tends to increase as employee satisfaction rises. This section of the study investigates the shift towards innovative human resources management through the functions of classical human resources management. Furthermore, the subsequent part of the study elucidates the relationship between innovative human resources management and job performance and job satisfaction.

Concepts of Innovation and Innovation Culture

In essence, innovation represents the conversion of new ideas into commercial value for businesses. Consequently, any profit-oriented enterprise places significance on the commercial value derived from innovative ideas. Conversely, service-oriented and non-profit institutions perceive innovation as a means of value creation, even if not viewed strictly from a commercial standpoint. Therefore, every idea, product, or service presented by an institution as an innovation essentially represents the production of value. When considering the perspective of profit-oriented enterprises, the concept of innovation requires a broader understanding beyond mere value production (Agarwala, 2003).

For a business to be truly innovative, it must embrace a sustainable perspective. This perspective should manifest as a behavior, as the identities of businesses are manifested through their actions within the social environment. In this regard, it is essential to emphasize the role of organizational culture. Culture serves as the overarching identity for a business. Thus, an innovative business must first foster a culture that encompasses shared values, mission, and vision throughout the entire organization. As a result, deep cultural sharing becomes crucial for an innovative business to propagate its innovative mindset effectively. To gain a better understanding of the subject, it is beneficial to conceptualize the notions of innovation and innovation culture (Lorenz and Valeyre, 2005).

Innovation Concept

Innovation is an effective tool in the competitive struggle with competitors. It is an effective way for companies to gain a competitive edge, generate profits and increase cash flows, and to be superior to their competitors in the industry served. Innovation can be described as an idea, practice or object that has just been accepted by the individual or the unit of practice, which is otherwise. Innovation is the manifestation of long-term performance integrated with the concepts of creative thinking, change, improvement, and risk taking (Shaw, 2006).

Innovation is also related to the process of using a different technical method and transferring it to resources as added value or increasing the difference associated with the cost and value of production. With innovation activities, firms use different advantages such as reducing costs, increasing quality, and meeting the demands and requirements of the more sophisticated consumer through innovations in structure, process, goods, and services. It contributes to the country's economy (Jiménez and Sanz, 2005).

Zhykharieva et al., (2020) defines innovation as the phase of establishing organizational processes or improving existing products and services or creating new products and services that are important and effective on an individual, organization, industry, and society. In their definition, Zhou et al., (2013) explain that it includes the traditional innovation terms such as innovation of products, new production times, innovation in materials and resources, different markets and new forms of organization. In the definition made by Liu et al., (2017). innovation is expressed as “a process that includes design, production, management and commercial activities, which is revealed to develop and market a new or more advanced product or process (process) or equipment.

Innovation Culture

Culture, development of human societies, historical process, mode of production is related to inter-communal relations. Culture, which is the way of life of the society, brings with it inter-communal differentiation in lifestyles (Horibe, 2016).

As the name suggests, innovative culture is a type of culture that consists of values that give importance to growth, risk-taking, innovation, competitiveness, and development. Businesses with values that hold people together are dynamic and powerful. Wallach divided organizational culture into three sub-headings and classified it as bureaucratic culture, supportive and innovative culture. According to Wallach (1983), innovative culture is a result-based active organizational culture that supports the desire and entrepreneurial spirit.

Innovation is an organizational culture that has a vision and mission, is cooperative, has a wide area, flexible structure, motivating system, has basic values, and has leadership. The importance of innovation among businesses is vitally effective. It is seen that the factors that determine the success, effectiveness, permanence, activities, and capacity of the organization pass through its success in innovation (Gerasimov et al., 2019).

Definition of Human Resource Management

Basically, Human Resource is transferred as one of the resources that businesses must use to achieve their goals. At this point, human is an indispensable element of the production process. Here, all employees, from the top manager to the lowest level employees, are mentioned. Businesses must have financial resources to run their business. However, although the quality of material resources is very good; If the human resource does not have sufficient qualifications, success will not be possible (Lee et al., 2019).

At this point, human resources management pursues two main purposes, such as increasing productivity with internal capabilities, gaining competitive advantage and adding quality to business life (Boon et al., 2019). Human resources management is primarily based on a management approach based on the quality of the human being, which is seen as a strategic element in competition. However, it draws a conceptual framework for how this resource, along with other resources, will be provided, employed, and directed. While this framework is handled from the human focus, it is equipped by culture. In addition, it enables businesses to fulfill their goals, social responsibilities and meeting the needs and expectations of employees in the most effective way (Sardi et al., 2021).

With the development of human resources management in the modern period, globalization, and the effects of the developments in telecommunication, the intense competition environment in the national and international markets, the radical transformations in industrial life, strategy and management sciences have come to the fore. This has revealed human resources management because of certain approaches as resources that feed management science such as psychology and sociology. These developments have resulted in their concentration on key areas such as total quality management, flexibility, and corporate culture. At this point, human resources management, which plays a leading role in competitive advantage, has come to the forefront as a department that directly affects the basic capabilities of the enterprise, rather than being a support unit within the enterprise (Iqbal, 2019).

Importance of Human Resources Management

The concept of human resources expresses the human element, which is one of the resources that an organization uses to achieve its goals, and includes all employees and management staff from the top to the bottom (Chams and García, 2019). Human resources management, on the other hand, refers to a strategic and adaptive approach to the management of the human element, which is seen as the most valuable resource of the organization and contributes

to the achievement of the goals of the organization individually or collectively (Saeed et al., 2019).

As it can be seen, the human resource is the most valuable resource in an enterprise, and it is emphasized how this resource should be managed to achieve organizational goals. Today, it has been understood that the success of an organization depends on the knowledge, skills, and capacities of the employees in that organization. At this point, the human element is the basic competence that distinguishes the organization from other organizations and adds a unique identity to it. (Deb, 2006:5).

From this point of view, the place of human resource cannot be substituted with a different resource, however, people provide and manage all other resources that the organization needs and work for the organization. Therefore, how people should be managed to achieve organizational goals and what should be done to make people happy in business life are among the main issues that human resources management deals with (Papa et al., 2020).

When evaluated from this point of view, it can be said that human resources management is based on two main themes (Stone et al., 2020);

1. "Efficient use of manpower in line with the organization's goal",
2. "Meeting the expectations of the employees and ensuring their development".

The duties of human resources management, which is built on these two foundations, briefly focus on raising the qualifications of the employee in working life by showing high performance. This view ascribes value by separating people from the material resource structure within the factors of production and taking them out of the classical management perspective. This value draws attention to the fact that human is a resource that needs to be satisfied (Macke and Genari, 2019).

Another reason why human resources management has an important position in the organization is the inimitable advantage it provides to organizations. An effective human resource has an important role in recognizing the opportunities and threats in the business environment, but it is also the source of organizational learning and organizational effectiveness and competence (Saeed et al., 2019).

Today, businesses do not experience great problems in reaching the material resources included in the production resource. However, the ability to use these resources varies according to each business, so businesses differ from each other. At this point, human resources is an important feature that distinguishes the organization from others and gives it a different identity. When evaluated from this point of view, human resources management can help the company

gain a competitive advantage. Other contributions of HRM are (Stone et al., 2020);

- It provides the opportunity for continuous improvement,
- Decreased employee turnover rate,
- Good job attendance rate,
- Decrease in work accidents, increase in work safety,
- Reduction of fire,
- Increasing the quality of the product in terms of quality,
- Increasing morale and motivation in the working environment,
- Reduction of employee-employer conflict.

Upon closer examination, it becomes evident that each of these benefits is interconnected and integral to a larger system, with human resources management serving as its executor. By fulfilling these crucial responsibilities, human resources management enhances the likelihood of employees carrying out their duties diligently and efficiently. This is achieved by prioritizing employee well-being and satisfaction within their work and the organization as a whole. Innovative Human Resources Management

Regardless of the sector they operate in, businesses absolutely need the power of human resources. An effective management system is also needed to get the most effective benefit from human resources. From this need, the concept of human resources management has emerged and started to be known (Koster and Benda, 2020)

The most valuable resource that businesses use to achieve their goals is human resources. From the employee with the lowest qualification in the enterprise to the manager with the highest qualification, and the potential workforce outside the enterprise are also included in the scope of human resources to be utilized. In this framework, human resources management is expressed as a system that focuses on improving the working skills of employees by providing effective management in a way that will be beneficial to the business, the environment and the employee, by complying with the laws determined in the internal and external environment of the human resource (Som, 2008)

While human resources include the talented workforce needed by the business, it is recommended that the motivation of the employee involved in the production stage is kept high, that the business can compete successfully in the changing market conditions and that the employees should be managed more effectively. In this case, human resources management is all the practices that the business develops without making any discrimination in the internal and

external environment, in order for the enterprise to achieve the goals they have determined in terms of human resources efficiently (Mirčetić et al., 2022).

Today, information involving people and businesses is subject to rapid change and transformation. These changes, especially in the technological, social, and economic sectors, have led to an increase in the dependence on human resources for businesses to achieve their goals. For businesses to reach their goals in the way they want, it was not enough to implement only the activities determined by the human resources management, instead, it was necessary to apply a more integrated management approach based on the superior and weak issues they determined in the business. In this direction, strategic human resources management has emerged. It has been concluded that human being is a strategic resource and should be managed strategically (Zhykharieva et al., 2020).

Relationship between Innovative Human Resources and Performance

Institutions are trying to develop methods and strategies that increase employee performance in order to maintain their existence in an environment where changes are continuous, and competition is fierce. Because job performance has an important effect on organizational success. Researchers conduct research on the reasons why employees show high performance in their jobs and what measures can be taken to increase performance. For this reason, it emerges as an output variable that focuses on job performance and needs to be improved in today's businesses (Mavondo et al., 2005).

April et al., (2005) defined job performance as the effort that employees must expend in return for a certain wage. Employee performance and competitiveness of the enterprise are variables that interact with each other. Employees with a high level of performance increase the performance of the organization, while this situation also directly affects the competitiveness of the enterprise. Job performance is one of the important indicators pointing to the competitiveness of the enterprise. It is thought that the entrepreneurial and innovative behaviors of the employees are among the main variables that affect both the employee and the organization in many ways, which bring vitality and dynamism to the organization, especially the job performance of the employees (Gloet, and Terziovski, 2004). As it can be understood from here, an innovative human resource management can be an important factor for both employee performance and corporate performance. The important thing here may be to understand through which human resource function this innovative perspective is put forward.

Considering the results of awareness and execution for innovative human resources practices and the intense relationship between them and satisfaction, it is possible that awareness and execution are built from innovative culture and affect the satisfaction received from the results of innovative human resources activities. According to some studies, training, specialization, performance evaluation, specialization and career development functions are closely related to the creation of innovative working conditions (Papa et al., 2020).

Relationship Between Innovative Approach and Job Satisfaction

Innovation in the business is an approach that has a positive relationship with the organizational support and empowerment created by the top management. In this context, individuals are supported to realize the "self-actualization" layer in Maslow's hierarchy of needs, with the innovation environment created in the business. It is said that the individual who reaches self-actualization is aware of his potential. The individual focuses on constantly improving himself to be creative. He is always ready to be flexible in his thoughts and behaviors. This situation creates an innovation culture, which is viewed from the organizational perspective, develops a supportive environment in the enterprise, has a high margin of error, a fair wage distribution, and where individual and organizational values coincide (Maslow and Lewis, 1987).

In addition, while creating an environment of colleagues who always support each other and have open and fast communication with each other, it positively affects the individual work performance of the employee with the support of senior management. In this case, self-actualization is not a need that will occur in every individual. For this need to be seen, the individual must be able to find his place in his social life, live in the environment he desires, work in the desired job, and reach a sufficient level of psychological and physiological development (Lester, 2013).

In this context, employees become self-actualized individuals with the innovation culture integrated with innovative human resources management practices. In addition, while these individuals achieve individual outputs such as satisfaction and performance, they will reach the best ideas as a result of the professional relationships they have established and will have the opportunity to develop their careers together with their own talents and contributions. In other words, since the innovation culture is based on change and modernization, the employees share the organizational values and the work. According to this statement, it should be said that how and to what extent the innovation culture will affect job satisfaction, which influences the job role is an important issue (Zhykharieva et al., 2020).

The culture of innovation provides an environment open to change, supports continuous learning, creates a harmonious environment, tolerates risks, supports individual creativity, encourages the sharing of new ideas, creates freedom of movement without being restricted by the senior management, offers the necessary training and development opportunities at different levels and transfers talents (Tian et al., 2018).

Employees in enterprises where innovative culture is dominant compete to find the new and original and use it in appropriate situations. Even if the success rate in these situations is a risky situation, individual job satisfaction increases when ideas are implemented. The point emphasized here is that the content of the job is interesting and enjoyable to the employee in accordance with his interests and abilities. According to this definition, being independent, diversity, and using the skills and abilities of the employee become factors that positively affect job satisfaction. In this context, the satisfaction of working individuals with their jobs and the quality of the business in the production process are among the main problems that managers try to cope with (Johannessen and Olsen, 2011).

Utilizing innovative human resources management functions is an important condition for achieving job satisfaction. For example, with the active suggestion and network systems in the innovation culture, the sharing of information and data is increasing. Shared information and data are prepared for use in the appropriate field by being supported with training and mentor support according to the situation of innovation need, thus giving personal development opportunities to working individuals (Aboramadan et al., 2020).

The Relationship Between Job Satisfaction and Individual Performance

There are various studies and interviews about the relationship between job satisfaction and performance. There are also opinions that job satisfaction increases the job performance of working individuals. It is stated that this view will be understood more clearly when explained by Herzberg's two-factor theory. Herzberg puts business policies, wages, control, working conditions and the relations of people with each other among the hygiene factors. He puts dynamics such as success, responsibility, recognition, promotion, and prestige among the motivating factors. According to Herzberg, the motivating factors for the individual express the feeling of satisfaction because they affect the performances that occur while performing the work (Stello, 2011).

Today, it is stated that businesses accept that the relationship between job performance, customer satisfaction and employee satisfaction is positive. According to this statement, it is recommended that businesses should keep

their motivation high in order to achieve their targeted performance and include employees who integrate with the goals of the organization, who question, make suggestions and whose creative side predominates (Siengthai and Pila 2016).

When the studies in the literature are examined, it is seen that there are studies that mention the existence of inconsistent and weak relationships between job satisfaction and performance. If the relationship between job satisfaction and performance level is not strong, economic reasons, family obligations and expectations may cause this. It is said that for job satisfaction and performance to be meaningful and positive, there must be dynamics that support this situation, such as the individual characteristics of the employee, the wage and reward system in the workplace. It is expected that individuals with high performance levels will also have high job satisfaction (Alromaihi et al., 2017).

According to the results of Ali and Farooqi, (2014) research, being satisfied with the job directly affects the individual performance, that is, the organizational performance directly. Factors considered important for job satisfaction are expressed as workload, busy working hours, risks presented by the job, manager's attitudes, professional development of the employee, adequate wages, adoption of the business vision, mission and goals, creation of the work environment and social privileges. It is also stated that these changing factors affect working individuals differently in many ways. The most important factor in the negative progress of working conditions in an enterprise is due to the decrease in job satisfaction.

The decrease in job satisfaction causes slowing down of the work, strikes, disciplinary problems and a decrease in the level of performance. In addition to increasing the happiness levels of working individuals, job satisfaction increases the commitment of the employees to their jobs, ensures efficient work and helps to decrease the turnover rate. It is observed that low performances are recorded in businesses where job satisfaction level is low, workforce turnover rate is high, there are employees with absenteeism and intention to quit. It is also observed that employees whose organizational commitment is weakened increase and they become alienated from the business with stress. In addition to these, it is determined that they can damage the operating equipment and cause physical and mental disorders (Khan et al., 2012).

CONCLUSION

Globalization, intensifying competition, and the rapid pace of technological advancements have presented businesses with a critical choice: innovate or risk obsolescence in today's dynamic business landscape. This choice aligns with the

fundamental premise of organizational ecology theory, which posits that firms that successfully adapt to changing environmental conditions will thrive, while those that fail to adapt will perish. This contemporary perspective emphasizes the social aspect of innovation and incorporates the concept of sustainability, distinguishing it from the traditional focus on the physical or technical aspects of innovation.

From a classical standpoint, innovation was often viewed as a one-time activity aimed at overcoming market challenges, economic bottlenecks, or outperforming competitors. However, in a market environment characterized by shortened product life cycles and evolving customer expectations, this limited understanding of innovation is inadequate. Instead, innovation should be perceived as a cultural development and change that permeates throughout the entire organization. For innovation to be effective, it must be internalized by management and embraced by all employees. Therefore, businesses need to embrace innovation as not just a temporary activity but as an integral part of their organizational culture and a competitive tool for sustained success.

In the realm of Human Resources Management, managers should adopt HR practices that are aligned with an innovative mindset. These may include implementing practices such as suggestion systems, empowerment, teamwork, training, harmonization, performance evaluation, manager development, and career planning. These innovative HR practices need to be continuously nurtured and evaluated to ensure they are effectively perceived and embraced by employees.

In an innovative culture, individual job performance is enhanced by the satisfaction derived from success. Whether it pertains to product-service, process, or organizational innovation, an innovative work environment fosters a sense of cooperation and trust, enabling employees to further develop themselves and seize career opportunities. Employees who embrace innovation, rather than perceiving their job as a mere obligation, tend to strive for success and prioritize outcomes. This reinforces the notion that result-driven satisfaction supports the cultivation of an innovative culture. Furthermore, career advancement serves as a powerful motivator for employees, driving them to perform even better and contributing to increased individual performance.

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