CURRENT PERSPECTIVES IN SOCIAL, HUMANITIES AND ADMINISTRATIVE SCIENCES

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Assoc. Prof. Dr. Caner ÇİÇEKDAĞI

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Chapter 1

Revisiting The “End Of History”: Crises and Contradictions of the Post-Cold War Liberal Order

Ali SAYILGAN[1]

Abstract

The collapse of the Soviet Union and the end of the Cold War were widely interpreted as the ideological victory of liberal democracy and the liberal economic order. Francis Fukuyama’s “end of history” thesis became one of the most influential formulations of this interpretation. However, the crises experienced after the Cold War have demonstrated that the consolidation of liberalism did not eliminate economic instability, geopolitical competition or the central role of the state. This chapter distinguishes Fukuyama’s claim about the ideological legitimacy of liberal democracy from broader claims about the stability of market capitalism. Using a qualitative and interpretive analysis of selected theoretical works and critical historical episodes, it examines how the 2007–2008 global financial crisis, the re-emergence of geopolitical rivalry and the Covid-19 pandemic challenged expectations of a stable and irreversible liberal order. It argues that these developments do not demonstrate the complete collapse of liberalism. Rather, they reveal the limitations of treating liberal democracy and the liberal economy as uncontested and final forms of political and economic organization. The post-Cold War period should therefore be understood not as the end of ideological and systemic transformation, but as a period in which the contradictions of the liberal international order have become increasingly visible.

Keywords: Fukuyama, End of History, Liberal Democracy, Liberal International Order, Recognition, Global Financial Crisis, Covid-19

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Introduction

The management, distribution and preservation of economic resources have played a central role in the historical transformation of political communities. Economic structures developed from relatively simple forms of exchange into increasingly complex arrangements through the emergence of money, credit, industrial production and global markets. The Industrial Revolution accelerated this transformation and enabled capitalism to expand beyond national economies. Liberal economic principles subsequently became increasingly influential in the organization of both domestic economies and the international system.

The liberal economic order has frequently been associated with political liberty, representative government and the expansion of individual choice. Nevertheless, the historical development of capitalism has also generated inequalities, periodic crises and intense competition among states. Liberalism therefore developed not as a crisis-free model, but as an order combining economic dynamism with recurring social, political and financial instability. The institutional arrangements established after the Second World War and strengthened during the Cold War attempted to manage these contradictions through international cooperation and economic governance (Ikenberry, 2018). This tension is also visible in the difficulty of reconciling deep economic globalization with democratic choice and national sovereignty (Rodrik, 2011).

The dissolution of the Soviet Union in 1991 transformed this ideological and systemic balance. With the disappearance of the principal socialist alternative, the United States consolidated its position as the dominant power in the international system, while liberal democracy and market-oriented economics appeared to become globally unrivalled (Sempa, 2017; Service, 2015). Francis Fukuyama interpreted this transformation as evidence that humanity had reached the final stage of its ideological development. In this framework, liberal democracy did not imply the end of political events or conflicts; it represented the claim that no alternative ideology possessed comparable universal legitimacy (Fukuyama, 1989, 1992).

The post-Cold War period, however, did not develop in accordance with an uninterrupted model of liberal consolidation. The 2007–2008 global financial crisis exposed structural vulnerabilities in highly integrated financial markets, weak regulation and high-risk lending practices (Financial Crisis Inquiry Commission, 2011). The growing economic influence of China and the renewed strategic role of Russia weakened assumptions concerning permanent American predominance and revived debates over balance-of-power politics (Mearsheimer, 2019). The Covid-19 pandemic further disrupted global production, trade and services, while encouraging states to introduce protectionist measures and extensive economic interventions (Fukuyama, 2020; International Monetary Fund, 2020). These developments demonstrated that the liberal order continued to depend on political authority and state capacity even when it emphasized the autonomy of markets.

This chapter asks to what extent the economic and geopolitical crises of the post-Cold War period have challenged Fukuyama's thesis concerning the universalization of liberal democracy. It argues that contemporary crises do not establish the definitive end of liberalism. Instead, they undermine the expectation that liberal democracy and market capitalism have achieved a stable, uncontested and irreversible victory. The chapter first examines the relationship between the end of the Cold War and the liberal triumph thesis. It then evaluates the 2007–2008 financial crisis, the return of geopolitical competition and the Covid-19 pandemic as interconnected challenges to the post-Cold War liberal order.

Methodologically, the chapter adopts a qualitative and interpretive approach based on a close reading of Fukuyama's thesis and selected debates on the liberal international order. The financial crisis, the return of geopolitical competition and the pandemic are treated as critical episodes that reveal different dimensions of the same problem: the distance between liberalism's claim to finality and the continuing openness of political and economic transformation.

1. The End of the Cold War and the Liberal Triumph Thesis

The Cold War was a period of geopolitical and ideological rivalry between the United States and the Soviet Union and their respective allies. Although the two superpowers avoided a direct large-scale military confrontation, they competed through military alliances, nuclear deterrence, economic systems and regional conflicts. The division between the Western and Eastern blocs therefore represented more than a conventional balance of power. It was also a struggle between competing claims about political authority, economic organization and social development (Sempa, 2017; Service, 2015).

The existence of the Soviet Union limited the ability of capitalism and liberalism to present themselves as universally accepted models. Socialist ideology offered an alternative conception of ownership, equality and economic distribution, even though its institutional application generated its own political and economic problems. The collapse of the Soviet Union eliminated this systemic counterweight and enabled the Western bloc, particularly the United

States, to interpret the outcome of the Cold War as a comprehensive ideological victory (Service, 2015).

Fukuyama's "end of history" thesis became closely associated with this historical moment. His argument was based on the proposition that liberal democracy had overcome its major ideological competitors and had emerged as the most legitimate model of political organization. The thesis did not claim that wars, crises or historical events would disappear. Rather, it suggested that the direction of ideological development had culminated in the general superiority of liberal democracy (Fukuyama, 1989, 1992). The end of the Cold War appeared to support this claim because the socialist alternative had collapsed while market-oriented reforms expanded across different regions.

Fukuyama's later formulation also rests on a theory of recognition rather than on economic modernization alone. Drawing on Hegel and the Platonic concept of thymos, he argues that individuals seek recognition of their dignity and political standing. Liberal democracy appears historically attractive because it institutionalizes equal recognition through citizenship, rights and participation. Yet the desire for recognition is not exhausted by material prosperity, and struggles over dignity, status and identity may continue even within formally liberal societies (Fukuyama, 1992).

The figure of the "last man" expresses this internal tension. A society capable of providing security, consumption and equal legal status may still generate dissatisfaction if political life is reduced to comfort and private interest. This point makes Fukuyama's argument more complex than a simple celebration of Western victory: the liberal order may possess unmatched ideological legitimacy while remaining vulnerable to demands for distinction, collective identity and political purpose. Recognition-based conflict can therefore persist after the decline of comprehensive ideological alternatives (Fukuyama, 1992).

A clear analytical distinction is therefore necessary between liberal democracy and the liberal economic order. Fukuyama's central claim concerns the former: the broad legitimacy of constitutional government, political rights and popular sovereignty as principles of political organization. Market capitalism is closely associated with this historical trajectory, but it is not identical to liberal democracy. Financial and economic crises do not by themselves refute the "end of history" thesis; their importance lies in showing how inequality, insecurity and repeated dependence on state intervention can weaken the social foundations and political legitimacy on which liberal democracy relies.

Nevertheless, the political dominance of liberalism did not eliminate the internal contradictions of the liberal economic system. The expansion of global markets increased economic interdependence, but it also intensified exposure to financial shocks. Technological development and global production networks created new opportunities while simultaneously generating new forms of dependency and inequality. The liberal order therefore entered the post-Cold War period with significant structural tensions that were less visible during the initial atmosphere of Western victory (Ikenberry, 2018; Milanovic, 2019; Rodrik, 2011).

The debate over the durability of the liberal international order became more pronounced as these tensions deepened. Ikenberry (2018) emphasized the historical and institutional foundations of the liberal order while acknowledging the seriousness of its contemporary crisis. By contrast, Mearsheimer (2019) argued that the liberal international order contained fundamental contradictions and was ultimately unable to overcome nationalism and balance-of-power politics. These approaches differ in their assessment of the order's capacity for renewal, but both indicate that the post-Cold War system cannot be understood simply as the completion of an irreversible liberal transformation (Acharya, 2014; Cooley & Nexon, 2020).

2. Crises of the Post-Cold War Liberal Order

2.1. The 2007–2008 Global Financial Crisis and the Limits of Neoliberalism

The rapid expansion of financial markets was one of the most important characteristics of the post-Cold War economic order. Capital mobility, credit mechanisms and increasingly complex financial instruments were presented as sources of efficiency and growth. However, the global financial crisis of 2007–2008 demonstrated that the same mechanisms could transmit instability across national borders. The crisis became the most severe disruption of the international financial system since the Great Depression and exposed the vulnerabilities associated with excessive borrowing, weak regulation and high-risk lending practices (Financial Crisis Inquiry Commission, 2011; Tooze, 2018).

The significance of the crisis extended beyond its immediate economic consequences. It weakened confidence in the capacity of liberalized markets to regulate themselves and required extensive intervention by states and central banks. Governments that had previously emphasized fiscal discipline and limited state involvement introduced rescue packages, guarantees and emergency measures to stabilize financial institutions. The response revealed a central contradiction: the continuity of the market-oriented order depended on public authority when private financial mechanisms entered a systemic crisis (Ikenberry, 2018; Streeck, 2014; Tooze, 2018).

The crisis therefore challenged the assumption that the spread of liberal capitalism would produce a stable and self-sustaining global system. It did not result in the disappearance of capitalism, nor did it generate a single coherent ideological alternative. Nevertheless, it demonstrated that the liberal economic model remained vulnerable to recurring crises and that political intervention was necessary to protect its institutional foundations. In this respect, the 2007–2008 crisis weakened the idea that the post-Cold War economic order represented the final resolution of systemic economic conflict (Streeck, 2014; Tooze, 2018).

2.2. The Return of Geopolitical Competition

The post-Cold War order was initially shaped by the predominance of the United States. Yet the continuation of American unipolarity became increasingly uncertain as other major powers expanded their economic, political and military capabilities. China's economic growth increased its influence within global production and trade, while Russia's renewed military and strategic role challenged Western predominance in several regions. These developments contributed to a more competitive and increasingly multipolar international environment (Acharya, 2014; Cooley & Nexon, 2020; Mearsheimer, 2019).

The return of great-power competition is important for the critique of the "end of history" thesis because it demonstrates the persistence of strategic rivalry and alternative political models. China's integration into the global economy did not produce direct convergence with Western liberal democracy. Similarly, Russia's re-emergence as a major strategic actor showed that military power, geopolitical interests and state sovereignty remained central features of international politics. The expansion of markets was therefore insufficient to eliminate balance-of-power behaviour or disagreements over political order (Mearsheimer, 2019; Milanovic, 2019).

Huntington's (1993) emphasis on civilizational and cultural conflict offered an early challenge to expectations of ideological homogenization. Although his framework has been strongly debated, it highlighted the possibility that the post-Cold War world would remain divided by different identities, historical experiences and political priorities. Mearsheimer's (2019) critique similarly stressed that nationalism and realist power politics would constrain attempts to construct a universal liberal order.

The re-emergence of geopolitical competition does not automatically disprove the normative appeal of liberal democracy. It does, however, weaken the expectation that economic globalization will inevitably produce political convergence. The post-Cold War system has instead combined economic interdependence with strategic rivalry. Interdependence can itself become a source of coercive power when states control key global network hubs (Farrell & Newman, 2019). This combination indicates that liberal institutions coexist with competing understandings of sovereignty, authority and development rather than replacing them entirely (Huntington, 1993; Ikenberry, 2018).

2.3. Covid-19 and the Return of the Interventionist State

The Covid-19 pandemic produced a global crisis affecting public health, economic production, trade, employment and social life. Its effects extended far beyond the spread of the disease itself. Restrictions on mobility, disruptions in supply chains and the decline of activity in the service sector placed significant pressure on national economies. The International Monetary Fund characterized the early economic shock as a contraction more severe than the 2008–2009 financial crisis, underlining the exceptional scale of the disruption (International Monetary Fund, 2020).

The pandemic revealed the vulnerability of an international system based on highly interconnected production and distribution networks. States introduced border controls, export restrictions, emergency economic programmes and public health regulations. These measures demonstrated that governments retained the authority and responsibility to intervene when markets and transnational networks were unable to provide essential goods, economic security or public protection. The crisis consequently strengthened the political importance of state capacity (Fukuyama, 2020).

The pandemic also intensified debates over the future of globalization. The liberal order had frequently been associated with the reduction of barriers to trade, capital and movement. Covid-19 temporarily reversed many of these trends and encouraged governments to reconsider their dependence on external production networks. Protectionist tendencies, concerns over strategic supply and the prioritization of national resilience became more visible. Kołodko (2020) consequently described the post-pandemic world as a period in which economic and political arrangements would require substantial reconsideration.

Fukuyama (2020) emphasized that the political effects of the pandemic would depend significantly on state capacity, social trust and leadership. This assessment is important because the pandemic cannot be interpreted simply as the victory of one ideological system over another. Liberal democracies and non-liberal regimes experienced different levels of success and failure. The decisive factors included institutional effectiveness and the ability to implement policy rather than ideological labels alone.

The pandemic therefore challenged an overly linear understanding of liberal progress. It demonstrated that market mechanisms remained dependent on public institutions and that globalization could be interrupted by crises requiring national responses (Fukuyama, 2020; Kołodko, 2020). At the same time, the pandemic did not produce a universally accepted alternative to liberal democracy. Its principal theoretical significance lies in revealing the continuing openness of political and economic development. History, understood as competition over institutions and models of governance, remained active rather than concluded.

Conclusion

The end of the Cold War was a decisive transformation in the international system because it removed the principal ideological and geopolitical alternative to the Western liberal order. In the atmosphere created by the collapse of the Soviet Union, liberal democracy and market capitalism appeared to have achieved not merely a strategic victory, but a deeper form of historical legitimacy. Fukuyama's "end of history" thesis captured this confidence by suggesting that the central ideological question concerning the most legitimate form of government had largely been resolved. The thesis did not predict the disappearance of events, conflict or political change; it proposed that liberal democracy had no rival capable of making an equally universal claim to legitimacy.

This chapter has argued that the development of the post-Cold War period requires a more qualified interpretation of that claim. The global financial crisis renewed great-power competition, and the Covid-19 pandemic did not generate a coherent ideological alternative that clearly displaced liberal democracy. They did, however, expose the fragility of the assumptions surrounding liberal finality. The post-Cold War order proved less stable, less self-regulating and less politically convergent than the early triumphalist interpretation suggested. Economic integration transmitted crises as well as prosperity, geopolitical interdependence coexisted with strategic coercion, and global markets repeatedly depended on public authority during periods of systemic disruption.

The distinction between liberal democracy and the liberal economic order is central to this conclusion. A financial crisis cannot directly invalidate the principle of constitutional government, just as the failure of a particular market policy does not automatically establish the superiority of authoritarian rule.

Nevertheless, economic instability has political consequences. Persistent inequality, insecurity, declining social mobility and the perception that public institutions protect markets more effectively than citizens can weaken trust in liberal-democratic systems. The relevance of economic crises to the "end of history" debate therefore lies not in treating capitalism and democracy as identical, but in recognizing that the social legitimacy of liberal democracy is partly shaped by the economic order within which it operates.

Fukuyama's emphasis on recognition also helps explain why material development and institutional stability cannot bring political history to a complete close. Liberal democracy promises equal recognition by granting individuals a shared legal and political status. Yet political communities are also shaped by demands for dignity, identity, belonging and distinction. These demands may be expressed through nationalism, populism, religious mobilization or challenges to established elites. The persistence of such struggles does not necessarily mean that liberal democracy has lost its normative attraction. It means that equal rights and economic prosperity alone may not satisfy every form of political aspiration. The possibility of dissatisfaction is therefore internal to the liberal order rather than merely imposed on it from outside.

The return of geopolitical competition further demonstrates that ideological legitimacy does not eliminate the strategic structure of international politics. States continue to pursue security, autonomy, influence and control over critical resources and networks. China's economic rise and Russia's strategic reassertion show that participation in global markets does not necessarily produce convergence toward a single political model. At the same time, the endurance of liberal institutions and alliances indicates that the post-Cold War order has not simply collapsed. The contemporary system is better understood as a contested and hybrid order in which liberal rules, national sovereignty, economic interdependence and power politics operate simultaneously.

The Covid-19 pandemic made this hybridity especially visible. Market mechanisms and transnational supply chains remained essential, but they were insufficient in the absence of effective public institutions. Governments assumed responsibility for public health, income support, border management and the protection of strategic supplies. The crisis demonstrated that state capacity is not the opposite of a functioning liberal order; it is one of its necessary conditions. The key question is therefore not whether the state or the market will prevail, but how political authority, democratic accountability and economic coordination can be combined without undermining individual rights or social trust.

The most defensible conclusion is not that history has ended, nor that liberalism has ended. Rather, the expectation of an automatic, uncontested and irreversible liberal progression has become increasingly difficult to sustain. Liberal democracy remains a powerful source of legitimacy, but its durability depends on its capacity to respond to economic vulnerability, recognition-based conflict, geopolitical pressure and demands for effective governance. The future of the liberal order will be determined not by the absence of alternatives, but by its ability to reform its institutions and address the contradictions that have become visible since the end of the Cold War. History continues because the relationship between freedom, equality, authority, recognition and economic organization remains politically unresolved.

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Chapter 2

Discursive Symmetry, Legal Asymmetry: The Strategic Mobilisation of International Law in the Russia-Ukraine War

Altuğ GÜNAL[1], Barış GÜRSOY[2]

"The strong do what they can and the weak suffer what they must."
- Thucydides, The Melian Dialogue

Abstract

The military operation launched by the Russian Federation against Ukraine on 24 February 2022 intensified longstanding debates over the foundational norms of international law. Both sides invoked the same legal norms to legitimise either the operation or resistance to it, yet interpreted those concepts in ways that produced diametrically opposed conclusions. Rather than reducing this opposition to a doctrinal inquiry into 'which side is legally right?', this study examines how international law has been strategically mobilised for foreign-policy purposes. Employing qualitative and comparative discourse analysis, it examines official statements by Russia and Ukraine, United Nations documents, applications before the International Court of Justice, and relevant international decisions. The study concludes that the substantial legalisation of international legitimacy compels the parties to explain their conduct through a shared normative vocabulary. International law is therefore neither a higher norm wholly independent of politics nor an ineffectual ornament concealing power politics. International law is both a strategic resource used to confer legitimacy and a contested arena still capable of constraining states' discourse and conduct.

Keywords: Russia-Ukraine War, International Law, Foreign Policy, Genocide, Self-Defence, Prohibition on the Use of Force

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Introduction

This study revisits the classic debate concerning the relationship between international law and international politics. A realist strand maintains that the influence of international law is conditioned by state interests and power relations and that material power remains central to international outcomes (Carr, 1946; Morgenthau, 1940). On the contrary, Liberal-institutionalist and constructivist approaches, claim that international institutions can reduce uncertainty by generating information, and increase the costs of non-compliance. At the same time, norms and legal obligations can shape, legitimate, and constrain state behaviour (Brunnée & Toope, 2010; Finnemore & Sikkink, 1998; Keohane & Martin, 1995). The Russia–Ukraine war shows that neither perspective alone can fully explain the case. Russia's selective mobilisation of international law confirms that legal argument does not operate independently of political interests. Moscow didn't just rely on raw power. It built an elaborate legal case for its actions, and that effort alone says something: the normative framework still carries weight. (Bower, 2015; Hurd, 2017).

The main research question of this article is: Since the beginning of the invasion in 2022, how have Russia and Ukraine interpreted and presented the same norms of international law in different ways, and how have they strategically used these norms to pursue their own political objectives? Three subsidiary questions follow from this main question. First, with which historical and security narratives did the parties connect the legal concepts they employed? Second, which domestic and international audiences did they seek to address through these narratives? Third, does the competing use of the same norms demonstrate the relativity and ineffectiveness of international law, or does it instead reveal its capacity to generate legitimacy and to constrain both discourse and practice?

The main argument of the article is that discursive symmetry and legal asymmetry coexist in the Russia–Ukraine war. The parties use the same or overlapping normative vocabulary, including international order, genocide, self-determination, self-defence, and sovereignty. There is therefore a degree of symmetry at the discursive level. However, their claims do not rest on equivalent legal foundations, doctrinal coherence, evidentiary support, or institutional acceptance. There is therefore an asymmetry at the legal level.

Strategic-narrative scholarship has documented the competition between Moscow's pro-Russian and anti-Western narrative and Kyiv's pro-Western and anti-Russian account of the conflict (Szostek, 2017; Myshlovska, 2022). Related research has traced the Russian narrative to perceptions of vulnerability to the West, claims to great-power status, and an asserted sphere of influence in the post-Soviet space (Götz & Staun, 2022). More recent studies have highlighted the direct contradiction between Russian and Ukrainian narratives of national identity and historical continuity (Klimenko, 2026), as well as Ukraine's efforts to present itself through narratives of resilience, Western liberal values, shared international norms, and solidarity (Bjola & Fjällhed, 2025).

The scope of this study is limited in two respects. First, violations of international humanitarian law and questions of individual criminal responsibility are not examined systematically. Second, the study does not directly measure which audiences have accepted the narratives in question. United Nations voting patterns and decisions may, of course, provide some indication of international acceptance. However, states may also determine how they vote on the basis of alliance commitments, dependency, economic interests, incentives, and political pressure.

This study takes a qualitative, interpretive, and comparative discourse-analytical approach. The aim isn't to count how often each legal term appears, but to look at what these legal concepts actually do within the broader political narratives. Therefore, the method combines close reading of official texts, presented official legal theses, conceptual coding, and a comparison of how the two sides' discourses differ.

International Law and Strategic Narratives

The relationship between international law and international politics has long been discussed through the following question: Can law actually influence the behaviour of states, and, if so, to what extent? Although this is a highly important question, it tends to approach law only as an external constraint, meaning that states either comply with it or do not. Hurd (2017), however, argues that international law is not merely a set of rules governing state conduct. It is also a social practice and a strategic resource that political actors use to justify their policies, seek legitimacy, and challenge the actions of others.

According to Bower's (2015) concept of strategic legal argumentation, actors advance legal arguments alongside persuasion and pressure, and this legal discourse can restrict their room for manoeuvre. Law may be a tool that powerful states can bend when necessary, but it is not infinitely flexible. The way legal concepts have been applied over time, procedural requirements, expectations of consistency, and the extent to which actors succeed in legalising their claims can constrain both discourse and action.

Nuñez-Mietz's (2018) legalization thesis points to how pervasive and privileged legal claims have become in today's debates over the legitimacy of force. Even when states put forward moral or geopolitical justifications, they usually try to connect them to legal categories such as self-defence, Security Council authorisation, consent, humanitarian intervention, and self-determination. Russia's conduct in 2022 illustrates this point. Although it was a permanent member of the Security Council and a nuclear superpower, it still formally invoked Article 51 of the UN Charter to justify its intervention in Ukraine.

This approach differs from reductionist realism, which treats law simply as a mask used by the powerful. At the same time, it also accepts that law is not completely separate from political interests and power relations. The effectiveness of a legal argument depends not only on how coherent it is or how firmly it rests on legal grounds. It also depends on the reputation and image of the actor advancing it, the historical experiences of the intended audience, existing alliance structures, and the wider structure of the international system. International law should therefore be understood not as a separate sphere outside material power, but as an institutional arena in which power, identity, and legitimacy are closely intertwined.

Material capacity explains how Russia was able to begin and continue the war, but it does not explain why Moscow made such an extensive effort to justify its actions through international law. Power may make action possible, but legal legitimacy helps determine the political and diplomatic costs that follow.

The Conflicting Legal Arguments and Discourses Advanced by the Parties

The legal side of Russia's discourse cannot be separated from its narratives of history and identity. In his 2021 essay, Putin argues that Russians and Ukrainians are in fact one people. He presents the Ukrainian state as the result of a Soviet administrative decision and claims that it was later turned into an anti-Russian project through foreign intervention. In this way, Putin seeks to weaken the moral and historical foundations of Ukraine's sovereignty. (President of Russia, 2021).

The 2014 Euromaidan events also occupy a central place in Russia's narrative. Moscow presents the change of government that followed not as a democratic revolution, but as an unlawful coup backed by the West. In this way, it questions the legitimacy of the post-2014 Ukrainian government and portrays the events in Crimea and Donbas not as separatism, but as local resistance to an unlawful government. As Götz and Staun (2022) demonstrate, pre-existing narratives within Russian strategic culture, particularly those concerning Russia's vulnerability to the West, its need for strategic depth, and its entitlement to a sphere of influence, became increasingly radicalised as Ukraine moved closer to the West. This radicalisation was reinforced by the portrayal of Ukraine as a

Western instrument detached from Russia's historical and civilisational space (Pynnöniemi, 2024).

In this context, sovereignty ceases to be an equal and unrestricted legal status and becomes contingent upon security and the capacity for 'genuine independence'. Russia associates its own sovereignty with the ability to resist Western intervention and shape the security environment in its neighbourhood, while depicting Ukraine's orientation towards NATO not as the free choice of a sovereign state, but as the acquisition of influence by foreign powers against Russia. The sovereignty of the two states is thus implicitly hierarchised: Russia's security and great-power status are presented as limits upon Ukraine's freedom to choose its alliances.

Russia grounds its arguments in self-defence, collective self-defence, grave human-rights violations, the Responsibility to Protect, and genocide, whereas Ukraine relies on sovereignty, political independence, territorial integrity, self-defence, collective self-defence, and genocide. The same legal principles are thus interpreted differently by the parties in accordance with their interests and deployed against one another. Leaving aside the historical and cultural arguments, the parties' competing legal arguments may be examined under the following headings:

Conflicting Interpretations of the Right to Self-Determination

One of the principal foundations of Russia's legal narrative concerning Donetsk and Luhansk is the right of peoples to self-determination under Article 1(2) of the United Nations Charter. According to the Russian discourse, following the allegedly unlawful removal of Viktor Yanukovych's government in 2014, the predominantly Russian-speaking communities of eastern and south-eastern Ukraine felt threatened by the rise of Ukrainian nationalism and became concerned about their own security and the future of their children. (President of Russia, 2014). In this narrative, the separation of Donetsk and Luhansk from Ukraine is presented not as an externally encouraged attempt at partition, but as the exercise of self-determination by communities whose security and political identity were under threat.

Russia's argument has revived historical and doctrinal debates over the scope of the right to self-determination in international law. Although self-determination became a major principle of international law, particularly through the process of decolonisation, it has two distinct dimensions: external and internal. Internal self-determination refers to the freedom of a particular community to determine its political, economic, social, and cultural system within the existing borders of a state. External self-determination, by contrast, denotes a claimed right to secede from an existing state in order to establish an independent state or join another state (Crawford, 2006). Russia's argument rests on the claim that the peoples of Donetsk and Luhansk exercised external self-determination.

However, Russia's position on Donetsk and Luhansk is plainly inconsistent with the arguments it advanced in the Kosovo case. Although In April 2022, Putin argued that Donetsk and Luhansk were entitled to rely on the Kosovo precedent when declaring independence (Interfax, 2022), Russia's earlier position in the Kosovo context weakens the consistency of this claim. Naturally, the adoption of different positions by states in comparable situations invites criticism of double standards and erodes confidence in the objectivity of international law (Franck, 1988)

In the written statement Russia submitted to the International Court of Justice (ICJ) in 2009 concerning Kosovo's independence from Serbia (Russian Federation, 2009, p.29-39), she leaned towards territorial integrity rather than self-determination when addressing the tension between the two principles. Russia argued that external self-determination should be confined to genuinely exceptional circumstances that gravely threatened the very existence of a community, such as a direct armed attack by the parent state. In the absence of such circumstances, Russia maintained that every effort should be made to resolve tensions between the parent state and the ethnic community concerned within the state's existing borders.

On the other hand, Ukraine argues that the right to self-determination cannot be exercised in a manner that violates the principle of territorial integrity. This position is supported by the Declaration on Principles of International Law concerning Friendly Relations and Co-operation among States, adopted by United Nations General Assembly Resolution 2625 (XXV) of 24 October 1970. (United Nations General Assembly, 1970, Annex, Section "The principle of equal rights and self-determination of peoples", paras. 7–8) On this view, external self-determination applies primarily to peoples living under colonial rule. Colonial territory does not belong to the colonial power; consequently, the exercise of self-determination by a colonial people does not violate the territorial integrity of that power. However, Donetsk and Luhansk were not colonial territories, nor was Ukraine a colonial power in relation to them.

The Allegation of Genocide and the Responsibility to Protect (R2P)

According to Russia's account, the events in Donbas amounted to a popular uprising and did not involve Russian instigation or military support. Russia claimed both a right and a responsibility to protect the region's Russian and

Russian-speaking population from grave human-rights violations imposed by Ukraine. Russia's Permanent Representative to the United Nations, Vasily Nebenzya, likewise defended the deployment of Russian forces to the two regions under the designation of a peacekeeping mission as an effort to protect Russian-speaking communities from Ukrainian aggression, stressing that the decision had not been taken suddenly and recalling that the declarations of independence dated back to 2014. (United Nations Security Council, 2022a, pp. 11–13).

To reinforce the claim of grave human-rights violations, Putin further alleged that Ukraine was committing genocide (President of Russia, 2022b). He formulated this allegation as the systematic targeting and attempted destruction of the Russian and Russian-speaking population in the region. Indeed, Article I of the 1948 Convention on the Prevention and Punishment of the Crime of Genocide obliges the contracting parties to prevent and punish genocide.

Ukraine, by contrast, contends that no genocide occurred in the region. No independent non-governmental organisation or institution had alleged the existence of genocide, and no state other than Russia had advanced such a claim. In international law, the existence of genocide requires proof of the specific intent to destroy a protected group, while the ICJ has applied a particularly demanding evidentiary standard to allegations of state responsibility for genocide (Schabas, 2009, pp. 241–306; ICJ, 2007, paras. 209–210). Genocide is difficult to prove, and such exacting standards may, regrettably, make it impossible to establish a genocide that has in fact occurred. Nevertheless, the near-total absence of support for Russia's allegations among the international community and credible non-governmental organisations raises serious doubts that the legal term was being politically instrumentalised.

Article VIII of the Genocide Convention, moreover, provides that any contracting party may call upon the competent organs of the United Nations to take such action under the UN Charter as they consider appropriate for the prevention and suppression of genocide. Thus, even if genocide were occurring, the Convention does not automatically grant individual states a unilateral right of intervention. Article IX further provides that disputes relating to the Convention shall be submitted to the ICJ. Based on this article therefore, Ukraine instituted proceedings before the ICJ on 27 February 2022, seeking a legal determination that the genocide alleged by Russia did not exist and requesting provisional measures to halt Russia's military operation

Ukraine, by contrast, argued that Russia had misused the Genocide Convention by invoking unsubstantiated allegations of genocide to justify its military operation. Ukraine requested that the Court indicate provisional measures requiring Russia immediately to suspend its military operations. On 16 March 2022, by thirteen votes to two (with the Russian and Chinese judges voting against), the Court ordered Russia to suspend immediately the military operations that it had commenced in Ukraine. The Court expressed profound concern about Russia's use of force and observed that, at that stage of the proceedings, it was not in possession of evidence substantiating Russia's allegation that genocide had been committed on Ukrainian territory (ICJ, 2022a, paras. 18, 59, 86).

The Court's decisions are binding, but it has no independent capacity to enforce them by force if necessary. In the end, implementation still depends on the political will of the Security Council. Since Russia is a permanent member with veto power, a paralysing deadlock would be unavoidable. This exposes one of international law's most serious weaknesses: the absence of an effective enforcement mechanism. Veto power has repeatedly prevented the Security Council from condemning or responding effectively to alleged violations of Article 2(4), particularly where a permanent member or one of its close allies was involved.

Russia's same argument is also connected to the doctrine of the Responsibility to Protect (R2P), introduced by the International Commission on Intervention and State Sovereignty (ICISS) in 2001. Under R2P, a state bears responsibility for protecting its population from genocide, war crimes, ethnic cleansing, and crimes against humanity. Where a state is unable or unwilling to fulfil this responsibility, or itself perpetrates such crimes, responsibility to respond expands to the international community. This may be through peaceful means and, where necessary, coercive measures under Chapter VII of the UN Charter and with Security Council authorisation (ICISS, 2001). However, the Responsibility to Protect has not yet acquired binding status in international law. There is also considerable doctrinal controversy over whether it can legitimise unilateral (that is by Russia) military intervention. Indeed, the R2P report itself does not endorse intervention undertaken by a single state.

The Argument of Individual and Collective Self-Defence

Perhaps the most consequential legal argument invoked by Russia to legitimise its intervention is the right of individual and collective self-defence under Article 51 of the UN Charter. Article 51 of the UN Charter provides: "*Nothing in the present Charter shall impair the inherent right of individual or collective self-defence if an armed attack occurs against a Member of the United Nations, until the Security Council has taken measures necessary to maintain international peace and security.*" Putin formulated this argument by claiming that Ukraine's rapprochement with NATO constituted an existential threat to

Russia and that force was being used in self-defence against that threat. At the centre of Putin's address of 24 February was the claim that NATO's eastward enlargement and Ukraine's military integration with the West had exposed Russia to an existential threat. In this telling, the danger wasn't just Ukraine's possible future NATO membership. Western military infrastructure, weapons, advisers being placed on Ukrainian soil was cast as an imminent threat, one that left Russia no room to simply wait it out. So Putin didn't frame the operation as an attack. He framed it as a defensive move meant to head off a bigger, more dangerous assault before it happened (President of Russia, 2022b; Russian Federation, 2022).

Russia constructs this argument on two principal foundations. First, it claims to be acting in its own self-defence against NATO enlargement. Second, it invokes collective self-defence in response to requests for assistance from the Donetsk and Luhansk People's Republics, which Russia had recognised as states. Within this framework, Putin described the intervention, purportedly intended to 'demilitarise' and 'denazify' Ukraine, not as a military campaign, occupation, or war, but as a 'special military operation' (President of Russia, 2022b; Russian Federation, 2022).

The discourse of 'denazification' draws upon one of the most powerful sources of legitimacy in Russian historical memory. The Soviet victory in the Second World War and the struggle against fascism are projected onto the contemporary war: the Ukrainian government is associated with aggressive nationalism and Nazism, while Russia seeks to identify itself with the historical role of the anti-fascist liberator. Drawing on Dudko's analysis, the concept of genocide can be seen as having been displaced from its technical legal context and incorporated into a political narrative that portrayed Russia's use of force as humanitarian protection and *denazification* (Dudko, 2022, pp. 134–136, 140).

Russia also invokes the right of collective self-defence under Article 51 of the UN Charter through the 'Treaties of Friendship, Co-operation and Mutual Assistance' concluded with the Donetsk and Luhansk People's Republics. (Russian Federation, 2022, annex, p. 6) On this account, Russia was contributing to those entities' collective self-defence.

Ukraine argues, first, that Russia's claim to be exercising self-defence against an existential threat is unfounded. Neither the West nor NATO had used or threatened force against nuclear-armed Russia, whether in rhetoric or in practice, nor was there an imminent and certain threat of such an attack. Russia's conduct can therefore be compared only to a claimed entitlement to pre-emptive or preventive force of the kind asserted by the United States under the Bush Doctrine in Iraq. International law draws an important distinction between pre-emptive and preventive self-defence. Anticipatory or pre-emptive self-defence generally refers to the use of force in response to a manifest and imminent threat of armed attack, whereas preventive force is directed against a more remote threat that may materialise in the future. The Caroline formula has frequently been invoked in support of a narrowly defined right of anticipatory self-defence where the necessity to act is instant and overwhelming, leaving no choice of means and no moment for deliberation. By contrast, preventive self-defence against a non-imminent or hypothetical future threat is not generally recognised as lawful under international law (Gill, 2006). Russia's action in response to the alleged NATO threat can, at best, be characterised as preventive.

The legality of Russia's collective self-defence claim depends first on whether Donetsk and Luhansk could be regarded as states and, therefore, whether they could legally request assistance in collective self-defence (Green et al., 2022, pp. 18–20). According to Ukraine, the fact that they were recognised only by Russia, which was itself the source of the problem, did not make them sovereign states in the eyes of the United Nations or the international community. In this sense, they did not possess international legal personality as states. international agreements with non-sovereign entities and then relying on those agreements to launch a military intervention amounted to an unlawful use of force and an attempted occupation of Ukraine. Even were this legal basis accepted for the sake of argument, Russia did not confine its actions to the relevant regions; it attacked the country from multiple directions, including the capital Kyiv, and declared an intention to demilitarise Ukraine as a whole. Even so, this would still amount to a grossly disproportionate use of force. Customary international law's proportionality requirement in self-defence calls for a reasonable relationship between the force used and the scale of the threat it responds to. (ICJ, 1986, para. 176; Dinstein, 2017, pp. 251–252, 282–287).

Ukraine also defends that the events must be characterised not as a *special military operation*, but as aggression and occupation. The choice of terminology is not merely semantic. *Operation* conveys the impression of a limited, technical, and protective intervention, whereas *aggression* activates the prohibition on the use of force, international responsibility, and the victim state's right of self-defence. This brings us to the prevention of use of force in international law.

Prohibition of the Use of Force, Sovereignty, Political Independence, and Territorial Integrity

Ukraine's principal legal argument against Russia rests on the foundational principles of international law: the prohibition on the use of force, sovereignty, political independence, and territorial integrity.

Article 2(4) is perhaps the most important provision of the UN Charter for the present analysis. It provides: '*All Members shall refrain in their international relations from the threat or use of force against the territorial integrity or political independence of any state, or in any other manner inconsistent with the Purposes of the United Nations.*' The prohibition on the unlawful use of force is widely regarded as a peremptory norm of international law (jus cogens), from which no derogation is permitted under Article 53 of the Vienna Convention. Article 103 of the UN Charter gives Charter obligations priority over conflicting treaty commitments. Through the provisions of Chapter VII, the United Nations Charter sought to centralise the authority to employ force on behalf of the international community whenever collective action was considered necessary. The Security Council was designated as the principal institutional authority responsible for exercising this centralised power. Accordingly, UN member states accepted significant restrictions on their unilateral use of force and entrusted the Security Council with primary responsibility for authorising collective enforcement measures, while retaining the inherent right of individual and collective self-defence under Article 51.

Ukraine also invokes the 1970 Declaration on Friendly Relations and the principles of the 1975 Helsinki Final Act alongside the prohibition on the use of force under Article 2(4) of the UN Charter. Principle III of the Helsinki Final Act affirms the inviolability of frontiers, while Principle IV requires participating States to respect one another's territorial integrity and prohibits military occupation or territorial acquisition through the threat or use of force. (United Nations General Assembly, 1970; CSCE, 1975, Principles III–IV)

United Nations General Assembly Resolution 3314 (XXIX), adopted by consensus on 14 December 1974, provides the principal international definition of aggression. Drawing on Article 2(4) of the UN Charter, it defines aggression broadly as the use of armed force by one state against the sovereignty, territorial integrity, or political independence of another and lists such examples as invasion, military occupation, annexation, bombardment, blockade, attacks on another state's armed forces, misuse of forces stationed abroad, and the sending of armed groups or mercenaries (United Nations General Assembly, 1974). Ukraine argues that Russia's long-standing instigation, support, arming, and training of separatist movements in Donetsk and Luhansk, followed by its direct invasion of Ukraine based on unfounded historical, cultural, and legal claims, constitutes a direct and manifest violation of Article 2(4).

A draft resolution condemning Russia's military action against Ukraine received the support of eleven members of the United Nations Security Council on 25 February 2022, but failed because of Russia's veto; while China, India, and the United Arab Emirates abstained. The draft described Russia's actions as contrary to Article 2(4) of the UN Charter and called for the termination of military operations, the unconditional withdrawal of Russian forces from Ukraine, and the reversal of the decisions recognising Donetsk and Luhansk. Russia's use of the veto attached to its permanent membership, despite being a party to the conflict, paralysed the Security Council but two days later, the Security Council adopted Resolution 2623 (2022), to the referral of the matter to an Emergency Special Session of the United Nations General Assembly. (United Nations Security Council, 2022a)[3] General Assembly Resolution ES-11/1 of 2 March 2022 was adopted by 141 votes in favour, five against (Russia, Belarus, Syria, North Korea, and Eritrea), and thirty-five abstentions.[4] It characterised Russia's aggression against Ukraine as a violation of the UN Charter and demanded that Russia immediately cease its use of force and withdraw its troops from Ukrainian territory. The United Nations General Assembly subsequently characterised Russia's conduct as aggression against Ukraine, while on 17 March 2023, more than a year later, the International Criminal Court (ICC) issued an arrest warrant for Putin in connection with allegations of war crimes (ICC, 2023). Because Russia is not a State Party to the Rome Statute, the ICC cannot currently exercise jurisdiction over the crime of aggression committed against Ukraine in the absence of a Security Council referral. To fill this jurisdictional gap, Ukraine and the Council of Europe signed an agreement in June 2025 establishing a Special Tribunal for the Crime of Aggression against Ukraine (Council of Europe, 2025). However, the overwhelming support for the resolution demonstrated that Russia's discourse of legal legitimation had not been accepted by the great majority of the international community. It must nevertheless be borne in mind that, unlike Security Council decisions, General Assembly resolutions are recommendatory and do not possess binding enforcement force.

Russia's violation of Article 2(4) of the UN Charter is the principal reason why Ukraine, just like Russia, invokes both individual and collective self-defence. On Ukraine's account, it has been confronting separatist movements in Crimea and Donbas that seek to divide the country and have received political backing and heavy weaponry from neighbouring Russia. Russia further violated Ukraine's territorial integrity in September 2022 by declaring the incorporation

[3] An Emergency Special Session (ESS) is an exceptional mechanism that enables the UN General Assembly to convene rapidly when the UN Security Council is unable to act on a threat to international peace and security because of a veto by one of its permanent members. Its legal basis is the 1950 "Uniting for Peace" Resolution. An ESS may be called within 24 hours at the request of at least nine members of the Security Council (no veto right) or majority of the UN General Assembly's members. During such sessions, the General Assembly may recommend collective measures, including military measures, although its resolutions are not legally binding.

[4]Türkiye also supported the resolution and emphasised respect for territorial integrity, but did not join the economic sanctions imposed on Russia.

of the Donetsk, Luhansk, Kherson, and Zaporizhzhia regions into its own territory on the basis of contested referendums conducted under conditions of armed conflict and military occupation. The United Nations General Assembly rejected this attempted annexation, declaring that the referendums had no legal validity and could not alter the status of the territories concerned. (UN General Assembly, 2022, para. 3) Faced with the threat of fragmentation, Ukraine has sought, as any state would, to preserve its territorial integrity and has been compelled to use force against armed separatists. As noted above, Article 51 of the UN Charter expressly recognises the right of individual or collective self-defence when a member state suffers an armed attack, until the Security Council has taken the necessary measures. There is broad agreement within the international community that Ukraine has been subjected to an armed attack by Russia. Because the UN Security Council, of which Russia is a permanent member, has been unable to take effective measures against this unlawful use of force, Ukraine has exercised its right of self-defence under Article 51. Most Western states, in response to Ukraine's request, have likewise supported Ukraine's collective self-defence through material and military assistance, while seeking to weaken Russia's capacity for aggression through sanctions.

Ukraine doesn't present self-defence as just a right to protect its own territory. It's framed as part of something bigger, a struggle to uphold the foundational principles of the international order itself. Zelensky has repeatedly cast Ukraine's resistance as a defence of the UN Charter, sovereign equality, the inviolability of borders (President of Ukraine, 2022a, 2022b). This ties the fight for national survival to a much larger, universal narrative about international order. And it means aid from third states isn't just framed as solidarity with Ukraine. It becomes an investment in their own security and in the international order they depend on too.

On sovereignty, the UN Charter is clear: all member states have sovereign equality (Chapter I, Article 2(1); Chapter XII, Article 78). As an independent, sovereign state, Ukraine defends that it is free to join whatever international organisation it chooses, and it doesn't need anyone else's approval to do so. Ukraine's democratically elected government chose to pursue EU and NATO membership. That decision wasn't meant to threaten anyone. If anything, it was itself driven by the threat Ukraine perceived from Russia. And Ukraine, for its part, has never tried to interfere with Russia's own choices about which international organisations it joins.

The Instrumentalisation of International Law

The Russia-Ukraine conflict provides a striking example of how international law may be instrumentalised by great powers. Russia has invoked the same norms of international law in relation to Donetsk and Luhansk in a manner directly contrary to the arguments it suggested in the Kosovo context. This position raises serious doubts about the objectivity and universality of international law and encourages the perception that law is merely an instrument serving political interests. In international legal doctrine, this double standard undermines the legitimacy of international law.

Russia also employs earlier unlawful or legally contested actions by Western states as a means of legitimising its own conduct. In the lengthy address delivered on the day the military operation began, Putin anticipated Western accusations that Russia was violating international law by referring individually to recent Western military interventions that were legally controversial/illegal and resulted in civilian deaths. In the same speech, he applied to Ukraine the rhetoric of a "threat of developing nuclear weapons" previously used by Western leaders to justify interventions and still employed in relation to Iran. He also associated the Ukrainian government with Nazism, one of Europe's deepest historical traumas. Even if true, the earlier legally contested uses of force by Western states, however, do not automatically confer upon Russia a right to use force unlawfully. Even if earlier Western interventions were unlawful or legally contested, they could not alter the international law governing Russia's resort to force or create a legal entitlement to violate the prohibition contained in Article 2(4) of the UN Charter. This follows from the principle *ex injuria jus non oritur*, according to which unlawful conduct cannot modify the law applicable between the parties (ICJ, 2019, para. 64). Russia's *tu quoque* argument—that Western states had previously engaged in comparable conduct—could therefore undermine the political or moral authority of its critics, but could not, by itself, provide a legal justification for Russia's use of force.

Nevertheless, Russia's narrative seeks to perform three political functions. First, it attempts to erode the West's moral authority to speak in the name of international law and to judge Russia. Second, it presents Russia's conduct not as an exceptional first breach of the rules, but as a continuation of, or reaction to, practices initiated by the West. Third, it communicates to non-Western audiences a message about double standards and a hierarchical world order. Although this resembles the classic tu quoque defence, it is not merely defensive. Russia points to past Western violations for two reasons at once, to legally excuse its own conduct, and to build a broader argument that the existing international order isn't impartial to begin with. So the success of Russia's strategy can't be measured just by asking whether Russia was seen as legally justified. When some states refuse to join Western-led sanctions, or choose to stay neutral without buying into Russia's narrative, that itself may be a political effect of this counter-legitimation strategy.

On the contrary, Zelensky, in his speeches, has increasingly sought to characterise the war as a struggle for decolonisation and national survival. Russia is presented not merely as an aggressor and occupying power, but as an imperial centre that denies Ukraine's right to exist as an independent nation. This framing strengthens Ukraine's domestic mobilisation while also enabling it to address non-Western audiences through an anti-colonial vocabulary. Ukraine thereby tries to reverse Russia's discourse of anti-imperialism and multipolarity: the state resisting an unjust system is not Russia, but Ukraine.

Conclusion

The narratives advanced by Russia and Ukraine are not directed at a single international public. In the domestic dimension of the Russian narrative; NATO encirclement, the Great Patriotic War, Nazism, and the protection of Russian-speaking populations are prominent. For Russia's near abroad and the Russian diaspora; shared history, language, and security ties are especially important. In discourse addressed to the West, the emphasis falls on double standards, Kosovo, Iraq, and Libya. The broader message to the Global South centres on multipolarity and opposition to Western hegemony and colonialism.

Ukraine's narrative is similarly multilayered. For domestic audiences, it foregrounds the survival of an independent nation and the defence of the homeland; for Western audiences, democracy, European identity, and shared values; and for the wider international community, sovereign equality, the inviolability of borders, and the security of comparatively small states. Ukraine's most significant narrative achievement has been to present national resistance not as an expression of the West's particular geopolitical interests, but as a universal test of the UN Charter.

The Russia-Ukraine case clearly demonstrates that international law may be used for propagandistic purposes. A concept as grave as genocide may be placed into circulation without evidence; recognition may serve as a preliminary step towards military intervention; and self-defence may be expanded to encompass long-term security concerns. Yet the label 'propaganda' alone does not explain why this process is conducted in the language of law.

Russia's presentation of legal justifications provides indirect evidence that the prohibition on the use of force continues to operate as a standard of legitimacy within international society. If law were wholly ineffectual, there would have been no need to notify the United Nations of the operation under Article 51, conclude agreements with Donetsk and Luhansk, or invoke the Genocide Convention. Rather than openly defending its conduct outside the existing normative order, the state attempted to situate it within that order. The violation of a norm, therefore, does not entirely eliminate its social power.

At the same time, law is a strategic resource not only for Russia, but also for the materially weaker Ukraine. Ukraine could not overcome Russia's veto in the Security Council, but it influenced the legal characterisation of the conflict by turning to the General Assembly, the ICJ, the ECtHR, and other legal mechanisms. Law did not by itself halt the military assault, but it shaped recognition policies, sanctions, assistance coalitions, evidence-gathering processes, and future claims of responsibility.

Russia and Ukraine thus employ a shared normative vocabulary. Sovereignty, self-determination, prohibition of use of force, individual and collective self-defence, the prevention of genocide, and international order occupy a central place in the discourse of both parties. Yet these concepts are embedded within opposed historical narratives, identities, and definitions of threat.

The parties' divergent interpretations of the same legal principles in pursuit of their own interests reveal fundamental problems in the interpretation of international law and the decisive influence of political interests upon legal argument. International law is a normative system governing relations among states, yet the interpretation and application of its norms depend to a considerable extent upon the political will of states.

International law is nevertheless neither an autonomous, automatically operating higher order independent of politics nor empty rhetoric that merely conceals power politics. States pursue political objectives through law, construct identities, build coalitions, and erode the legitimacy of their rivals. The strategic use of law is evidence both of its weakness and of its continuing normative force. The Russia-Ukraine War demonstrates that contemporary international political conflict is waged not only over territory and military capacity, but also over whose side the law is on and even what the law means.

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Chapter 3

Which Households Experience Persistent Energy-Related Deprivation in Türkiye? Evidence from the 2021–2024 SILC Panel

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Abstract

This study examines persistent energy-related deprivation among households in Türkiye using a balanced panel of 5,782 households observed in the 2021–2024 Income and Living Conditions Survey. Three outcomes are analyzed separately: persistent inability to keep the home adequately warm, persistent arrears on utility bills, and persistent physical housing deprivation involving leaks, dampness, or rot. A household is classified as persistently deprived if it experienced the relevant deprivation in 2024 and in at least two of the preceding three years. Separate logistic regression models relate these four-year outcomes to household and dwelling characteristics measured at the 2021 baseline. Average marginal effects are reported using HC1-robust standard errors, with Benjamini–Hochberg adjustment applied within each outcome model.

In the analytical sample, persistent inadequate heating was observed in 14.0% of households, utility-bill arrears in 7.5%, and physical housing deprivation in 26.0%. Higher income and educational attainment were consistently associated with lower probabilities of all three outcomes, while tenancy was associated with higher probabilities across the models. One-person and lone-parent households showed higher probabilities of persistent inadequate heating and physical housing deprivation. Dwelling type was most strongly associated with physical housing deprivation, particularly among households living in detached and semi-detached or terraced dwellings. Associations with age, employment status, household composition, and basic amenities differed across outcomes.

The findings indicate that persistent inadequate heating, utility arrears, and physical housing problems capture related but analytically distinct dimensions of deprivation. The findings may inform policies that combine income and payment support with measures targeting rental housing quality, dwelling maintenance,

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and the housing conditions of vulnerable household types. The results represent conditional associations between baseline characteristics and persistent deprivation and should not be interpreted as causal effects or estimates of genuine state dependence.

Keywords: Energy poverty, Energy poverty persistence, Persistent deprivation, Housing deprivation, Household panel,

Introduction

Energy services enable the basic functions of daily life, such as heating and cooling homes, lighting, cooking, hot water, and the use of electrical appliances. The inability to meet these needs at a socially and materially acceptable level is referred to as energy poverty. Energy poverty is a multifaceted phenomenon that stems primarily from the high share of energy expenditures in household budgets, low-income levels, and the poor energy performance of buildings and appliances; it affects different segments of society to varying degrees (Bouzarovski, 2013; Thomson et al., 2017a; European Commission, 2020)

Although the concepts of energy poverty, fuel poverty, and energy vulnerability are sometimes used interchangeably in the literature, they do not refer to the same analytical framework. The concept of fuel poverty has historically evolved from heating and affordability issues in the United Kingdom; energy poverty has shifted toward a broader framework of energy services; and energy vulnerability focuses on the processes that determine households' capacity to fall into, remain in, or escape poverty. Therefore, a binary approach that classifies developed countries solely based on affordability and developing countries solely based on access is inadequate. Access, affordability, energy efficiency, resilience, needs, and daily practices can all interact in different national contexts (Bouzarovski & Petrova, 2015; Bouzarovski, 2018).

Goal 7 of the United Nations Sustainable Development Goals calls for access to affordable, reliable, sustainable, and modern energy for all by 2030 (United Nations, 2015). Rising living costs in the aftermath of the COVID-19 pandemic and the 2022 energy crisis have brought the affordability of energy services back to the center of the academic and political spotlight. Recent findings regarding European regions indicate that the impact of these crises has not been uniform across countries and regions in terms of direction or severity (Śmiech & Karpińska, 2025). The issue is intertwined not only with energy consumption but also with housing quality, health, economic insecurity, and social exclusion (Churchill & Smyth, 2021; Thomson et al., 2017b).

According to TÜİK's 2025 Poverty and Living Conditions Statistics, the relative poverty rate in Türkiye was 20.6% when the poverty threshold was set at

60% of median equivalised household disposable income. Among those below the 60% poverty line, 50.5% reported being unable to afford heating for their homes, while 45.9% reported experiencing physical housing problems such as leaky roofs, damp walls, or rotten window frames. These rates are 19.7% and 30.4%, respectively, among those with incomes between 60% and 120% of the median income, and 3.1% and 18.2% among those with incomes above 120% of the median income. The fact that these rates do not drop to zero even among groups above the poverty line indicates that while income poverty is strongly linked to energy and housing deprivation, the two do not fully overlap. In particular, the fact that heating and physical housing problems are also observed among groups above the poverty line indicates that monetary poverty indicators alone cannot fully capture all forms of deprivation in living conditions.

Annual prevalence rates indicate the extent of deprivation at a particular point in time, but they do not show how long the same households remain deprived or whether they subsequently exit and re-enter deprivation. The choice of indicators can also significantly alter the results. Expenditure-based and subjective indicators applied to the same households can classify different groups as energy-poor; while the proportion of those classified as energy-poor according to all four prevalence measures at the European Union level is very low, the proportion of those classified as energy-poor according to at least one measure can be quite high (Deller et al., 2021; Maier & Dreoni, 2024). This finding supports the separate analysis of different dimensions of energy poverty rather than merging them into a single composite outcome.

This study examines three longitudinal outcomes separately using panel data from the Turkish Statistical Institute's (TÜİK) Income and Living Conditions Survey for 2021–2024: (i) persistent inability to keep home adequately warm, (ii) persistent arrears in utility bills, and (iii) persistent physical housing deprivation in the form of leaks, dampness, or rot. The central research question is how household and housing characteristics at the 2021 baseline are associated with the persistent experience of these deprivations over the 2021–2024 period. The study's contribution is to expand the household literature in Türkiye—which has primarily relied on cross-sectional and expenditure-based measures—by comparing the persistence of three distinct dimensions of deprivation within the same balanced panel.

Theoretical Framework

Boardman's (1991) approach frames fuel poverty not merely as a result of low income, but within the context of the interaction between income, energy prices, and a home's energy performance. According to Boardman, when a low-income family lives in an energy-inefficient home, it becomes impossible to afford adequate heating; therefore, solutions relying solely on income transfers risk subsidizing energy inefficiency, while a lasting solution requires investment in the physical performance of the housing. This three-pronged framework has evolved in subsequent literature into a broader approach to energy vulnerability that incorporates household needs, usage practices, heating technologies, tenure types, and policy institutions (Bouzarovski & Petrova, 2015; Thomson et al., 2017a).

In this study, energy poverty is addressed not as a simple subset of income poverty, but as a lack of capacity to obtain necessary energy services. However, the three outcome variables used do not have the same theoretical status. "Inability to adequately meet the household's heating needs" constitutes a direct deprivation of thermal energy services. Utility-bill arrears indicate difficulty in meeting essential service payments. However, because the survey item also covers non-energy services such as water, it cannot be interpreted as a specific measure of energy affordability, although the two phenomena overlap (Özdemir & Koukoufikis, 2024).

Indicators such as a "leaky roof, damp wall, or rotted window frame" measure the physical condition of the dwelling rather than the energy services directly consumed. A poor-quality building can lead to energy poverty by increasing heating costs, moisture, and heat loss; it can also be the result of broader housing deprivations, such as low income and an inability to perform maintenance. Therefore, in this study, this indicator has been assessed as "physical housing deprivation," which is related to energy poverty but analytically distinct from it. In the measurement literature as well, air leakage and moisture are treated not so much as direct measures of energy services but rather as indicators of housing conditions, vulnerability, or consequences of deprivation (Healy & Clinch, 2004; Thomson et al., 2017a).

The concept of persistence also requires distinguishing between two different approaches. The first is a classification of periodic or chronic deprivation based on the number of years a household experienced deprivation during a specific observation period. The second is the dynamic panel approach, which estimates the true state-dependent effect of prior-period deprivation on subsequent-period deprivation after controlling for observed and unobserved heterogeneity. This study employs the first approach; it does not estimate state dependence. Therefore, the results are interpreted as conditional differences between the 2021 baseline profiles of households experiencing and not experiencing persistent deprivation.

Literature Review

Measurement of energy poverty

Approaches to measuring energy poverty can be grouped into three main categories. Expenditure-based measures use the ratio of energy expenditure to income or the disposable income remaining after energy and housing expenses; subjective or consensus-based indicators rely on household reports such as insufficient heating and bill arrears; direct technical measurements examine indoor temperature, building energy performance, or consumption requirements. Composite indicators/indexes, which could be considered a fourth category, combine multiple dimensions into a single measure (Al Kez et al., 2024; Halkos & Gkampoura, 2021; Siksnelyte-Butkiene et al., 2021). Systematic reviews indicate that while there are numerous indicators, they have different advantages and limitations in terms of data requirements, interpretability, contextual sensitivity, and policy alignment (Siksnelyte-Butkiene et al., 2021).

The main advantage of expenditure-based indicators is that they clearly show the relationship between income and costs. On the other hand, they may overlook households that suppress their needs through low consumption or misclassify high-income but high-energy-consuming households. Subjective indicators reflect experienced deprivation more directly; however, they may be influenced by preferences, expectations, cultural norms, health status, and the household's adaptive behaviors. Deller et al. (2021) demonstrate that, within the same UK panel, the "low income–high cost" and "inability to afford adequate heating" criteria identified different numbers and types of households; they also show that older households may exhibit higher risk under expenditure-based criteria but lower risk under subjective heating criteria.

Maier and Dreoni (2024), analyzing four indicators for the European Union, show that subjective measures based on insufficient heating and bill arrears cover different groups than the expenditure-based M/2 and 2M indicators. While the study found that approximately 40% of the population is classified as energy-poor according to at least one measure, the proportion of those falling within the intersection of all four measures is only 0.3%; approximately one-third of those defined as energy-poor are also income-poor. This low overlap indicates that energy poverty cannot be reduced to income poverty and that the indicators should not be used interchangeably.

It appears that the choice of criteria can also influence policy assessments. Opatrny and Scasny (2025) propose the M2LIHC indicator for the Czech Republic, which combines the 2M and low-income-high-cost criteria; the authors show that the LIHC measure may respond counterintuitively to income changes among low-income households. For this reason, in the present study, the three indicators were not converted into a single index; each was modeled as a separate outcome.

Transient and persistent energy poverty

A significant portion of the literature on energy poverty focuses on prevalence in a single year. However, households may fall into poverty due to a temporary income or price shock, remain in poverty for an extended period due to structural housing and labor market conditions, or relapse into poverty after having emerged from it. This distinction is important for differentiating the objectives of temporary price or income support from those of structural policies such as energy efficiency and housing renovation**.**

Karpinska and Śmiech (2020) analyzed the 2015–2018 EU-SILC panel data for 26 European countries using a Markov process and calculated the average persistence rate for energy poverty at 22%. The same study shows that poverty makes it, on average, approximately twice as difficult to escape energy poverty. This finding suggests that broader economic hardship substantially constrains households' ability to exit energy poverty.

For Germany, Drescher and Janzen (2021) found that being energy-poor based on expenditure in a previous period significantly increased the likelihood of energy poverty in subsequent periods; and that while the majority of energy poverty was transitory, it became chronic in certain household types. In Greece, Halkos and Kostakis (2023), using a four-wave panel, report a true state dependence of 10–12 percentage points in consensus-based indicators and a chronic energy poverty rate of approximately 9–10 percent. Studies from Spain also show the coexistence of both temporary and persistent components, with low income, education, housing type, and health conditions being associated with duration (Pourkhanali et al., 2023).

Masciandaro et al. (2026), who compared Spain and the Netherlands over the 2005–2023 period, found that although the probability of entering energy poverty is higher in Spain, the probability of remaining in poverty is significant in both countries and ranges from 3% to 23%, depending on the indicator used. While the risk of entering energy poverty increases in women-headed households, no consistent gender difference was found regarding persistence. The findings suggest that the processes of entry and persistence may not share the same determinants, and that characteristics such as gender may play different roles at different stages of the process.

Özdemir and Koukoufikis (2024) adapted Eurostat's approach to persistent income poverty and material deprivation to energy poverty, defining households as "persistently deprived" if they were deprived in the final year of a four-year period and had experienced the same deprivation in at least two of the preceding three years. This criterion distinguishes deprivation that persists at the end of the period and has been observed in at least three of the four years. However, it is not the same as the actual status dependency in dynamic probit models and does not classify long-term deprivation that ended during the period as “persistent.” The present study uses this definition because it is consistent with the persistence convention adapted from Eurostat by Özdemir and Koukoufikis.

Krstić et al. (2024) find substantial cross-country heterogeneity in both classified persistence and genuine state dependence across 26 European countries. Initial energy-poverty status remains a strong predictor, but the estimated magnitude of state dependence differs markedly between countries.

There is no single method for measuring persistence. Chen et al. (2026) proposed a time-independent method that separates the Foster-Greer-Thorbecke index into chronic and temporary components in order to reduce the arbitrariness of classifications based on a specific time threshold. Zhou et al. (2025), on the other hand, combined the Alkire-Foster multidimensional poverty approach with the time dimension and demonstrated that the impact of long-term energy poverty on health can be stronger than that of depth. Although these studies are based on different countries and measurement contexts, they agree that persistence cannot be represented solely by annual prevalence.

Socioeconomic and demographic determinants

One of the most comprehensive recent reviews of the determinants of energy poverty is the systematic review by del Río et al. (2025), in which they classified 144 different determinants. The review found that income and the head of household’s educational level showed the most consistent negative association with energy poverty, while unemployment or a weak labor market position, household size, and, in some studies, older age were associated with a higher risk. However, the vast majority of the studies examined are cross-sectional; findings regarding age, gender, retirement, and household structure vary depending on the indicators used and the country context.

Krstić et al. (2024) estimated separate models for the probability and intensity of energy poverty in 29 European countries using 2017–2020 EU-SILC data. In most countries, a higher proportion of low-educated and unemployed individuals within a household, as well as a higher proportion of individuals unable to participate in the labor market due to health issues, is associated with higher energy poverty; household income, on the other hand, is associated with lower energy poverty. While household size showed a positive relationship in many countries, the number of children, gender composition, and most housing types generally did not form a statistically consistent pattern. Furthermore, the proportion of individuals aged 65 and older is associated with lower probability or intensity of energy poverty in many countries compared to the 25–44 age group. These findings motivate treating household size, children, age composition, and dwelling type as analytically distinct covariates.

Income is the direct source of the ability to cover energy costs; however, it is not the sole determinant of energy poverty. Studies have highlighted the effects of unemployment, education, household composition, ownership status, and health (Costa-Campi et al., 2019; Pourkhanali et al., 2023); Abbas et al. (2020), who examined multidimensional energy poverty in South Asia, demonstrated that wealth and education act as protective factors, while household size and rural residence act as risk-increasing factors. Despite differences in measurement and development contexts, education emerges as a resource associated with more stable income, access to information, energy usage skills, and higher-quality housing. The impact of household structure can be two-sided, depending on energy service needs and economies of scale. While one-person households cannot share fixed housing and energy costs, single-parent households may face both income constraints and the burden of care. In Germany, chronic deprivation is particularly concentrated in lone-parent and one-person households (Drescher & Janzen, 2021). However, due to differences in indicators, the direction of the effect of household size is not consistent across all studies.

A similar heterogeneity exists with regard to gender and age. A study on financial inclusion in Türkiye indicates that the effect of financial inclusion on reducing energy poverty is stronger in households headed by women (Dogan et al., 2021). In contrast, European evidence suggests that female-headed households may face a higher probability of entering energy poverty, but female headship is not consistently associated with persistence (Masciandaro et al., 2026). Since older households may appear to be at higher risk in expenditure-based indicators but at lower risk in subjective adequate heating indicators, age coefficients must be interpreted with consideration of the measurement approach (Deller et al., 2021).

Dwelling type, tenure status and heating conditions

A home's energy performance is the key structural factor that determines the cost of the necessary energy services. Homes with poor insulation, a defective building envelope, or an inefficient heating system require more energy to achieve the same level of thermal comfort. In Ireland, Healy and Clinch (2002), who used a combination of objective and subjective thermal comfort measurements, found that two-thirds of fuel-poor households experienced cold stress and that more than half of elderly households experienced inadequate indoor temperatures during the winter. The same researchers' study on housing quality revealed the relationship between humidity and condensation and the severity of fuel poverty, as well as market failures hindering energy-saving investments (Healy & Clinch, 2004).

Tenure status, authority to invest, and financial capacity are key factors. Tenants have less control than owners over decisions regarding investments in insulation, windows, heating systems, or renewable energy; this gives rise to the "split incentive" problem, where the property owner bears the investment cost while the tenant bears the energy bill. Recent findings from Australia indicate that up to 45% of the difference in tenants' ability to pay bills can be explained by their capacity to make investments, and that assets play a stronger role than income (Best et al., 2025).

A spatial microdata analysis covering approximately 80% of households in the Netherlands examined energy poverty in terms of energy costs, housing energy quality, and the capacity to participate in energy transition. While a group of about 7% faces a combination of low income, high energy costs, and inadequate insulation, 48% of households are unable to retrofit their homes on their own due to being renters or having insufficient financial resources; 75% of energy-poor households live in public housing (Mulder et al., 2023). These findings highlight the importance not only of bill assistance but also of housing renovation and access to investment.

A systematic literature review shows that tenancy, detached housing, older buildings, and rural settlements are associated with higher levels of energy poverty in many studies (del Río et al., 2025). However, dwelling type does not solely determine energy performance; it interacts with dwelling size, exterior wall area, building age, regional climate, infrastructure, and settlement characteristics. Therefore, the dwelling type coefficients in the present study are interpreted not as the direct causal effect of the building type, but as conditional indicators of the 2021 baseline housing profile.

The heating system is also a composite indicator of energy prices, efficiency, and fuel access. The Germany panel study demonstrated that heating technology plays a significant role in distinguishing between temporary and chronic energy poverty, with electric heating in particular being associated with chronic risk (Drescher & Janzen, 2021). The literature on energy choice in Türkiye also indicates that income, age, place of residence, and housing characteristics determine preferences for natural gas versus traditional fuels (Özcan et al., 2013).

Turkish Context

The literature on household energy poverty in Türkiye consists of various conceptual definitions, data levels, and measurement practices. Günay and Kayacan (2023) emphasize that there is no official definition of energy poverty in Türkiye and that a country-specific measurement framework is needed. Although more recent studies have expanded the national literature in terms of multidimensional, longitudinal, spatial, and policy assessment approaches, there is still no common and institutionalized definition or regular monitoring system (Değirmenci & Limanlı, 2025; Korkmaz & Şenyel Kürkçüoğlu, 2025). Furthermore, the authors caution that the "bill arrears" indicator may include non-energy essential services such as water, in addition to electricity and gas (Günay & Kayacan, 2023).

A significant portion of early micro-data studies in Türkiye have focused on fuel choice and energy consumption patterns rather than direct energy service deprivation. Özcan et al. (2013) demonstrated that income, age, and rural-urban residence are determining factors in fuel preferences. Emeç et al. (2015), using a multinomial logit model applied to the 2012 Household Budget Survey, found that households in the lowest income quintile had a higher relative risk of choosing traditional fuels over natural gas compared to those in the middle income quintile; they also found that less-educated and rural households were more likely to rely on traditional fuels. While these studies explain Türkiye's energy infrastructure, income, and fuel ladder, they do not directly measure whether the necessary energy services are being met or how long energy deprivation persists within the same household.

Studies based on expenditure thresholds show that energy poverty in Türkiye is strongly stratified along income distributions. Selçuk et al. (2019), using the 2003 and 2017 Household Budget Surveys, calculated that the energy poverty rate based on the 10% threshold decreased over the period; however, in 2017, approximately 46% in the lowest quintile and 3.5% in the highest were energy poor. Dogan et al. (2021), using 2018 data, reported that financial inclusion—as measured by three expenditure-based indicators—reduced energy poverty; they also noted that income, education, employment, health, property, and housing characteristics were significant factors. Uğur (2023), using 2019 data, associated a higher level of education with a lower probability of energy poverty, while linking unemployment to a higher probability of energy poverty. Although these cross-sectional studies provide strong evidence, they can only classify different households based on indicators and do not observe the duration of energy poverty for the same households.

Multidimensional and longitudinal approaches have become increasingly prominent in the Turkish literature in recent years. İpek and İpek (2024), using the 2018–2021 SILC longitudinal microdata, developed a continuous energy poverty index based on subjective and objective indicators through principal component analysis and demonstrated that energy poverty is associated with poorer subjective health. While this study tracks the same individuals over time, it treats energy poverty as the explanatory variable and health as the outcome variable; it does not classify persistent deprivation. Değirmenci and Limanlı (2025), on the other hand, calculated the Alkire–Foster multidimensional index using 2006–2020 SILC data, showing that while the index decreased, the concentration of deprived households improved only to a limited extent; fuel type made the largest contribution, and housing/insulation issues remained among the most persistent dimensions. While this analysis distinguishes annual fluctuations at the national and regional levels, it does not measure the consecutive deprivation experiences of the same households.

Regional and administrative studies highlight the spatial and institutional inequalities of energy poverty within Türkiye. Eke and Ayrancı (2018) found that low residential electricity consumption in 2017 was particularly concentrated in the eastern and southeastern provinces; Algül (2024), meanwhile, demonstrated a positive long-term relationship between per capita household electricity consumption and per capita income across 26 regions during the 2007–2021 period. Korkmaz and Şenyel Kürkçüoğlu (2025), in a vulnerability map they created using 15 indicators across 81 provinces, identified higher vulnerability in the southeastern provinces and some provinces along the Mediterranean and Aegean coasts, and lower vulnerability in many provinces in Central Anatolia, the north, and the northwest. Household income, natural gas, and central heating infrastructure were found to reduce vulnerability, while single-parent households, unemployment, large household size, private rental housing, energy-inefficient housing, and climate exposure were among the factors that increased vulnerability.

Data on the electricity market and social policy provide complementary evidence regarding payment difficulties and targeting mechanisms. Emre and Sözen (2024) developed a disconnection index per consumer using disconnection work orders related to unpaid debts from more than six million bill records across five distribution companies in the eastern regions. Emre (2025), meanwhile, examined Türkiye’s three-pronged framework for the 2019–2023 period, consisting of direct energy assistance, a tiered tariff supporting low consumption, and the Maximum Settlement Price mechanism. The study argues that the MSP, combined with the 240 kWh tariff threshold, supports affordability for low-consumption users and that the eastern and southeastern distribution regions benefit from higher relative support. However, the analysis is based on correlation, price differential, and coverage calculations at the institutional and distribution region levels; it does not provide estimates of causal effects or permanent exit from poverty at the household level.

To the best of our knowledge, no previous study for Türkiye has used a balanced household panel to compare persistent inadequate heating, utility arrears, and physical housing deprivation as separate outcomes within the same households. The present study addresses this gap.

Data and Methodology

This study is based on a balanced panel sample of 5,790 households observed across four waves of the Income and Living Conditions Survey conducted by the Turkish Statistical Institute during the 2021–2024 period. After accounting for missing observations in the explanatory variables and excluding households in the sparse housing categories, the main models were estimated using data from 5,782 households. All descriptive statistics and regression models were estimated using the unweighted balanced household panel.

The dependent variables were derived by converting the three questions in the SILC into binary variables: "ability to keep home adequately warm," "arrears on utility bills in the last 12 months," and the presence of dwelling problems such as "leaky roof, damp walls, or rot in window frames." The indicators have not been combined into a composite index.

The definition of persistent energy poverty is based on the measure adapted by Özdemir and Koukoufikis (2024) from Eurostat's persistent poverty definition. For a household to be classified as in persistent deprivation, it must experience the relevant deprivation in 2024 and have been in the same situation in at least two of the years 2021–2023.

Let Y_{ijt} denote the annual deprivation status of household i for outcome j in year t. The main dependent variable is defined as follows:

$$\boldsymbol{PersistentEP_{ij} = 1\left[Y_{ij,2024} = 1 \ and \sum_{t=2021}^{2023} Y_{ijt} \geq 2\right]}$$

where

j ∈ {inadequate heating, utility bill arrears, physical housing deprivation}

Therefore, the main definition requires that the household be deprived in 2024 and that this deprivation have been experienced in at least two of the preceding three years. Deprivation experienced only in past years but not carried over to

2024 is not coded as 1 in the main persistence variable. The variables and reference categories used in the main models are shown in Table 1.

Table 1. Explanatory Variables and Reference Categories

Variable	**Analytical Code**	**Reference**
Log income	Continuous	-
Age	18–34, 35–49, 50–64, 65+	35–49
Gender	Male, Female	Male
Education	Low, Middle, High	Low
Employment Status	Employed, Unemployed, Retired, Other inactive	Employed
Household Composition	Couple with children, Couple without children, One-person household, Lone-parent household, Other multi-person/mixed	Couple with children
Tenure Status	Owner, Tenant, Other	Owner
Dwelling Type	Apartment 10 or more flats, Apartment less than 10 flats, Detached house, Semi-detached or terraced	Apartment 10 or more flats
Log m^2 per person	Continuous	-
Lack of Basic Amenities	No, Yes	No

The explanatory variables were derived from the households' baseline profiles in the 2021 wave. The income variable is the equivalised household disposable income. Due to the structure of the SILC, the reference year for incomes is the previous year.

Educational attainment has been grouped into three categories—low, medium, and high—based on the relevant official education codes; employment status has been grouped into four categories: employed, unemployed, retired, and other inactive. The "other multi-person/mixed" household type category combines households containing at least one family with other individuals and multi-person households that do not contain a family. Observations for which the household type could not be determined and the dwelling type variable containing only a single observation were excluded from the analysis.

Living space per person was calculated by dividing the total living area in square meters by household size. To reduce the influence of extreme or potentially erroneous values, the variable was winsorized at the 1st and 99th percentiles and subsequently log-transformed. "Lack of basic amenities" was coded as 1 if a bathroom or toilet was shared with other households, or if at least one of the following was missing: a bathroom, toilet, kitchen, or piped water. Hot-water availability was excluded to avoid introducing an energy-service deprivation measure among the housing covariates. The direction and substantive interpretation of the main estimates were unchanged when rooms per person replaced living space per person and when lack of hot water was included in the basic amenities indicator.

Rather than combining housing conditions into a single index, interpretable variables were included in the model separately. This approach aimed to prevent the inclusion of housing indicators that are conceptually very close to the outcome variables in the index and to avoid generating sample-specific, difficult-to-interpret weights.

Table 2. Descriptive Statistics of the Analytical Sample

	Value (%)
Number of households	5,782
Equivalised household disposable income 2020 TRY, median	29,867
Age of household head	
35–49	1,988 (34.4%)
18–34	977 (16.9%)
50–64	1,706 (29.5%)
65+	1,111 (19.2%)
Gender of household head	
Female	1,264 (21.9%)
Male	4,518 (78.1%)
Educational attainment of household head	
Low	2,786 (48.2%)
Middle	1,786 (30.9%)
High	1,210 (20.9%)
Employment status of household head	
Employed	3,377 (58.4%)
Unemployed	256 (4.4%)
Retired	1,233 (21.3%)
Other inactive	916 (15.8%)
Household composition	
Couple with children	2,932 (50.7%)
Couple without children	1,156 (20.0%)
One-person households	723 (12.5%)
Lone-parent households	429 (7.4%)
Other multi-person/mixed	542 (9.4%)
Tenure status	
Owner	3,437 (59.4%)
Tenant	1,412 (24.4%)
Other	933 (16.1%)
Dwelling type	
Apartment 10 or more flats	2,006 (34.7%)
Apartment less than 10 flats	1,898 (32.8%)
Semi-detached or terraced	390 (6.7%)
Detached house	1,488 (25.7%)

Living space per person, m², median	36.5
Lack of basic amenities	
No	5,521 (95.5%)
Yes	261 (4.5%)
Persistent Inadequate Heating	808 (14.0%)
Persistent Arrears on Utility Bills	434 (7.5%)
Persistent Leaks, Dampness, or Rot	1,504 (26.0%)
Note: Counts and percentages are unweighted and describe the balanced household panel used in the regression analyses.	

Model Specification

Since each of the three indicators of persistent deprivation is binary, separate logistic regression models were estimated. The model for household i and deprivation dimension j is:

$$\boldsymbol{Pr\left(PersistentEP_{ij} = 1 \mid X_i \right) = \Lambda(\alpha_j + X_i'\beta_j)}$$

$$\boldsymbol{\Lambda(z) = \frac{exp(z)}{1 + exp(z)}}$$

Here X_i is the vector of initial characteristics of the household in 2021. The analysis is not a panel regression based on repeated household-year observations. Instead, each model is estimated at the household level and relates the household's 2021 characteristics to a binary persistence outcome defined over the four-year period.

The main specification includes logged income, age, gender, education, employment status, household composition, tenure, dwelling type, logged living space per person, and lack of basic amenities. Average marginal effects (AMEs) were calculated using HC1-robust standard errors. For logged continuous covariates, effects represent average discrete changes in predicted probability after increasing the original variable by 10% for each observation. The Benjamini–Hochberg adjustment was applied separately within each outcome model across all reported AME comparisons. Standard errors and confidence intervals are unadjusted, whereas significance stars reflect adjusted p-values.

Model diagnostics indicated acceptable discrimination and no evident problems with multicollinearity, influential observations, or sparse outcome cells. Across the three main models, AUC values ranged from 0.748 to 0.816 and Brier scores from 0.0645 to 0.163. The maximum adjusted GVIF was 1.78, indicating no problematic multicollinearity. The maximum Cook's distance was 0.0084, and screening identified no sparse outcome cells likely to produce separation.

The estimated parameters describe conditional differences between households' initial-period characteristics and persistent deprivation over 2021–2024. They do not estimate genuine state dependence or causal effects. Because several baseline characteristics are contemporaneous with the first deprivation observation and may change during the panel, the estimates should not be interpreted as effects of continuously maintained household statuses.

Table 3. Average marginal effects from the main logistic regression models

Variable		Persistent Inadequate Heating	Persistent Utility Bill Arrears	Persistent Physical Housing Deprivation
A. Socioeconomic and Demographic Characteristics				
Log income		**-0.0110***** (0.0008)	**-0.0045***** (0.0005)	**-0.0079***** (0.0009)
Age				
	18–34	**0.0201** (0.0150)	**0.0307**** (0.0126)	**0.0220** (0.0169)
	50–64	**-0.0221** (0.0124)	**-0.0225**** (0.0096)	**0.0505***** (0.0156)
	65+	**-0.0181** (0.0161)	**-0.0443***** (0.0116)	**0.0522**** (0.0214)
Gender				
	Female	**-0.0030** (0.0180)	**-0.0113** (0.0140)	**0.0323** (0.0218)
Educational Attainment				
	Middle	**-0.0499***** (0.0112)	**-0.0278**** (0.0093)	**-0.0397**** (0.0145)
	High	**-0.1160***** (0.0129)	**-0.0652***** (0.0105)	**-0.0920***** (0.0193)
Employment Status				
	Unemployed	**0.0537**** (0.0210)	**0.0264** (0.0153)	**-0.0454*** (0.0251)
	Retired	**-0.0043** (0.0135)	**-0.0071** (0.0123)	**-0.0566***** (0.0162)
	Other inactive	**0.0420*** (0.0196)	**-0.0055** (0.0137)	**-0.0344** (0.0216)
Household Composition				
	One-person	**0.0674**** (0.0252)	**-0.0277** (0.0158)	**0.1279***** (0.0307)
	Couple without children	**0.0245** (0.0160)	**-0.0335**** (0.0113)	**0.0202** (0.0188)
	Lone-parent	**0.0737***** (0.0211)	**0.0399*** (0.0197)	**0.0519*** (0.0250)
	Other multi-person/mixed	**0.0013** (0.0138)	**-0.0046** (0.0118)	**0.0000** (0.0178)
B. Housing Characteristics				
Tenure Status				
	Tenant	**0.0383***** (0.0123)	**0.0244**** (0.0088)	**0.0371**** (0.0147)
	Other	**0.0198** (0.0116)	**0.0195*** (0.0096)	**0.0536***** (0.0155)
Dwelling Type				
		0.0130	**0.0074**	**0.0714*****
	Apartment less than 10 flats	(0.0109)	(0.0087)	(0.0130)
	Semi-detached or terraced	**0.0160**	**-0.0015**	**0.1595*****

	(0.0175)	(0.0136)	(0.0243)
Detached house	**0.0566*****	**-0.0024**	**0.2101*****
	(0.0131)	(0.0104)	(0.0173)
Per capita Living Space, m² (log)	**-0.0023**	**-0.0008**	**-0.0096*****
	(0.0012)	(0.0010)	(0.0016)
Lack of Basic Amenities	**0.0331**	**-0.0298****	**0.0765****
	(0.0189)	(0.0118)	(0.0275)
Observations	**5,782**	**5,782**	**5,782**

Note: Average marginal effects are reported; HC1-robust standard errors are in parentheses. Logged continuous variables are average discrete changes for a 10% increase in the original variable. Benjamini–Hochberg adjustment was applied separately within each outcome model across all reported AME comparisons. Stars reflect adjusted p-values: *** p < .01; ** p < .05; * p < .10.

Table 3 shows the relationships between the 2021 baseline characteristics and the three persistent deprivation indicators for the 2021–2024 period. An AME of 0.01 corresponds to an average difference of approximately 1 percentage point in the predicted probability of the outcome.

Income and education level show the most consistent relationships across all three dependent variables. A 10% increase in equivalised household disposable income is associated with a 1.10 percentage point lower probability of persistent inadequate heating, a 0.45 percentage point lower probability of persistent arrears on utility bills, and a 0.79 percentage point lower probability of persistent leaks, dampness, or rot. Compared to the low-education reference group, middle education is associated with 4.99, 2.78, and 3.97 percentage points lower probabilities, respectively, for the three outcomes; high education is associated with 11.60, 6.52, and 9.20 percentage points lower probabilities.

Regarding persistent inadequate heating, unemployment of the household head is associated with a 5.37 percentage point higher probability compared to the employed reference group. Although a positive difference of 4.20 percentage points was found in the other economically inactive group, this estimate is significant at the 10% level. No statistically significant differences were observed across age and gender categories. The probability of persistent insufficient heating in one-person households is 6.74 percentage points higher than in households consisting of couple with children, and the probability in lone-parent households is 7.37 percentage points higher.

Housing characteristics are also associated with persistent inadequate heating. The probability is 3.83 percentage points higher in tenants than in owners, and 5.66 percentage points higher for those living in detached houses compared with those living in apartments with 10 or more flats. Estimates for small apartment buildings and semi-detached houses are positive but not statistically significant. Per capita living space and disadvantages in basic amenities also do not exceed the significance threshold in this model.

A different age pattern emerges regarding persistent arrears in utility bills. In households where the head of household is in the 18–34 age group, the probability of persistent utility-bill arrears is 3.07 percentage points higher than in the 35–49 age group; it is 2.25 and 4.43 percentage points lower in the 50–64 and 65+ age groups, respectively. In households consisting of couple without children the probability of arrear is 3.35 percentage points lower than in households consisting of a couple with children. The 3.99 percentage point positive difference in lone-parent households is statistically significant at the 10% level.

Tenancy is also positively associated with utility bill arrears: tenants are 2.44 percentage points more likely to have arrears than homeowners. Estimates for dwelling type and per capita living space are not statistically significant. The negative association of 2.98 percentage points with a lack of basic amenities is counterintuitive and should not be interpreted as a protective effect. This counterintuitive estimate should not be interpreted as evidence of a protective effect and is discussed cautiously below.

The most pronounced result regarding housing characteristics is persistent physical housing deprivation. When apartments with 10 or more flats are used as the reference, the probability is 7.14 percentage points higher in apartments with less than 10 flats, 15.95 percentage points higher in semi-detached or terraced houses, and 21.01 percentage points higher in detached houses. The probability is 3.71 percentage points higher for tenants than for owners and 5.36 percentage points higher for other forms of occupancy. A disadvantage in basic amenities is associated with a 7.65 percentage point higher probability, while a 10% increase in living space per person is associated with a probability that is approximately 0.96 percentage points lower.

The strongest association in household composition is observed in one-person households. The probability of persistent physical housing deprivation is 12.79 percentage points higher in one-person households than in couple with children. In lone-parent households, the positive difference of 5.19 percentage points is statistically significant at the 10% level. By age, the probability is approximately 5 percentage points higher in the 50–64 and 65+ age groups compared to the 35–49 age group.

Physical housing outcomes related to employment status should be interpreted with caution. Negative estimates were obtained for unemployed and retired household heads compared to the employed reference group; the result regarding unemployment is statistically significant only at the 10% level. Since age, income, and housing characteristics were controlled for in the same model, these coefficients do not indicate an unconditional housing advantage for the groups and may stem from strong conditioning or compositional differences.

In general, while income and education show a similar relationship with three forms of persistent deprivation, tenancy is associated with a higher probability of deprivation across all results. In contrast, the relationships regarding household composition, age, and labor market status vary depending on the outcome variable. Dwelling type, living space per person, and basic amenities showed their strongest associations with physical housing deprivation.

Discussion

The fact that income and education show strong, similar relationships across all three outcomes is consistent with the systematic evidence regarding the determinants of energy poverty. del Río et al. (2025) demonstrate that there is a high level of evidence and consensus in the literature regarding income and education. Cross-sectional studies in Türkiye also emphasize the importance of education, income, and labor market status, despite using different expenditure measures (Dogan et al., 2021; Uğur, 2023). Current findings indicate that these relationships are observed not only in single-year energy expenditure classifications but also in different types of deprivations measured over a four-year period.

The association between tenancy and all three outcomes suggests that tenure may capture differences not only in housing costs, but also in investment authority, access to assets, and the capacity to undertake dwelling improvements. Best et al. (2025) highlight the strong role of investment capacity and assets—independent of income—in the tenant-owner bill stress gap. Mulder et al. (2023) also show that tenants and low-asset home owners are unable to participate in the energy transition. The higher likelihood of persistent deprivation among tenants suggests a need for policy tools targeting the energy performance of the rental housing stock, in addition to short-term bill assistance.

Dwelling type shows a much stronger association with physical housing deprivation than with bill arrears, supporting the interpretation that the indicators capture distinct dimensions. This may be related to the larger exterior surface area of detached and semi-detached/terraced houses, as well as maintenance responsibilities, building age, and settlement characteristics. However, since building age, insulation class, regional climate, and settlement type were not controlled for simultaneously in the dataset, the dwelling type coefficients should be interpreted as a composite indicator of these mechanisms.

One-person and lone-parent households showed higher estimated probabilities of inadequate heating and physical housing deprivation. This pattern may reflect limited economies of scale, income constraints, and restricted maintenance capacity, although these mechanisms cannot be identified directly from the available data. Studies from Germany and Spain also indicate that these household types may be vulnerable to chronic or recurring deprivation (Costa-Campi et al., 2019; Drescher & Janzen, 2021). However, the pattern of bill arrears varies by household type; this suggests that factors such as economies of scale, responsibility for bill payment, and consumption-restraint behaviors may operate differently across these groups.

Findings that age and employment status vary according to the deprivation dimension are consistent with the literature on indicator dependency. Deller et al. (2021) demonstrated that older households can be classified differently based on expenditure-based measures and subjective measures. In the present study, older age is associated with a lower likelihood of bill arrears and a higher likelihood of physical housing problems. This pattern may reflect a lower propensity to accumulate payment arrears alongside greater exposure to older or more maintenance-intensive housing; however, these mechanisms cannot be tested with the available data.

The negative relationship between basic amenities deprivation and bill arrears should be interpreted with particular caution. Since the bill arrears indicator may include not only electricity and gas but also water and other basic services, households' infrastructure connections and billing methods may influence the outcome (Özdemir & Koukoufikis, 2024). This counterintuitive association may reflect differences in service access, consumption, or billing exposure, none of which can be directly evaluated with the available variables.

The study's distinctive contribution lies in its distinction of the three dimensions of deprivation while applying the European persistence measure to the Turkish SILC panel. Özdemir and Koukoufikis (2024) demonstrate that the relationship between insufficient heating and bill arrears is stronger than the relationship with the leakage/dampness/rot indicator. The current findings from Türkiye also support this conceptual distinction by revealing that, despite shared patterns of income and education, housing variables show substantially larger associations with physical deprivation.

Limitations

First, the analysis is limited to balanced panel households observed across all four waves. If panel attrition is higher among disadvantaged households, retention rates and baseline profiles may be subject to selection bias. Because the analysis does not compare the baseline characteristics of retained and attrited households, the direction and magnitude of possible attrition bias cannot be assessed. Because the SILC does not provide a four-year longitudinal household weight, the reported prevalences and model estimates should be interpreted as sample-based results rather than nationally representative population estimates.

Second, the indicators are based on household self-reports. Inadequate heating may be influenced by preferences and expectations; bill arrears by the scope of national billing; and leaks, damp, and rot by perceptions and maintenance standards. While the bill indicator includes basic non-energy services, the physical housing indicator is not a direct measure of energy services. For this reason, the three outcomes have not been interpreted as a single "energy poverty" variable.

Third, the definition of persistence used requires that deprivation continue into 2024. Households that experienced long-term deprivation during the first three of the four years but exited in 2024 are not classified as persistent. The definition ensures comparability with the European measure of persistent poverty; however, it does not fully account for the dynamics of duration, entry, exit, and re-entry.

Fourth, the models estimate conditional relationships between 2021 initial characteristics and four-year persistence outcomes. Due to unobserved household characteristics, reverse causality, and simultaneous changes, the coefficients are not causal. Furthermore, the models do not estimate true state dependence. Estimating state dependence, entry, exit, and re-entry would require a different longitudinal research design and model specification.

Fifth, some important mechanisms—such as regional climate, building age, insulation class, energy prices, housing renovations, and settlement type—were not directly controlled for in the data or the model. In particular, the coefficients for dwelling type may be correlated with these unobserved characteristics. Finally, since the income in the 2021 wave reflects the previous year's income, there may be a time mismatch between the initial profile and current living conditions.

Conclusion

This study examined persistent inadequate heating, utility bill arrears, and physical housing deprivation in Türkiye during the 2021–2024 period separately within the same balanced panel. The findings indicate that income and education level constitute the most consistent negative correlates across all three outcomes, while tenancy is associated with a higher likelihood of persistent deprivation in all outcomes. One-person and lone-parent households stand out particularly in terms of inadequate heating and physical housing deprivation, while detached and semi-detached/terraced homes show a distinct pattern regarding physical housing deprivation.

These findings highlight the potential relevance of addressing, alongside short-term payment assistance, the quality of rental housing, access to dwelling improvements, the circumstances of one-person and lone-parent households, and basic housing infrastructure. However, the findings reveal conditional differences in the initial profiles of households experiencing and not experiencing persistent deprivation, rather than a causal effect.

The persistence approach identifies households experiencing repeated deprivation rather than relying solely on annual prevalence. Future studies in Türkiye could account explicitly for unbalanced panels and attrition, integrate regional climate and building-performance information, model entry and exit transitions, and examine sensitivity to alternative definitions of persistence.

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Chapter 4

The Effects of Globalization, Financial Development, and Human Development on the Informal Economy: Empirical Evidence from Türkiye

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Abstract

The aim of this study is to identify the determinants of the informal economy in Türkiye over the period 1990–2020 using an econometric approach. The long-run relationship among the variables was examined using the ARDL bounds testing approach. The findings reveal the existence of a long-run cointegration relationship among the variables. The long-run estimates indicate that economic globalization and financial development reduce the informal economy, whereas human development increases it. These findings highlight the importance of promoting economic globalization and strengthening the financial system in reducing the informal economy, while suggesting that the effect of human development should be evaluated within the context of country-specific structural characteristics.

Keywords: Informal Economy, Economic Globalization, Financial Development, Human Development, ARDL Bounds Test

JEL Classification: C22, E26, F60, O15

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1. Introduction

The informal economy, also referred to as the shadow or underground economy, encompasses economic activities that are conducted outside the regulatory and supervisory framework of public authorities and are either unreported or underreported in official records (Borlea et al., 2017; Baklouti & Boujelbene, 2020). According to the International Labour Organization, approximately 60% of the employed population aged 15 years and over participates in the informal sector during at least part of their working lives. Currently, the informal economy accounts for nearly one-third of all economic activity in low- and middle-income countries, whereas this figure is approximately 15% in developed economies (Deléchat & Medina, 2020, p. 54). The size of the informal economy varies across countries depending on the level of financial development and institutional quality. While factors such as high tax burdens, weak governance, and rigid labor market regulations tend to expand the informal economy, financial development and strong institutions facilitate access to the formal financial system, thereby reducing informality. Therefore, strengthening institutional quality and promoting financial development play a crucial role in curbing the informal economy (Ameer et al., 2025, p. 2; Georgescu et al., 2025).

The emergence of the informal economy is largely driven by differences in countries' economic and institutional structures. In developed economies, informality is primarily associated with high tax burdens and labor market regulations, whereas in developing economies, demographic factors such as rapid population growth and urbanization also play a significant role (Aslanoğlu, 2008, p. 200). On the other hand, the literature presents divergent views regarding the effects of the informal economy. One perspective argues that informal activities support employment and economic growth by mobilizing idle resources and fostering entrepreneurial activities (Bağırzade, 2015, p. 42). In contrast, the opposing view maintains that the informal economy reduces tax revenues, creates unfair competition, and undermines economic efficiency. Furthermore, informality weakens public finances, adversely affects the social security system, and increases labor market insecurity. Accordingly, the informal economy is widely recognized as generating both short-term economic benefits and long-term economic, fiscal, and social costs (Bağırzade, 2015, p. 42; İlarslan & Vurur, 2024, p. 485).

The informal economy is a complex and multidimensional phenomenon shaped by economic, institutional, and macroeconomic factors. Consequently, the existing literature does not provide a comprehensive theory capable of fully explaining the informal economy in either developed or developing countries

(Dell'Anno, 2022). Nevertheless, several theoretical perspectives have been proposed to explain its emergence. The first is the dual development theory (Lewis, 1954), which views the informal economy as a natural outcome of the economic development process. According to this theory, the inability of the formal sector to generate sufficient employment opportunities forces labor to move into the informal economy. As economic development accelerates and the formal sector expands, the size of the informal economy is expected to decline. The second perspective is the institutional approach, which attributes informality to factors such as high tax burdens, complex bureaucratic procedures, rigid labor market regulations, and weak institutional structures. As the costs of operating within the formal economy increase, individuals and firms are more likely to engage in informal activities. The third perspective is the structuralist approach, which considers the informal economy an integral component of the economic system. In particular, globalization, the restructuring of production processes, and the widespread adoption of flexible employment arrangements are argued to stimulate informal economic activities (Castells & Portes, 1989; Godfrey, 2011; Dell'Anno, 2022; Afful et al., 2025).

This study aims to investigate the effects of economic globalization, financial development, and human development on the informal economy in Türkiye. To this end, the existence of a long-run relationship among the variables is examined using the ARDL bounds testing approach. The remainder of the paper is organized as follows. Section 2 reviews the relevant literature. Section 3 describes the econometric methodology, data, and model specification. Section 4 presents and discusses the empirical findings. Finally, Section 5 concludes the study by discussing the main findings and outlining their policy implications.

2. Literature Review

The literature on the informal economy has evolved over the years through various theoretical and empirical approaches. Early studies primarily examined the informal economy from the perspectives of employment and economic development. In particular, the dual economy theory developed by Lewis (1954) and the concept of the informal sector introduced by Hart (1973) laid the theoretical foundations of this literature. Subsequently, North (1990) emphasized the decisive role of institutions in shaping economic activities, while Castells and Portes (1989) advanced the structuralist perspective by conceptualizing the informal economy as an integral component of the global production system. On the empirical side, Schneider and Enste (2000) provided a comprehensive analysis of the causes, consequences, and measurement methods of the informal economy. Later, Schneider et al. (2011) employed the Multiple Indicators

Multiple Causes (MIMIC) approach to produce comparable estimates of the size of the informal economy across 162 countries, thereby establishing one of the principal data sources for subsequent empirical research in this field.

There is a broad consensus in the literature that the informal economy exists, to some extent, in every economic system. However, the determinants of the informal economy vary according to countries' economic, institutional, and social conditions, resulting in diverse empirical findings across the literature. The impact of globalization on the informal economy has been examined from different empirical perspectives. In this regard, Bacchetta et al. (2009) demonstrated that the effect of globalization on informal employment in developing countries is not unidirectional. Their findings indicate that while greater trade openness can reduce informal employment, trade reforms and foreign direct investment may increase it. Focusing on the manufacturing sector in Uruguay, Geronazzo (2016) found that trade liberalization increased total factor productivity but reduced the employment of low-skilled workers, thereby leading to significant structural changes in the labor market. Likewise, Temkin and Veizaga (2010) reported that the effect of economic globalization on informal employment differs according to countries' level of development, increasing informal employment in developing countries while reducing it in developed economies. Farzanegan and Hassan (2017) investigated the relationship between economic globalization and the informal economy in Egypt using data for the period 1976-2013 and found that an increase in economic globalization significantly reduced the size of the informal economy. Similarly, Pham (2017) examined the effects of different dimensions of globalization on informality in developing countries and concluded that trade openness, financial openness, trade diversification, and international economic flows are the principal dimensions of globalization influencing informality. Examining OECD countries over the period 1996-2018, Eren (2023) also reported that globalization reduces the informal economy. Furthermore, the study found that higher income levels decrease informality, whereas vulnerable employment, inflation, and trade openness increase it. Evidence from Türkiye also supports the role of globalization in shaping the informal economy. In this respect, Pata and Ela (2021) examined the effects of globalization and human capital on the informal economy in Türkiye over the period 1986-2015. Their findings revealed that globalization significantly reduced the informal economy, whereas human capital had no statistically significant effect on informality.

The relationship between financial development and the informal economy has been one of the most extensively examined topics in the literature. Using micro-level data for Italy, Capasso and Jappelli (2013) analyzed the relationship between financial development and the informal economy and found a negative long-run association between the two variables. Beck et al. (2014) investigated the relationship between financial development and tax evasion and demonstrated that greater access to the financial system reduces firms' propensity to evade taxes. Similarly, Berdiev and Saunoris (2016) reported that financial development contributes to reducing the size of the informal economy. Bose et al. (2012), in a study covering 137 countries, identified a negative relationship between banking sector development and the informal economy, concluding that both the depth and efficiency of the banking sector play a significant role in reducing informality. Gharleghi and Jahanshahi (2020), examining 29 developed and developing countries, found that the effect of financial development on the informal economy depends on the level of per capita income. Their findings indicate that financial development reduces the informal economy only in countries where per capita income exceeds a certain threshold, whereas its effect is statistically insignificant in countries below that threshold. Focusing on Türkiye, Bayar and Aytemiz (2017) examined the relationship between financial development and the informal economy over the period 1960-2009 and found that financial development reduces the size of the informal economy in the long run. They also reported the existence of a unidirectional causal relationship running from financial development to the informal economy. Kapıcıoğlu (2022) likewise analyzed the relationship between financial development and the informal economy in Türkiye and found evidence of a one-way causal relationship from financial markets to the informal economy. The study further emphasized that financial development contributes to reducing informality. Katircioglu and Imamoglu (2020), using data for Türkiye over the period 1970-2017, found that financial development initially increases the informal economy, whereas as the financial system becomes more developed, its effect gradually shifts toward reducing informality. In contrast, İmamoğlu (2025) examined the effects of financial sector development and trade openness on the informal economy in Türkiye and reported that financial sector development increases the informal economy, whereas trade openness reduces it in the long run. This finding suggests that the existing financial system has not yet become sufficiently effective in curbing informal economic activities.

Agustina (2020) investigated the relationship between human capital and the informal economy in Indonesia. The findings indicate that life expectancy reduces the size of the informal economy, whereas the gross enrollment ratio in higher education increases it. İlarslan and Vurur (2024) examined the determinants of the informal economy in the member countries of the Organization of Turkic States. Their findings revealed that financial development exerts asymmetric effects on the informal economy. In addition, human development and anti-corruption efforts were identified as important factors contributing to a reduction in the informal economy, whereas inflation was found to have no statistically significant effect. Buehn and Farzanegan (2013), using data from more than 80 countries over the period 1999-2007, investigated the effect of education on the informal economy. Their results indicate that improvements in educational attainment reduce the informal economy only in countries with a high level of institutional quality. Dell'Anno (2009) examined the determinants of the informal economy in Latin American countries and found that institutional factors such as human development, the marginal tax rate, public social expenditure, and the unemployment rate are important determinants of the informal economy. Furthermore, the study revealed an inverted U-shaped relationship between human development and the informal economy, suggesting that beyond a certain level of development, further improvements in human development contribute to reducing the size of the informal economy.

Overall, the existing literature suggests that the effects of economic globalization, financial development, and human development on the informal economy vary depending on countries' economic, institutional, and social characteristics. Nevertheless, most studies focusing on Türkiye have examined these variables separately, and no empirical study has jointly investigated the effects of economic globalization, financial development, and human development on the informal economy within a single empirical model. In this respect, the present study aims to fill an important gap in the literature on Türkiye by adopting a comprehensive approach that incorporates these three key determinants into a unified analytical framework.

3. Data Set, Model and Econometric Methodology

This study empirically analyzes the effects of economic globalization, financial development, and human development on the informal economy in Türkiye using annual time-series data covering the period 1990-2020. The sample period is limited to 2020 because the informal economy series ends in that year. Data on the informal economy are obtained from the informal economy series estimated by Elgin et al. (2021) using a Dynamic General Equilibrium (DGE) model. Data on the Economic Globalization Index are obtained from the KOF Swiss Economic Institute, while the Financial Development Index and the Human Development Index are sourced from the International Monetary Fund (IMF) and Our World in Data, respectively. Detailed descriptions of the variables used in the analysis are presented in Table 1.

Table 1
Description of The Variables

Symbol	Variables	Source
IE	Informal Economy (Informal output (% of official GDP))	(Elgin et al., 2021)
EGI	Economic Globalization Index	KOF (Swiss Economic Institute)
FDI	Financial Development Index	IMF
HDI	Human Development Index	Our World in Data

Source: Author collection from various databases

In this study, the natural logarithms of all variables were used to reduce potential heteroskedasticity, normalize the data distribution, and enable the estimated coefficients to be interpreted as elasticities (Paramati et al., 2017). Accordingly, the full logarithmic regression model presented in Equation (1) was estimated.

$$ln(IE)_t = \beta_0 + \beta_1\, ln(EGI)_t + \beta_2\, ln(FDI)_t + \beta_3\, ln(HDI)_t + \varepsilon_t \quad (1)$$

In the first stage of the analysis, the stationarity properties of the series were determined using the Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) unit root tests. While the ADF test examines stationarity based on a parametric approach, the PP test was also employed because it provides more robust results in the presence of potential serial correlation and heteroskedasticity (Dickey & Fuller, 1979; Phillips & Perron, 1988). Based on the findings obtained from the unit root tests, the order of integration of the variables was identified, after which the existence of a long-run relationship among the variables was investigated using the ARDL bounds testing approach developed by Pesaran et al. (2001). The ARDL approach is widely preferred because it allows variables integrated of different orders I(0) and I(1), provides reliable estimates in small samples, and enables the simultaneous estimation of both short-run and long-run coefficients within a single model. Accordingly, the ARDL model specified to estimate the long-run relationship among the variables is presented in Equation (2).

$$\Delta ln\ IE_t = \beta_0 + \sum_{i=1}^{p} \beta_{1i}\, \Delta ln\, IE_{t-i} + \sum_{i=0}^{p} \beta_{2i}\, \Delta ln\, EGI_{t-i} + \sum_{i=0}^{p} \beta_{3i}\, \Delta ln\, FDI_{t-i} + \sum_{i=0}^{p} \beta_{4i}\, \Delta ln\, HDI_{t-i} + \lambda_1 ln\ IE_{t-1} + \lambda_2 ln\ EGI_{t-1} + \lambda_3 ln\ FDI_{t-1} + \lambda_4 ln\ HDI_{t-1} + \varepsilon_t \quad (2)$$

In Equation (2), β_0 and ε_t denote the constant term and the error term, respectively. The β coefficients represent the short-run dynamics of the variables, whereas the λ coefficients capture the level coefficients associated with the long-run relationship. The Δ operator denotes the first difference of the variables. The ARDL approach enables the simultaneous estimation of both short-run and long-run relationships within a single model. Once a cointegrating relationship is established, the corresponding error correction model (ECM) is estimated. A negative and statistically significant error correction coefficient indicates that short-run disequilibria are corrected over time, allowing the variables to converge toward their long-run equilibrium.

$H_0 : \lambda_1 = \lambda_2 = \lambda_3 = \lambda_4 = 0$

$H_1 : \lambda_1 \neq \lambda_2 \neq \lambda_3 \neq \lambda_4 \neq 0$

The null hypothesis (H_0) of the ARDL bounds test states that no long-run cointegration relationship exists among the variables, whereas the alternative hypothesis (H_1) suggests the existence of a long-run cointegration relationship. The calculated F-statistic is evaluated by comparing it with the lower and upper critical bounds proposed by Pesaran et al. (2001). If the calculated F-statistic exceeds the upper critical bound, the null hypothesis is rejected, indicating the existence of a statistically significant long-run cointegration relationship among the variables. Conversely, if the F-statistic falls below the lower critical bound, the null hypothesis cannot be rejected, implying the absence of a long-run cointegration relationship.

4. Empirical Results

Table 2 presents the results of the ADF and PP unit root tests conducted to examine the stationarity properties of the variables. Both the intercept and the intercept with linear trend specifications were considered in the unit root analysis. The empirical findings indicate that lnEGI is stationary at level, implying that it is integrated of order zero, I(0). In contrast, lnIE, lnFDI, and lnHDI are found to be non-stationary at their levels but become stationary after first differencing, indicating that these variables are integrated of order one, I(1). Overall, the findings obtained from the ADF and PP tests are largely consistent and confirm that none of the variables is integrated of order two, I(2). Since the variables are integrated at a mixture of I(0) and I(1), the ARDL bounds testing approach is considered an appropriate econometric framework for examining the existence of a long-run relationship among the variables (Pesaran et al., 2001).

Table 2
Unit Root Tests Results

	Level		*First Difference*		*Level*		*First Difference*	
	ADF (Intercept)	*ADF (Trend & Intercept)*	*ADF (Intercept)*	*ADF (Trend & Intercept)*	*PP (Intercept)*	*PP (Trend & Intercept)*	*PP (Intercept)*	*PP (Trend & Intercept)*
lnIE	-0.204	-2.933	-4.801***	-4.704***	-0.199	-2.555	-4.747***	-4.629***
lnEGI	-3.099**	-3.728**	-7.070***	-7.186***	-3.079**	-3.530*	-7.901***	-8.379***
lnFDI	-2.232	-2.587	-5.900***	-6.514***	-3.358**	-2.365	-5.900***	-6.477***
lnHDI	-0.323	-1.770	-4.444***	-4.324***	-0.340	-2.129	-4.539***	-4.426***

Notes: *, ** and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively. Lag lengths for the *ADF* test were selected according to the Schwarz Information Criterion (SIC), while the bandwidth for the *PP* test was selected using the Newey-West automatic procedure with the Bartlett kernel.

Table 3 reports the results of the ARDL bounds test for cointegration. The calculated F-statistic (31.374) exceeds the upper critical bound value at the 1% significance level (I(1)=8.31). Likewise, the calculated t-statistic (-13.389) is lower than the corresponding lower critical bound value at the 1% significance level (-4.73). According to the critical values proposed by Pesaran et al. (2001), these findings indicate the existence of a long-run cointegrating relationship among the variables. Accordingly, the null hypothesis of no level relationship is rejected, confirming the presence of a long-run equilibrium relationship. Based on this result, the long-run coefficients and the associated error correction model are subsequently estimated.

Table 3.
ARDL Bounds Test Results

ARDL (4,3,4,4)	Critical Value	I(0)	I(1)
F = 31.374 k = 3	10%	3.86	4.96
	5%	4.68	5.98
	1%	6.64	8.31
	Critical Value	I(0)	I(1)
t = -13.389	10%	-3.13	-3.84
	5%	-3.41	-4.16
	2.5%	-3.65	-4.42
	1%	-3.96	-4.73

Table 4 (Panel A) reports the short-run ARDL estimates. The estimates indicate that economic globalization, financial development, and the human development index exert statistically significant short-run effects on the informal economy. In addition, the negative and statistically significant trend coefficient suggests a declining trend in the informal economy over the sample period.

Table 4.
ARDL Results

Panel A: Short-Run Coefficients			
Variables	*Coefficients*	*Standard Error*	*Prob.*
Δ(LnIE(-1))	1.466***	0.134	0.000
Δ(LnIE(-2))	1.100***	0.115	0.000
Δ(LnIE(-3))	0.405***	0.082	0.001
Δ(LnEGI)	-0.033**	0.011	0.026
Δ(LnEGI(-1))	0.139***	0.016	0.000
Δ(LnEGI(-2))	0.068***	0.011	0.000
Δ(LnFDI)	-0.047***	0.006	0.000
Δ(LnFDI(-1))	-0.005	0.006	0.454
Δ(LnFDI(-2))	-0.011	0.006	0.118
Δ(LnFDI(-3))	0.018**	0.005	0.014
Δ(LnHDI)	0.411***	0.056	0.000
Δ(LnHDI(-1))	-0.328***	0.071	0.002
Δ(LnHDI(-2))	-0.352***	0.061	0.000
Δ(LnHDI(-3))	-0.197***	0.051	0.006
Trend	-0.043***	0.003	0.000
Constant	8.874***	0.664	0.000
Panel B: Long-Run Coefficients			
	Coefficients	*Standard Error*	*Prob.*
LnEGI	-0.082***	0.017	0.002
LnFDI	-0.033**	0.010	0.015
LnHDI	0.542***	0.038	0.000
Panel C: Diagnostic Tests			
ECM_{t-1}	-2.088 [0.155]***	Jarque-Bera	3.749 (0.153)
R^2	0.966	χ^2_{BG}	5.401 (0.067)
$\overline{R^2}$	0.914	χ^2_{BPG}	1.050 (0.509)
DW	2.357	Ramsey Test	0.051 (0.829)

Notes: *, ** and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively. In the ARDL model, the maximum lag length was set to 4, and the optimal lag structure was selected according to the SIC. ECM_{t-1} denotes the error correction model. Values in parentheses are *p*-values, whereas values in square brackets are standard errors. χ^2_{BG} denotes the Breusch-Godfrey LM serial correlation test, and χ^2_{BPG} denotes the Breusch-Pagan-Godfrey heteroskedasticity test.

The long-run estimates (Panel B) indicate that EGI and FDI have negative and statistically significant effects on the informal economy. Specifically, a 1% increase in EGI reduces the informal economy by approximately 0.082%. Similarly, a 1% increase in FDI reduces the informal economy by approximately 0.033%. In contrast, a 1% increase in HDI increases the informal economy by approximately 0.542%. These results are consistent with the ARDL bounds test and further support the existence of a long-run equilibrium relationship among the variables.

Table 4 (Panel C) presents the diagnostic test results. The error correction term is negative and statistically significant at the 1% level, indicating that short-run disequilibria converge to the long-run equilibrium. Furthermore, the Jarque-Bera, Breusch-Godfrey, Breusch-Pagan-Godfrey, and Ramsey RESET tests indicate that the residuals are normally distributed and provide no evidence of serial correlation, heteroskedasticity, or model misspecification. The Durbin-Watson statistic further supports the absence of serial correlation.

Figure 1. CUSUM Test Graph

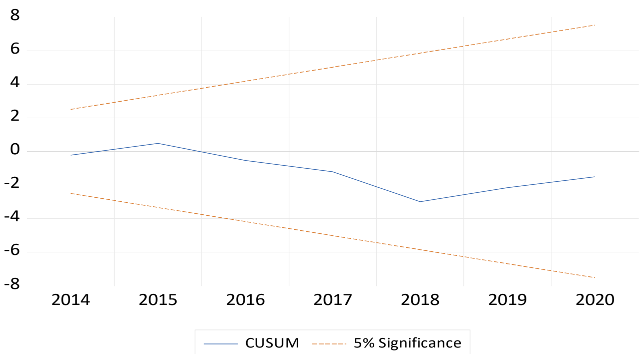
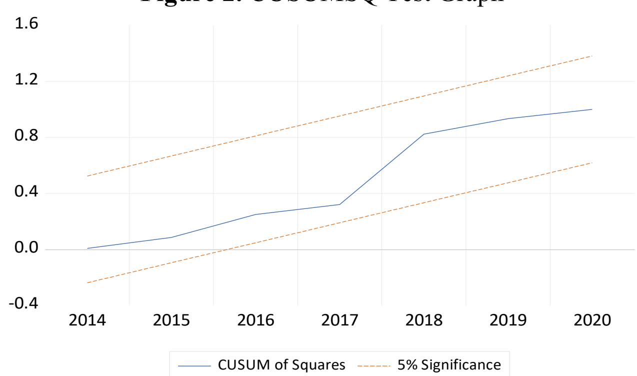


Figure 2. CUSUMSQ Test Graph



Finally, the stability of the estimated model coefficients is illustrated using the CUSUM and CUSUMSQ tests. The CUSUM and CUSUMSQ test results presented in Figures 1 and 2 show that both test statistics remain within the 5% significance bounds throughout the sample period. These findings indicate that the estimated coefficients are stable over the sample period and confirm the structural stability of the estimated ARDL model.

5. Conclusion and Policy Implications

This study examines the effects of economic globalization, financial development, and human development on the informal economy in Türkiye using annual data covering the period 1990-2020 and the ARDL bounds testing approach.

The results indicate that economic globalization reduces the size of the informal economy. This finding can be attributed to the fact that economic globalization increases trade volume, strengthens international competition, and promotes greater transparency in economic activities. Moreover, deeper integration into global markets encourages firms to operate within the formal economy, thereby contributing to a reduction in informal economic activities. This finding is consistent with the results reported by Farzanegan and Hassan (2017), Pham (2017), Eren (2023), and, for the case of Türkiye, Pata and Ela (2021).

The negative effect of the financial development index on the informal economy can be attributed to the deepening of the financial system, which encourages individuals and firms to participate more actively in the banking sector and increases the recording of financial transactions. The development of financial markets promotes formal economic activities and facilitates the monitoring of informal transactions. This finding is consistent with the results reported by Capasso and Jappelli (2013), Beck et al. (2014), Bayar and Aytemiz (2017), and Kapıcıoğlu (2022).

A noteworthy finding of this study is that the Human Development Index has a positive and statistically significant effect on the informal economy. This result contrasts with the predominant view in the existing literature, which generally expects human development to reduce informality. However, in the case of Türkiye, improvements in human development do not appear to have translated into a proportional increase in formal employment. Although substantial progress was achieved in education and health indicators during the study period, the inability of the labor market to generate sufficient formal employment opportunities may have driven, particularly young and skilled workers, toward informal or precarious forms of employment. These findings further suggest that improvements in human development alone are insufficient to reduce the size of the informal economy. Rather, they should be complemented by stronger institutional frameworks, more effective enforcement mechanisms, and policies that promote formal employment.

Addressing the problem of the informal economy in Türkiye requires a comprehensive policy approach. It is well recognized that the size of the informal economy in Türkiye remains considerably higher than the average observed in developed countries. Therefore, the government's strategy to combat informality should focus not only on improving financial and economic conditions but also on implementing high-quality education policies that enhance human capital. Furthermore, maximizing the benefits of globalization requires further expansion of international trade, improvements in the investment climate, and the strengthening of institutional arrangements that promote formal production and economic activities.

This study has several limitations. First, the analysis is limited to the period 1990-2020 due to the availability of data on the informal economy. Second, the study focuses exclusively on the case of Türkiye. Future research could extend the analysis by employing panel data methods for a broader set of countries. In addition, incorporating variables such as institutional quality, digitalization, tax burden, and labor market conditions into the model would provide a more comprehensive understanding of the determinants of the informal economy.

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Chapter 5

The Effects of Income Inequality on Economic Growth and Development: A Macroeconomic Perspective Through Social Policies

Fehime GÜNBEGİ[1]

Abstract

This study examines, within an integrated framework, the channels through which income inequality affects economic growth, macroeconomic stability, and human development. It brings together several mechanisms—including aggregate demand, human capital formation, political institutions, financialization, technological transformation, and gender inequality—and evaluates them in the context of intergenerational mobility. A central argument is that the impact of inequality on growth is not determined by a single factor; rather, it varies according to initial economic conditions, the level of financial development, institutional quality, and the composition of public policies. In the case of Türkiye, the analysis draws on the 2025 Income Distribution Statistics, together with labour market and public finance indicators. The findings suggest that pre-distributive policies aimed at equalizing opportunities before market incomes are determined should be coordinated with redistributive instruments based on taxes and transfers. Overall, the study concludes that reducing inequality does not require countries to sacrifice economic growth. On the contrary, well-designed policies can make growth more sustained and inclusive while strengthening its social legitimacy.

Keywords: Income inequality, economic growth, development, social policy, human capital, Türkiye.

1. INTRODUCTION

The relationship among economic growth, development, and income distribution has been one of the most widely debated issues in economics since the emergence of the discipline, yet no full consensus has been reached. Classical and Neoclassical economic thought regards capital accumulation and productivity growth as the main drivers of sustainable economic progress. The resulting income inequalities are often considered either a necessary social cost of improving living standards or a natural outcome of market mechanisms. The

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"Inverted-U Hypothesis," introduced by Kuznets (1955) and highly influential in the early development literature, proposed that income distribution would initially deteriorate during industrialisation but improve automatically at more advanced stages of growth. From this perspective, policymakers should focus on expanding the overall economic "pie" rather than distributing it more equitably, while social policies remain secondary to macroeconomic objectives.

However, this paradigm has increasingly been questioned since the final quarter of the twentieth century, as global inequality has deepened alongside globalization, technological change, and financialization. Piketty (2014) provides a fundamental theoretical and empirical challenge to this view, arguing that when the rate of return on capital equals or exceeds the rate of economic growth, distributional imbalances do not correct themselves but instead lead to the structural concentration of wealth. Accordingly, modern macroeconomics and development literature increasingly regard income inequality not merely as a moral or social justice issue, but as a structural threat to macroeconomic stability, sustainable growth, and the quality of development (Berg ve Ostry, 2011).

Modern literature identifies both demand- and supply-side mechanisms through which income inequality can undermine macroeconomic performance. From a Post-Keynesian perspective, stagnation arises not simply from the concentration of wealth among high-income groups but from the resulting decline in aggregate demand, since low-income groups have a higher marginal propensity to consume (Stiglitz, 2012). Supply-side endogenous growth theories, meanwhile, emphasize human capital. Inequality restricts large segments of society's access to quality education and healthcare, while imperfect financial markets prevent talented but financially constrained individuals from realizing their potential (Lucas, 1988; Romer, 1990). This weakens the stock of human capital—one of the principal drivers of growth in modern economies—and reduces innovation capacity. Acemoglu and Robinson (2012) similarly argue that severe income inequality enables economically powerful elites to shape political and administrative processes in their own interests. This undermines inclusive institutions and weakens the long-term investment climate.

Against this background, growth refers primarily to a quantitative expansion of economic output, whereas development involves qualitative improvements in living standards, skills, equality of opportunity, and income distribution. In an economy characterized by severe income inequality, high GDP growth alone cannot ensure sustainable and stable development or broadly improve social welfare.

This study theoretically examines the channels through which income inequality obstructs and weakens economic growth and development. Rather than conducting a data-based econometric analysis, it develops a conceptual framework that synthesizes the principal arguments advanced by the major schools of economic thought. The study first explains how inequality disrupts macroeconomic balances and then discusses contemporary social policy proposals, including pre-distributive measures implemented before market incomes are determined and redistributive measures operating through taxes and transfers. In doing so, it presents an integrated macro-social policy perspective intended to contribute to both policymaking and academic debate.

2. METHODOLOGY, SCOPE, AND CONCEPTUAL BOUNDARIES

The study does not provide a systematic meta-analysis or new econometric estimates; instead, it synthesizes the main theoretical mechanisms discussed in the economics and social policy literature through a critical narrative review. The sources consist of seminal works in the discipline, peer-reviewed empirical studies, and official reports published by institutional data producers such as TurkStat, OECD, IMF, World Bank, ILO, and UNDP. Particular attention is paid to distinguishing causal claims from descriptive correlations. Cross-country correlations alone cannot establish inequality as the sole determinant of economic growth, as reverse causality, measurement and definitional differences, and institutional heterogeneity may influence the findings (Banerjee and Duflo 2003; Deininger and Squire 1996).

The literature search was conducted from January 2026 until the final search date using keywords such as income inequality, economic growth, human capital, aggregate demand, institutional quality, financialization, social mobility, and redistribution. The eligibility criteria included: (i) foundational theoretical works in the relevant field; (ii) peer-reviewed empirical studies with clearly stated methodologies and findings; and (iii) official publications by national or international institutions producing comparable data. In the section on Türkiye, priority was given to the most recent official data and reports. Sources containing unsupported opinions or unverifiable assumptions, as well as studies that did not directly address the relationship between inequality, growth, and development, were excluded. The selected sources were assessed according to the direction of their findings, the periods and country groups examined, and the strength of their causal claims, while conflicting findings were summarized in the text. Although this is not a systematic review protocol, it provides a transparent narrative review framework intended to improve reproducibility.

Income inequality refers to the unequal distribution of wages, profits, rents, and interest among individuals. Wealth, by contrast, refers more closely to accumulated net worth, including assets such as housing, land, financial investments, and business ownership. Because wealth is accumulated over time and may be inherited across generations, it is generally more unequally distributed than income (Atkinson, 2015; Piketty, 2014). Focusing solely on current income may therefore underestimate the concentration of economic power among those at the top of the distribution. Absolute poverty refers to living below the minimum level of resources and services required to maintain an acceptable standard of living, whereas relative poverty describes an individual's disadvantage in relation to the median level of resources and services within society. Although these concepts are related, they should not be used interchangeably.

2.1. Measuring Inequality: The Gini Coefficient, Income Shares, and the Palma Ratio

The Gini coefficient measures inequality on a scale from zero, representing perfect equality, to one, representing complete concentration. However, it does not reveal where changes within the income distribution occur. It should therefore be considered alongside indicators such as top and bottom income shares, the P80/P20 and S80/S20 ratios, and the Palma ratio (Cowell 2011; World Bank 2024).

Measurement choices also influence policy evaluation. Market income reflects the distribution of income before taxes and transfers, whereas disposable income represents the distribution after these interventions. Public services further affect households' actual living standards. Moreover, equivalence scales that account for differences in household size and composition are necessary for meaningful comparisons of living standards (OECD, 2015).

3- INEQUALITY IN THE CONTEXT OF GROWTH AND DEVELOPMENT

Neoclassical models argue that inequality is growth-friendly as high saving from the rich pays for investments, while modern approaches challenge this due to both low demand and loss of human capital (Solow, 1956; Cingano, 2014).

3.1. Competing Approaches and Conditional Effects in the Literature

The relationship between inequality and economic growth remains controversial in the literature. Kaldor (1955) developed an influential approach to capital accumulation based on differences in saving propensities across income groups, arguing that investment is largely financed by the savings of higher-income individuals. Income differences may also encourage entrepreneurship, risk-taking, education, and skill acquisition, thereby creating a potential trade-off between equality and efficiency (Okun, 1975).

Conversely, high income inequality may intensify social conflict and increase pressure for redistribution, thereby weakening investment incentives (Alesina and Rodrik, 1994; Persson and Tabellini, 1994). Empirical findings, however, vary across periods, countries, and methodological approaches. Forbes (2000) identifies a positive short- to medium-term relationship between inequality and growth, while Barro (2000) finds that this relationship differs according to countries' income levels. Banerjee and Duflo (2003), by contrast, show that substantial changes in inequality can hinder growth. Persistent inequality may also weaken long-term growth by restricting access to educational opportunities (Cingano, 2014; OECD, 2015).

Therefore, not all income differences necessarily harm economic performance. Inequality becomes particularly damaging when it restricts equality of opportunity, weakens fair competition, concentrates political and economic power, and limits productive investment. Policy interventions should consequently target rent-based concentration and unequal initial conditions rather than seeking to equalize outcomes mechanically.

3.2. Aggregate Demand and the Underconsumption Dilemma: A Keynesian Perspective

Keynesian and Post-Keynesian approaches emphasize that the marginal propensity to consume declines as income rises. Lower-income groups therefore spend a larger proportion of their income than higher-income groups (Stiglitz, 2012; Dabla-Norris et al., 2015). All else being equal, the concentration of income at the top may consequently lead to underconsumption and weaken aggregate demand. Declining demand reduces firms' profit expectations and discourages investment, which may in turn increase unemployment (Stiglitz, 2012; Dabla-Norris et al., 2015). This cycle can push the economy towards chronic stagnation and greater instability (Stiglitz, 2012). Rising inequality may therefore impose structural constraints on economic growth through its adverse effects on consumption and investment.

3.3. Human Capital and Endogenous Growth Theories: Supply-Side Erosion

Income inequality restricts an economy's long-term productive capacity. Lucas (1988) emphasizes the role of human capital and knowledge, while Romer (1990) identifies ideas, innovation, and their effective use as key drivers of sustainable growth. However, imperfect credit markets make investments in education and healthcare dependent on household income (Galor and Zeira, 1993). As inequality increases, access to quality education and healthcare becomes more limited for children from lower-income households, imposing substantial macroeconomic costs (Galor and Zeira, 1993; OECD, 2015). This weakens national innovation capacity, reduces workforce skills, and slows productivity growth and potential output. Income inequality therefore undermines long-term growth by restricting equality of opportunity and the broad accumulation of human capital.

3.4. Institutional Decay and the Deterioration of the Investment Climate: A New Institutional Economics Perspective

Inequality affects market, administrative, legal, and political institutions. According to Acemoglu and Robinson (2006, 2012), institutional quality is a key determinant of sustainable development. As economic concentration increases, established elites may capture policymaking processes to protect their interests, resulting in extractive rather than inclusive institutions (Acemoglu and Robinson, 2006, 2012; Stigler, 1971). Institutional deterioration weakens stability and the investment climate through several channels: a biased judicial system discourages long-term investment, high barriers to entry restrict competition, and social unrest raises political risk and sovereign risk premiums. Inequality may therefore undermine inclusive institutions and the conditions required for productive investment, potentially trapping an economy in a cycle of low growth, weak productivity, and instability (Alesina and Perotti 1996; Acemoglu and Robinson 2012).

3.5. Financialization, Indebtedness, and Crisis Dynamics

When income gains are concentrated among a small number of households, economic activity may become increasingly dependent on credit-financed consumption. This leaves indebted households vulnerable to rising interest rates and declining asset prices. As Rajan (2010) argues, compensating for inequality through easy access to credit creates financial fragility. Similarly, Kumhof, et al., (2015) find that when the savings of high-income groups finance borrowing by lower-income households, leverage increases and the risk of financial crisis rises. Although policies and financial regulations influence this relationship, macro-financial oversight must consider income distribution, particularly when insufficient wage growth makes households dependent on debt to sustain consumption (Dabla-Norris et al., 2015).

3.6. Technological Transformation, Automation, and Labor Income

Although digitalization and automation generate economic prosperity, their benefits are unevenly distributed among technology owners, workers whose skills complement new technologies, and workers displaced by them. According to Autor (2014), technology primarily replaces routine tasks while complementing problem-solving, adaptability, and social skills. Acemoglu and Restrepo (2020), however, argue that industrial robots may adversely affect employment and wages. These distributional outcomes depend on factors such as education, competition, intellectual property rights, and workers' bargaining power. Lifelong learning programmes, portable social benefits, and transitional income support are therefore necessary to help workers adapt and to promote technologies that complement rather than replace labour (Acemoglu and Johnson, 2023; OECD, 2019).

3.7. Gender and Regional Inequality

The unequal burden of unpaid care work, occupational segregation, and gender wage gaps limits women's career advancement and lifetime earnings. Affordable, high-quality childcare is therefore an important component of both production and income-distribution policies, as it supports children's development while enabling women to participate in the labour market (Devercelli and Beaton-Day, 2020; World Bank, 2024a). Moreover, the concentration of infrastructure and employment opportunities in particular cities increases the extent to which individuals' life outcomes are determined by their place of birth. Because local conditions have strong causal and intergenerational effects on social mobility (Chetty et al., 2014), spatially targeted policies should coordinate public services, housing, transportation, and municipal fiscal capacity.

4. INEQUALITY AS A BARRIER TO THE TRANSITION FROM QUANTITATIVE GROWTH TO QUALITATIVE DEVELOPMENT

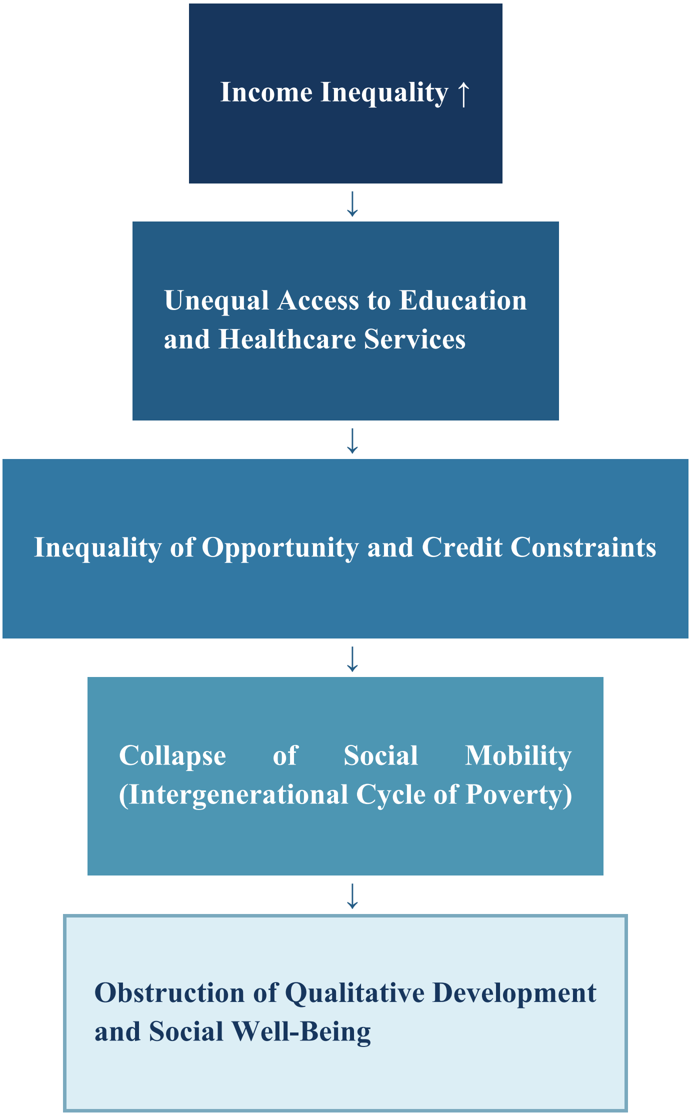
Economic growth refers to a quantitative increase in GDP, whereas economic development is a broader process involving improvements in human development, quality of life, and shared prosperity (Sen, 1999; Bourguignon, 2004; UNDP, 2024). An unequal distribution of income may prevent economic growth from translating into genuine development. In highly unequal economies, GDP growth does not necessarily improve overall social welfare or benefit all segments of society (Sen, 1999; OECD, 2015).

4.1. A Critique of the Kuznets Curve and the Illusion of "Self-Correction"

For decades, the “growth first” approach was supported by Kuznets (1955) and his “Inverted-U Hypothesis,” which proposed that income inequality initially rises and then naturally declines as countries industrialize. However, Piketty (2014) demonstrates that markets do not necessarily correct distributional imbalances when the rate of return on capital exceeds the rate of economic growth, allowing inequality to become entrenched. The Kuznets curve should therefore not be regarded as a universal pattern, as its validity largely depends on specific institutional and policy conditions. Inclusive institutions and effective social policies are essential for transforming economic growth into qualitative development; consequently, the empirical literature does not support the assumption of an automatic inverted-U mechanism (Kuznets, 1955; Piketty, 2014; OECD, 2015).

4.2. The Decline of Social Mobility and Inequality of Opportunity

Social inequality undermines economic mobility and equality of opportunity across generations. As illustrated by the “Great Gatsby Curve,” higher levels of income inequality are associated with lower intergenerational mobility. Consequently, family background plays a greater role in determining life outcomes, while individual effort becomes less effective in promoting upward mobility (Corak, 2013).



Income inequality creates unequal access to education and healthcare. While children from affluent households benefit from high-quality opportunities and resources, talented children from low-income families may be unable to realize their full potential. This lack of equal opportunity wastes society's human potential and perpetuates poverty across generations. Consequently, it undermines economic progress, social cohesion, justice, and meritocracy, making sustainable social welfare more difficult to achieve (Corak, 2013; OECD, 2018).

5. INCOME DISTRIBUTION IN TÜRKİYE: CURRENT OUTLOOK AND STRUCTURAL CHANNELS

5.1. Income Shares and the Impact of Social Transfers

According to the Income Distribution Statistics published by TurkStat in 2025, Türkiye's Gini coefficient was 0.410. The highest-income 20% of the population received 48.0% of total income, whereas the lowest-income 20% received only 6.4%, resulting in a P80/P20 ratio of 7.5. The Gini coefficient calculated without social transfers was 0.473, indicating that social transfers contributed to reducing income inequality, although income remained highly concentrated (TurkStat, 2025). The income figures refer to the calendar year preceding the survey year.

Table 1. Trends in Income Inequality Indicators in Türkiye, 2018–2025

Survey Year	Gini Coefficient	P80/P20 Ratio
2018	0,408	7,8
2019	0,395	7,4
2020	0,410	8,0
2021	0,401	7,6
2022	0,415	8,0
2023	0,433	8,4
2024	0,413	7,7
2025	0,410	7,5

Note: The income reference period is the preceding calendar year. P80/P20 is the ratio of the income share of the highest-income 20% to that of the lowest-income 20%. Source: TurkStat income distribution bulletins; Presidency of Strategy and Budget (2025).

Table 1 shows that income inequality in Türkiye followed a fluctuating rather than linear pattern between 2018 and 2025. The Gini coefficient declined from 0.408 in 2018 to its lowest level of 0.395 in 2019, before rising to a period high of 0.433 in 2023. It subsequently fell to 0.413 in 2024 and 0.410 in 2025. The P80/P20 ratio followed a broadly similar pattern, ranging from 7.4 in 2019 to 8.4 in 2023 and declining to 7.5 in 2025. Despite the improvement observed after 2023, both indicators suggest that income inequality remained persistently high throughout the period. However, these descriptive trends alone do not establish a causal relationship between changes in inequality and particular economic or policy factors (TurkStat, 2025; Presidency of Strategy and Budget (SBB), 2025).

With a Gini coefficient of 0.410 in 2025, Türkiye remains among the countries with the highest levels of income inequality in Europe and Central Asia (World Bank, 2024b). Although the Gini coefficient and P80/P20 ratio declined after reaching their highest levels in 2023, these short-term changes do not necessarily indicate a structural improvement in income distribution. Their interpretation should also consider the distributional effects of inflation and asset-price movements, as well as the limited measurement of informal incomes and wealth concentrated at the top of the distribution.

5.2. Labor Market, Gender, and Tax Structure

Labour market conditions are among the main drivers of income inequality in Türkiye. Informal employment, skill and productivity gaps, regional disparities, and unequal labour force participation all contribute to differences in household income. In the first quarter of 2025, the labour force participation rate was 71.0% for men and 36.0% for women (TurkStat, 2025a). This substantial gender gap limits household income while weakening women's economic independence, social security coverage, and long-term earning capacity. Addressing it requires accessible childcare services, safe transportation, effective parental leave policies, and stronger measures against workplace discrimination.

Evaluating the distributional effects of fiscal policy requires consideration of tax rates, the breadth of the tax base and available exemptions, the size of the informal economy, the allocation of public expenditure, and the accessibility and quality of public services. According to TurkStat's Government Accounts Report, Türkiye's tax burden amounted to 25.2% of GDP in 2024, while direct taxes represented 6.1% of GDP. The government revenue-to-GDP ratio also remained below the European average (TurkStat, 2025b). These figures point to the need for reforms that broaden the tax base, reduce exemptions and loopholes, strengthen tax compliance, and improve both fiscal sustainability and tax fairness.

5.3. The Distributional Impact of Inflation

High inflation disproportionately harms low-income households, as they spend a larger share of their income on basic necessities and generally lack the financial assets that may protect higher-income groups against inflation. Delayed wage adjustments further intensify these losses in purchasing power. Although disinflation programmes are essential for restoring price stability, they should be complemented by cost-of-living-adjusted income support and effective housing, energy, and competition policies. Broad price subsidies should be carefully designed to limit their fiscal burden and prevent disproportionate benefits from accruing to higher-income groups.

5.4. Lessons from Selected Country Experiences

Scandinavian countries have reduced income inequality through high employment rates, progressive taxation, universal public services, and coordinated wage-setting systems. Their relative success cannot be attributed to a high tax burden alone; it also reflects high-quality public services, care infrastructure that facilitates women's employment, and strong administrative capacity. By contrast, the experience of the United States shows that innovation alone does not guarantee social mobility, as access to education and housing, together with spatial and social segregation, significantly shapes individual opportunities (Corak 2013; Chetty et al., 2014).

During the 2000s, several Latin American countries reduced inequality through minimum-wage increases, expanded access to education, and cash-transfer programmes. However, commodity dependence, widespread informality, and narrow tax bases limited the sustainability of these gains (Lustig et al., 2013). East Asian economies, meanwhile, achieved relatively inclusive growth through land reform, mass education, export-oriented industrialization, and early employment creation (World Bank, 1993). These experiences should not be treated as universal policy prescriptions but as design principles that must be adapted to each country's institutional structure, demographic conditions, and fiscal constraints.

6. SOCIAL POLICIES FOR MACROECONOMIC STABILITY AND SUSTAINABLE GROWTH

Traditional welfare policies have generally responded to inequalities after they emerge through market processes. However, because income inequality can undermine economic development, social policies should also serve as proactive instruments for promoting macroeconomic stability and sustainable growth (Hacker, 2011; Ostry et al., 2014).

Recent literature therefore proposes a two-stage framework: pre-distributive policies that promote equality of opportunity before market incomes are determined, and redistributive policies that correct market outcomes through taxes and transfers (Hacker, 2011; Ostry et al., 2014).

6.1. Predistributive Social Policies: Equalizing Human Capital

Pre-distributive policies aim to reduce inequalities in access to productive resources and opportunities before individuals enter the market (Hacker, 2011). By equalizing the conditions under which individuals participate in economic and social life, the state can prevent poverty rather than merely compensate for its consequences.

Early childhood development, particularly between the ages of zero and three, has lasting effects on educational and economic outcomes. Safe, affordable, and high-quality preschool and childcare services should therefore be available to all children from birth to age six. These services can reduce future human capital gaps while increasing women's labour force participation and contributing to economic growth (Devercelli and Beaton-Day, 2020).

Government-supported lifelong learning, reskilling, and upskilling programmes are necessary to help workers adapt to changes arising from artificial intelligence, automation, and the green transition. Such programmes can reduce technology-induced unemployment, improve productivity, expand the supply of skilled labour, and limit occupational polarization and wage inequality (OECD 2019).

Labour market institutions should also be strengthened by reducing barriers to unionization and adjusting minimum wages in line with productivity and broader economic conditions. These measures can help maintain labour's share of national income, support consumption demand, and reduce the risk of a Keynesian underconsumption trap (ILO, 2024).

6.2. Redistributive Social Policies: Establishing Macroeconomic and Financial Balances

Redistributive policies reduce income inequality through taxes, transfers, and public expenditure. When effectively designed, these instruments can also function as automatic stabilizers by supporting aggregate demand during economic downturns and reducing macro-financial vulnerabilities (Ostry et al., 2014; Cingano, 2014).

The burden of regressive indirect taxes, particularly VAT, on low-income groups should be reduced, while the tax bases for progressive income, wealth, and inheritance taxes should be broadened. Such reforms can limit excessive and unproductive wealth concentration (Piketty, 2014) while creating fiscal space for growth-enhancing public investment. Effective tax design should nevertheless account for the breadth of the tax base, behavioural responses to taxation, administrative capacity, and the quality of public expenditure (Piketty, 2014; Ostry et al., 2014).

Depending on national conditions and fiscal capacity, countries may introduce a basic income or expand unemployment benefits to protect living standards during economic crises and technology-driven labour market transitions (OECD, 2019). These measures can sustain consumption during downturns and reduce households' dependence on excessive borrowing, thereby limiting financial instability and the risk of credit bubbles (Rajan, 2010).

7. FEASIBILITY, COSTS, AND LIMITATIONS IN POLICY DESIGN

7.1. Policy Mix and Sequencing

Addressing inequality requires a coordinated, multi-instrument strategy implemented in three phases. The first phase should strengthen data infrastructure, social registries, tax transparency, and policy impact-assessment mechanisms. The second should prioritize high-return social services, including early childhood education, healthcare, and active labour market programmes. The third should make income and wealth taxation more progressive while expanding transfers to low-income workers. The timing and sequencing of these reforms should take account of inflation dynamics, debt sustainability, and administrative capacity.

Empirical evidence, however, suggests that redistribution does not necessarily weaken economic growth. Ostry et al. (2014) associate lower inequality with longer periods of sustained growth, except in cases of extreme redistribution. Nevertheless, excessively high tax rates, narrow tax bases, and arbitrary enforcement may discourage investment and job creation. Additional tax revenue should therefore be generated primarily by reducing exemptions, broadening the tax base, improving taxpayer services, strengthening digital notification and auditing systems, enhancing international tax cooperation, and ensuring legal certainty.

7.2. Balancing Universality and Targeting

Universal programmes can be costly, but they reduce stigma, attract broader political support, and simplify administration. Income-targeted programmes direct resources towards low-income groups more efficiently, yet they may exclude informal workers, impose application costs, and create work disincentives. A balanced approach would combine universal services, particularly education and healthcare, with targeted cash transfers that are adjusted automatically, phased out gradually as income rises, and designed according to individuals' needs at different stages of the life cycle.

7.3. Limitations of the Study and Directions for Future Research

This study does not use new Turkish microdata but conceptually synthesizes findings from the international literature. These findings may not be directly transferable to Türkiye because of differences in institutional, economic, and social conditions. Household surveys may also underestimate incomes and wealth at the top of the distribution, while annual indicators such as the Gini coefficient fail to capture lifetime income patterns, regional differences in living costs, and the quality of public services (Atkinson, 2015; Deaton, 2013).

Future research should combine tax records with household survey data to examine income, wealth, and consumption simultaneously. In Türkiye, quasi-experimental methods could be used to assess the effects of childcare provision, school quality, social mobility, inflation, and welfare-policy transitions. Policy recommendations should also be supported by pilot programmes and independent impact evaluations before being implemented on a broader scale.

8. CONCLUSION

This study, which examines the dynamic interaction among economic growth, development, and income distribution, demonstrates that the traditional economic understanding of "growth first, distribution later" is inadequate for explaining contemporary global and national macroeconomic realities. Classical and Neoclassical economic thought regarded inequality as an inevitable precondition for capital accumulation and economic growth. Similarly, Simon Kuznets's deterministic "Inverted-U Hypothesis" suggested that market forces would spontaneously reduce income inequality during the later stages of economic growth. However, historical experience and contemporary empirical evidence have substantially weakened the validity of these approaches. Thomas Piketty's work likewise indicates that when free-market mechanisms are left to their own dynamics, inequalities may systematically deepen because the rate of return on capital tends to exceed the rate of economic growth.

The theoretical and empirical framework examined in this study shows that income inequality is not merely an issue of social justice or morality; it is also a macroeconomic obstacle that undermines the sustainability of economic growth and the quality of development. A deterioration in income distribution directly and indirectly affects key determinants of economic growth, including aggregate demand, human capital, innovation capacity, institutional quality, and the investment environment.

Demand-side analyses based on the Keynesian perspective suggest that the concentration of income among high-income groups, whose marginal propensity to consume is relatively low, constrains aggregate consumption demand. Persistently weak domestic demand may adversely affect production and investment decisions, thereby reinforcing stagnation within the economy. A more balanced distribution of income is therefore important not only for social welfare but also for sustaining aggregate demand and economic activity.

Supply-side analyses within the framework of Endogenous Growth Theory focus on the effects of income inequality on human capital. The inability of credit-constrained, low-income households to adequately finance education and healthcare limits human capital accumulation across society. In the long term, this may weaken labour productivity, technological adaptability, and innovation potential, all of which are crucial to the growth of modern economies.

From the perspective of New Institutional Economics, excessive income and wealth inequality may increase the influence of economically powerful groups over political and administrative decision-making mechanisms. The capture of institutions by particular interest groups may weaken property rights, restrict competition, divert resources towards unproductive activities, and increase sociopolitical risks. These developments may reduce the confidence of economic actors and adversely affect both the investment environment and the economy's long-term growth capacity.

Taken together, these mechanisms demonstrate that quantitative growth—in other words, an increase in GDP—does not automatically translate into qualitative development. For economic growth to generate human welfare, equal opportunities, and social mobility, the distribution of the income generated is as important as the sources of growth. Achieving inclusive development therefore requires active public policies and a comprehensive approach that addresses economic and social objectives simultaneously.

Within this framework, the coordination between social and macroeconomic policies should first be strengthened. Social policies should not be regarded as passive, merely "damage-repairing" transfer expenditures that remain separate from broader economic processes. When monetary and fiscal policies are formulated, their potential effects on income distribution should be assessed in advance. For example, the disproportionate costs imposed on low-income groups by indirect taxes and inflation should be taken into account, while macroeconomic stability and social welfare objectives should be pursued simultaneously (Dabla-Norris et al., 2015; Ostry et al., 2014).

Predistributive policies should also be prioritised to reduce both the need for post-market redistribution and the fiscal burden of such interventions. These policies should aim to equalise the opportunities available to individuals before they enter market processes. Universal early childhood education should be provided as a public right, while government.

This study, which examines the dynamic interaction among economic growth, development, and income distribution, demonstrates that the traditional economic view of "growth first, distribution later" is inadequate for explaining contemporary global and national macroeconomic realities. Classical and neoclassical economic thought regarded inequality as an inevitable precondition for capital accumulation and economic growth. Similarly, Simon Kuznets's deterministic "Inverted-U Hypothesis" suggested that market forces would eventually reduce income inequality as economic growth progressed. However, historical experience and recent empirical findings have considerably weakened the validity of these approaches. Thomas Piketty's work also shows that when market mechanisms are left to operate according to their own dynamics, inequality may systematically deepen because the rate of return on capital exceeds the rate of economic growth.

The theoretical and empirical framework examined in this study indicates that income inequality is not merely a matter of social justice or morality; it is also a macroeconomic obstacle that undermines the sustainability of economic growth and the quality of development. A deterioration in income distribution directly and indirectly affects key determinants of economic growth, including aggregate demand, human capital, innovation capacity, institutional quality, and the investment climate.

From a Keynesian perspective, demand-side analyses suggest that when income is concentrated among high-income groups with a relatively low marginal propensity to consume, aggregate consumption demand is constrained. Persistently weak domestic demand may adversely affect production and investment decisions, thereby reinforcing economic stagnation. A more balanced distribution of income is therefore important not only for social welfare but also for sustaining aggregate demand and economic activity.

Supply-side analyses based on Endogenous Growth Theory focus on the effects of income inequality on human capital. The inability of credit-constrained, low-income households to finance adequate education and healthcare expenditure limits society's accumulation of human capital. In the long run, this may weaken labour productivity, technological adaptability, and innovation potential, all of which are essential to the growth of modern economies.

From the perspective of New Institutional Economics, extreme income and wealth inequality may increase the influence of economically powerful groups over political and administrative decision-making mechanisms. The capture of institutions by particular interest groups may weaken property rights, restrict competition, divert resources towards unproductive activities, and increase sociopolitical risks. These developments may erode economic confidence and adversely affect the investment environment and long-term growth capacity.

Taken together, these mechanisms demonstrate that quantitative growth—measured by increases in GDP—does not automatically translate into qualitative development. For economic growth to generate human well-being, equality of opportunity, and social mobility, the distribution of the resulting income is as important as the sources of growth themselves. Achieving inclusive development therefore requires active public policies and a comprehensive approach that integrates economic and social objectives.

Within this framework, the coordination between social and macroeconomic policies should first be strengthened. Social policies should not be regarded as passive, "damage-repairing" transfer expenditures operating outside the broader economic system. When monetary and fiscal policies are formulated, their potential distributional consequences should be assessed in advance. For example, the disproportionate costs imposed on low-income groups by indirect taxes and inflation should be considered, while macroeconomic stability and social welfare objectives should be pursued simultaneously (Dabla-Norris et al., 2015; Ostry et al., 2014).

Predistributive policies should also be prioritised to reduce both the need for post-market redistribution and the fiscal burden associated with such interventions. These policies should aim to equalise the opportunities available to individuals before they participate in market processes. Universal early childhood education should be provided as a public right, while government-supported lifelong learning, reskilling, and upskilling programmes should be developed to address the skills mismatch caused by technological transformation. Moreover, accessible and high-quality public childcare infrastructure should be expanded to facilitate women's participation in the labour force (Hacker, 2011; Devercelli and Beaton-Day, 2020; OECD, 2019).

A fair and efficient tax reform is another essential policy instrument for improving income distribution. The share of indirect taxes, such as value-added tax and special consumption taxes, which place a disproportionate burden on low-income groups, should gradually be reduced. At the same time, the progressive direct income tax system should be made fairer and more effective, while the enforcement and administration of taxes on financial wealth, real estate gains, and inheritances should be strengthened. The fiscal space created through these reforms should be directed towards productive public investment, education, healthcare, and other areas that contribute to human capital formation (Piketty, 2014; Ostry et al., 2014).

Automatic stabilisers and social safety nets should also be strengthened to enhance social resilience against technological unemployment and global macroeconomic shocks. The coverage of unemployment insurance should be broadened, and flexible yet secure employment models compatible with changing forms of work should be developed. Furthermore, direct cash-transfer mechanisms targeting lower-income groups should be made more effective to prevent the financial vulnerabilities associated with excessive household borrowing, as highlighted by Rajan (2010). Such measures could mitigate the effects of economic shocks on households while preventing sharp contractions in consumption demand.

In conclusion, achieving greater fairness in income distribution is neither a luxury that requires sacrificing economic growth nor a policy objective that conflicts with growth. On the contrary, a more balanced distribution of income is one of the fundamental conditions for stable, sustainable, and high-quality economic growth. The transformation of economic growth into broader social welfare depends on strengthening equality of opportunity, investing in human capital, establishing a fair tax system, and developing inclusive institutions. Income-distributional justice should therefore be regarded as one of the most important foundations of sustainable development and social cohesion.

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Chapter 6

Vegetal Ornamentation on Ottoman Clay Tobacco Pipes from the Smyrna Agora

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Introduction

Owing to their distinctive appearance, Ottoman clay tobacco pipes were among the most widely produced objects in everyday Ottoman life for nearly three centuries. Introduced into the Ottoman Empire in the early seventeenth century, tobacco rapidly led to the widespread use of clay tobacco pipes as the principal smoking implement. Their use, however, declined rapidly with the growing popularity of cigarettes[1].

Although it is generally accepted that the earliest concept of using a bowl for smoking tobacco first emerged in Africa, later spread to the Americas, and was subsequently introduced to Europe by Spanish sailors, it is assumed that the Ottomans were already familiar with comparable smoking implements through the use of opium and cannabis in the Iranian cultural sphere (Bakla, 2007: 98).

The rapid spread of tobacco and its increasing consumption led the Ottoman authorities to impose a series of prohibitions. However, these bans proved ineffective, as they failed to prevent either the cultivation or the use of tobacco during the first century of its widespread adoption (Bakla, 2007; Yılmaz, 2007; Erim, 2007).

Ottoman clay tobacco pipes were produced from a wide variety of materials, including stone, metal, porcelain, and wood, while generally maintaining a similar overall form. Typological classifications of these pipes are based primarily on the form of the bowl morphology. In terms of their overall morphology, they are broadly divided into two principal groups, elbowed and elbowless pipes, while the bowls are further classified into types such as tulip-shaped, conical, and cylindrical[2] (Fig.1).

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[1] For a detailed discussion of the introduction of tobacco to the Ottoman Empire, its dissemination, and tobacco consumption culture, see Yılmaz, 2007, 4-15.

[2] For typological studies on Ottoman clay tobacco pipes, see Robinson, 1985:163; Hayes, 1992: 392-394; Bakla, 2007:130; Ayhan 2010a, 1,2; Uçar, 2019: 124.

As with other categories of artefacts, the type, technique, density, and character of surface ornamentation are important factors in the study of Ottoman clay tobacco pipes. While meerschaum and wooden pipes were commonly decorated by carving and engraving, mould-made production was the predominant manufacturing technique for clay tobacco pipes throughout the Ottoman world. In this process, the pipes were formed in lead moulds[3].. Pipes produced in moulds were generally decorated either as part of the mould itself or by means of stamp impressions, often complemented by incised decoration. Among these decorative techniques, stamping was by far the most common. Stamp decoration could either be repeated across the surface to create continuous ornamental patterns or applied individually to selected areas, resulting in isolated motifs rather than repetitive compositions (Bakla, 2007:149). Incised decoration constituted the secondary decorative technique. Executed with a pointed tool, these motifs display a freer style than mould-made decoration. Both vegetal and geometric ornamentation were produced using this technique, allowing pipe makers greater freedom in the creation of decorative designs.

Fig.1: Representative examples of elbowed and elbowless Ottoman clay tobacco pipes.

[3] For further information, see Robinson, 1985: 157; Bakla, 1993: 62; Bakla 2007: 145.

The present study examines the vegetal ornamentation on Ottoman clay tobacco pipes recovered during the archaeological excavations at the Smyrna Agora (Fig.2). Through an analysis of the motifs, decorative techniques, and compositional arrangements, it seeks to identify the principal characteristics of vegetal ornamentation and to evaluate its relationship with the ornamental repertoire of Ottoman decorative arts.

Fig.2: General aerial view of the Smyrna Agora (http://antiksmyrna.com)

1.Vegetal Ornamentation on the Pipes

Among the pipe assemblage from the Smyrna Agora, vegetal ornamentation is represented primarily by floral, leaf, and, more rarely, tree motifs. These motifs occur more frequently on pipes made of red fabric. In terms of their distribution, vegetal ornamentation is concentrated predominantly on the bowl, with only a limited number of examples occurring on the stem. Decorations may appear either on the front or on the lateral surfaces of the bowl. Most vegetal motifs were produced using the stamping technique. Moulds, single-faced stamps, and cylindrical stamps were the principal tools employed in the execution of these decorative designs.

The floral motifs identified on the pipes can be divided into two principal types according to their mode of depiction. The first type consists of flowers depicted from above[4]. Neither the position nor the number of these motifs follows

[4] For comparable examples, see Robinson, 1985: Pl.63; Ayhan, 2010a: 20, Tab.2; Ayhan, 2010b: 56, Fig.5; Güngör, 2025: 447,Fig.8; Yenilir, 2025: Fig.4/14; Şen&Karasu, 2020: 433, G.13/D-7; Polat, 2022: 682, Fig.4.

a consistent arrangement. On the surface of the pipes, the motifs may appear either individually or in groups placed side by side. This type represents the simplest form of floral decoration. In most examples, neither the sepals nor the flower stalk is depicted. In some cases, a simple, usually circular seed pod is represented without any internal detail.

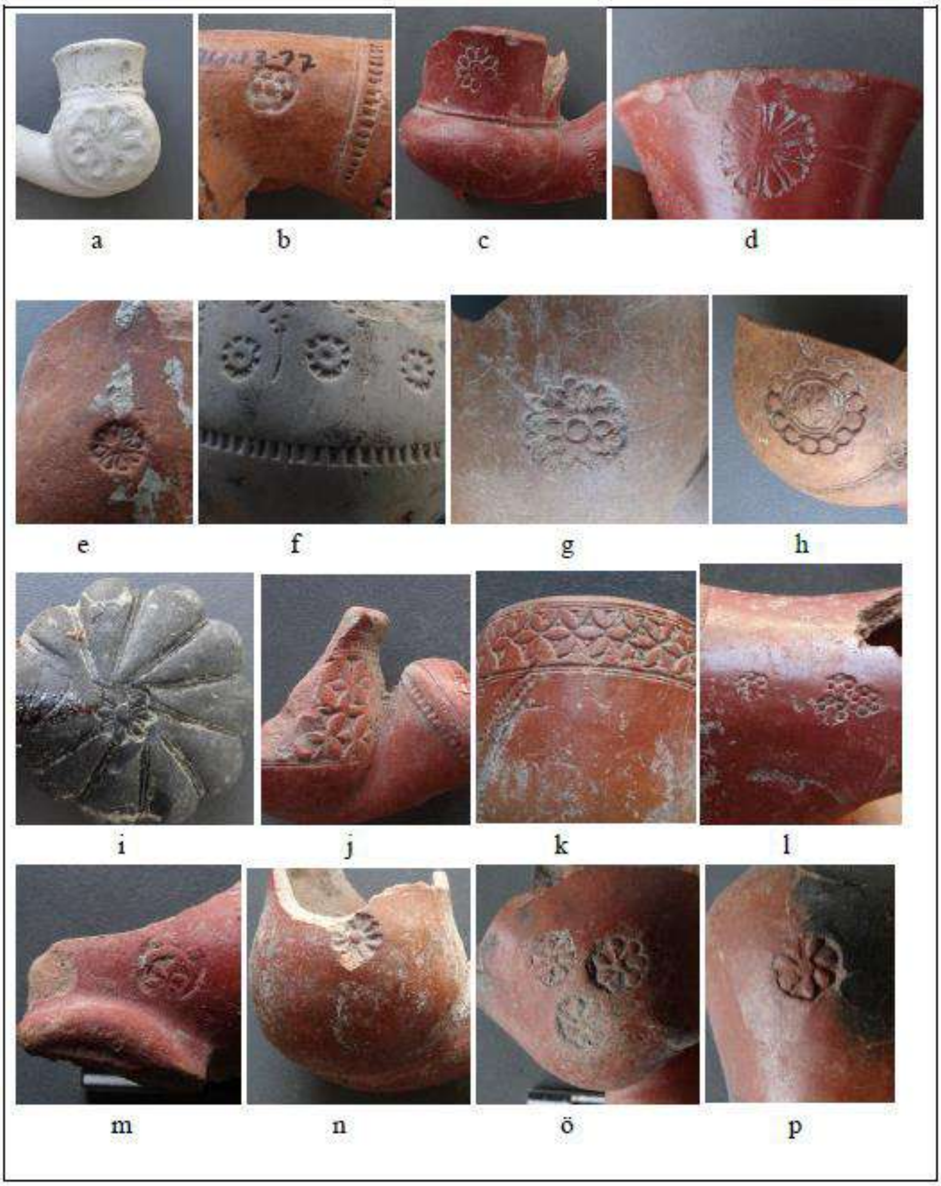

Fig.3:Ottoman clay tobacco pipes decorated with stylized floral motifs.

One of the mould-made examples, in which the mould also determined the overall form of the pipe, is decorated with a large floral motif on each side of its barrel-shaped bowl[5]. Each flower is composed of eight petals. Unlike the floral motifs produced by other techniques, the surfaces of the petals are recessed. The floral motifs produced with flat stamps, which constitute the most common decorative technique, are generally similar in appearance, although they differ in their details. Nearly all of these motifs are circular in form, indicating that the stamping faces of the stamps were themselves circular. Despite variations in size, their most distinctive characteristic, in contrast to mould-made decoration, is the raised appearance of the design on the surface. Consequently, the petals are more clearly defined than those on mould-made examples.

Some floral motifs feature a circular central area from which the petals radiate outward. Whether this element was created intentionally or unintentionally by the pipe maker, it may reasonably be interpreted, from a morphological perspective, as representing the flower's seed pod. In most examples, this central element is rendered in relief together with the petals, whereas in one example it is recessed (Fig. 3f). Another example differs from the others in that it incorporates a circular maker's mark at the centre, surrounded by a ring of circular petals, giving the motif a distinctive appearance (Fig. 3h).

The defining feature that identifies these circular motifs as flowers is the presence of petals. Although the number of petals is not standardised, their forms also exhibit considerable variation. The most common type consists of elliptical petals, representing the simplest stylised form of a leaf. In addition, petals of circular, linear, and teardrop-shaped forms are also represented among the decorative motifs.

Among the examples in which the flowers are depicted from above, two specimens display distinctive characteristics. In one example, an additional row of petals or simple floral motifs surrounds the main flower, creating a more elaborate composition. With its plan-like arrangement, the motif closely resembles a rose (Fig. 3g). In the other example, a crescent motif is placed beside a six-petalled flower, together forming the crescent-and-star emblem. In this composition, the floral motif functions as the star, giving the design a symbolic character (Fig. 3i).

The examples demonstrate that, in addition to flat stamps, cylindrical stamps were also employed. In the decorative schemes produced with cylindrical stamps, identical floral motifs are arranged side by side, creating a continuous horizontal border (Fig. 3j, k).

[5] For comparable example, see Gaşpar, 2016: Fig.10, 19.1-20.1

Although only a few examples depict flower stalks, their overall arrangement does not differ from that of the flowers represented from above. In one example, a flower stalk was added to the motif using the incising technique (Fig. 4a). The stalk is rendered in a very simple manner and is not convincingly connected to the flower itself, while the adjacent flowers lack stalks altogether. One of the most distinctive examples in this group features flowers depicted from above, linked together by scrolling stems. Stylised leaves are placed near the points where the stems join the flowers, possibly representing the sepals. Another noteworthy feature of this composition is that the stems were created using a toothed roulette. The combination of scrolling stems and multiple floral motifs produces a more dynamic decorative composition across the pipe surface.

Among the pipes with vegetal ornamentation are examples in which the flowers are depicted in side view. The form of these motifs indicates that the shape of the stamping face differed from that used for flowers shown from above. Accordingly, the impression assumes an oval rather than a circular form. This was most likely a consequence of the need to accommodate the vertically arranged stylised floral motif. Unlike the flowers depicted from above, in which the petals constitute the principal visual element, these examples also incorporate the sepals. Although these motifs may initially evoke the appearance of a cypress, a pine cone, or a leaf, their overall morphology and compositional context suggest that they are more appropriately interpreted as stylised floral motifs.

Both examples share a similar decorative arrangement. In the stylised floral motifs depicted in side view, a pair of linear sepals extending laterally from the base of the flower forms a distinctive feature. In the example with the triangular floral form, a teardrop-shaped element occupies the centre of the flower (Fig. 4a), most likely representing the seed pod. In the other example, the flower is oval in shape and filled with linear hatching. The floral motifs are placed on the faces of the flower- or lobed-shaped base beneath the bowl. In this respect, the motifs harmonise closely with the form of the base (Fig. 4b). The stylised flowers are distinguished by their serrated contours.

After floral motifs, stylised **leaf motifs** constitute the second most common category of vegetal ornamentation on the pipes. Although some examples initially resemble trees in appearance, the presence of clearly defined midribs and lateral veins suggests that they are more appropriately interpreted as leaves. Most leaf motifs appear to have been produced using the stamping technique. As with the side-view floral motifs, the decoration was created by applying a stamp bearing a leaf motif once or repeatedly onto the pipe surface.

In one example, three identical leaf motifs are arranged on the bowl. Their linear midribs and lateral veins are clearly defined, while the central leaf is provided with a narrow groove, creating the impression of a stem (Fig. 4e). Another particularly noteworthy example occurs on the stem of a pipe. Leaf-shaped projections with triangular tips were formed on the clay stem, and each was impressed with a leaf-shaped stamp (Fig. 4k).

A further example, also produced with a leaf stamp, is elliptical in form. In this motif, the veins are rendered as parallel hatching, leaving an undecorated area at the centre of the leaf (Fig. 4f). One of the stamped motifs, however, evokes the appearance of a tree rather than a leaf. Unlike the floral motifs, it lacks the linear sepals observed in the flower designs, while its surface hatching differs from that of the leaf motifs. Considering these features together with its thick trunk, this motif is more plausibly interpreted as representing a cypress tree (Fig. 4l).

Fig.4: Ottoman clay tobacco pipes decorated with stylized floral and leaf motifs..

One of the most common decorative applications involved creating leaf motifs in relief by repeatedly impressing onto the surface a pointed stamp with a triangular stamping face at regular intervals. In this technique, the stamp itself does not bear a leaf motif. Instead, vertically arranged leaf motifs are formed by successive impressions of the stamp placed side by side along the same axis on the pipe surface. In these examples, the spaces between the leaves are emphasised with a grooved roulette. Palmette motifs frequently appear on the stamping face of the stamps. The serrated edges of the leaves further enhance their leaf-like appearance (Fig. 4g, i).

In examples where the stamps were impressed in two horizontal rows, the leaf motifs are more clearly defined. This feature can be observed on a pipe decorated with impressions of a lattice-patterned stamp in the lower row and a palmette-decorated stamp in the upper row. This arrangement creates a relatively broad decorative border, in which vertically arranged elliptical leaf motifs constitute the most prominent decorative element (Fig. 4h). A variation of this arrangement was created by impressing the stamp diagonally across the pipe surface in two rows. In one example, impressions of a palmette-decorated stamp produce leaf motifs whose tips meet to form a series of "V"-shaped motifs. As a result, the leaves together create a zigzag pattern across the surface (Fig. 4j).

The palmette, a motif widely employed in other branches of the decorative arts, also appears among the vegetal ornaments on Ottoman clay tobacco pipes. In general, the palmettes on the pipes consist of a stylised vegetal motif composed of a common base from which a prominent central leaf rises upward in a fan-shaped arrangement, flanked by smaller lateral leaves. The palmette is one of the most distinctive decorative motifs found on both the bowl and the stem of the pipes. Although all examples were produced using the stamping technique, variations can be observed in both the number and the form of the leaves.

The palmette motifs on the pipes can be divided into two groups: palmettes with volutes and palmettes without volutes. The volutes extending from the base to either side may also be interpreted as the outer leaves of the palmette[6]. In two examples, the volutes are formed as concentric circles (Fig. 5a, b). In another example, the palmette rests on a pair of opposing C-shaped volutes. Unlike the other examples, these volutes create the appearance of a vase or vessel enclosing the base of the palmette (Fig. 5c).

Palmettes without volutes also occur on the pipes in a simpler form. They appear either as independent motifs or in combination with other decorative elements, forming part of the ornamental repertoire. An arrangement consisting of two superimposed palmettes is most commonly found on pipes with an oval bowl and a

[6] For comparable example, see Yazıcı Metin, 2019:101, F.4.

short polygonal neck. Each facet of the polygonal neck is decorated with two palmettes, the lower one having a greater number of leaves and the upper one fewer (Fig. 5d)[7]. As seen on another pipe, the upper palmette motif also appears as a group of three on the lower part of the bowl, indicating that there was no fixed position for this motif and that a particular palmette type was not confined to a specific pipe type (Fig. 5e).

The arrangement of fan-shaped palmettes in three horizontal rows around the bowl is particularly noteworthy for its repeated use of the motif. The motifs are arranged in a staggered pattern, apparently to create a greater sense of movement in the overall design. Although the motif may visually evoke the appearance of a shell, its origin and formal characteristics indicate that its vegetal character is more pronounced (Fig. 5f). A similar palmette motif also appears on the stem (Fig. 5h). On a pipe with a disc-shaped base, a single row of palmettes decorating the surface of the disc is more naturalistic than the other examples in terms of the arrangement of the leaves. The central and lateral leaves are more clearly defined (Fig. 5i).

Fig.5: Ottoman clay tobacco pipes decorated with palmette and tulip motifs.

[7] For comparable examples, see Kurt, 2022: 367, Fig.2/18; Kayın, 2026: 262, Fig.18.

Among the identifiable floral motifs on the Smyrna Agora pipes is the **tulip**. A tulip motif appears on each facet of the neck of a pipe with an oval bowl and a polygonal neck. The three-petalled tulips were formed by the mould used to produce the pipe (Fig. 5h)[8].

2. Evaluation and Conclusion

The millennia-long history of İzmir has been illuminated through archaeological excavations carried out at various locations across the city. The excavations at the Smyrna Agora have yielded both architectural remains and small finds dating from every historical period, from the Hellenistic era to the Republican period. Following the Turkish-Islamic conquest of the city and its subsequent development into one of the Ottoman Empire's major commercial ports, the population increased rapidly. Ottoman communities of diverse ethnic and religious backgrounds settled upon the remains of the Hellenistic and Roman settlements.

The ongoing excavations at the Smyrna Agora continue to uncover not only Ottoman-period architectural remains but also a variety of small finds, including ceramics and clay tobacco pipes. Together, these different categories of material provide valuable insights into daily life in the Ottoman period between the seventeenth and twentieth centuries[9].

Before the widespread adoption of cigarettes in Ottoman society, the clay tobacco pipe was an indispensable object and was most commonly made of clay. Pipes recovered from archaeological excavations and preserved in various collections clearly demonstrate this. Despite being among the smallest artefacts encountered in archaeological contexts, pipes—particularly because of the frequent breakage of their bowl rims—had to be replaced regularly by their users. Although they were made from a fragile material, pipe makers generally completed their products with decorative ornamentation. These decorations ranged from simple toothed roulette or grooved designs to floral motifs whose species cannot be identified. Undecorated examples, however, are by no means rare. Indeed, the existence of pipes that are both undecorated and unburnished suggests that they were produced to meet the needs of users with different economic means.

The vegetal ornamentation on the Ottoman clay tobacco pipes recovered from the Smyrna Agora demonstrates that motifs widely employed in Ottoman decorative arts were also successfully adapted to small objects. Floral motifs, leaves,

[8] For examples of the tulip motif employed in compositions executed using different techniques, see Robinson,1985: pl.59,60.

[9] For some of the publications in which these finds are presented, see Ayhan, 2011:1-22; Çakmak, 2015: 43-47; Gök, 2015; Ersoy, 2017.

palmettes, and tulips were applied individually or arranged in a variety of decorative compositions on the surfaces of the pipes. These decorative motifs served not only an aesthetic purpose but also reflected the ornamental tradition of the period. The fact that the great majority of these motifs were produced using moulds indicates a standardised production process and shows that the same ornamental repertoire could be repeated on different pipe types. In addition, the examples decorated by incision suggest that pipe makers occasionally employed freer decorative practices to complement the mould-made ornamentation. Such incised decoration, however, is relatively uncommon, since pipe makers sought not only to produce visually attractive pipes but also to maximise production. This concern was largely overcome through the use of the lead mould that formed the shape of the pipe and the stamps used to create the decoration. By transferring pre-prepared decorative designs onto the pipe surface through stamping, craftsmen were able to save both time and labour.

The distribution of vegetal ornamentation on the pipe surfaces also reflects a deliberate decorative preference. In most cases, the motifs are concentrated on the bowl, although examples with decoration on the stem are also encountered. This may be related to the fact that the bowl was the part that first attracted the user's attention. In addition, the broader surface of the bowl facilitated the application of stamped decoration.

Floral motifs constitute the largest group among the vegetal ornamentation identified on the pipes (Fig. 3). In most cases, the species of these flowers cannot be identified. Depicted both in top and side view, these flowers may be interpreted as schematic adaptations of the naturalistic floral style that was widely employed in Ottoman decorative arts. Particularly in the side-view examples, the clearly rendered sepals indicate that these motifs are not merely geometric designs but stylised representations of specific vegetal forms.

The similarity between the floral compositions on Ottoman clay tobacco pipes and the decoration found on certain coffee cups should not be regarded as coincidental. Just as coffee and tobacco became an inseparable pair in Ottoman society, underglaze-painted decoration on coffee cups was transferred to the surfaces of pipes through a different technique, creating a harmonious relationship between two objects used within the same social setting.

Leaf motifs constitute another important group within the ornamental repertoire, although in most cases the plant species they represent cannot be identified (Fig. 4e–k). These motifs were generally produced by stamping and convey their vegetal character through the clearly defined central and lateral veins. Although some examples initially give the impression of trees, their vein patterns suggest that they are more appropriately interpreted as stylised leaves. At the same time, certain motifs with thick trunks tapering towards the top may also be regarded as representations of cypress trees (Fig. 4l)[10]. The elliptical form of some motifs likewise suggests that they represent leaves. In addition to the direct stamping of leaf motifs onto the pipe surface, other stamp designs were also arranged in such a way as to create leaf motifs, resulting in larger leaf compositions. In some cases, these leaves, arranged side by side, even evoke the appearance of a flower. Rising from the base of the tobacco bowl towards its rim, they transform the bowl into a flower and the leaves into sepals. The occurrence of pipes with trays formed as multi-petalled flowers further demonstrates that vegetal forms were deliberately incorporated into the overall design of Ottoman clay tobacco pipes[11].

Although the exact origin of the palmette motif remains uncertain, it is generally accepted that it was an important decorative motif in the art of the Sumerians, Egyptians, Assyrians, and later the Greeks and Romans. Having entered the repertoire of Islamic art in the eleventh century, the palmette became increasingly widespread and remained one of the most characteristic motifs of both the Seljuk and Ottoman periods (Mülayim, 1976: 145).

The palmette motifs on the Smyrna Agora pipes differ considerably in form from those found in Ottoman decorative arts. Consequently, they preserve the classical forms of Ottoman ornamentation only to a limited extent. Although greatly simplified as a result of the production technique, they nevertheless retain certain formal Neo-Classical characteristics. The palmettes on the Smyrna Agora pipes can be divided into two principal groups, with volutes and without volutes, and were used either as individual motifs or as repeated elements forming decorative borders (Fig. 3a–h). In the examples with volutes, the palmettes are placed on opposing C- and S-shaped volutes, whereas the examples without volutes display a much simpler character. Particularly noteworthy are the borders composed of fan-shaped palmettes arranged in a staggered pattern, which create a successful decorative composition conveying a strong sense of movement across the surface.

Although not represented by many examples, tulip motifs are also present among the Smyrna Agora pipes (Fig. 3i). The tulip motif, which was already used as a decorative element in pre-Islamic Turkish art and has often been identified as a form of palmette, continued to appear in decorative compositions after the adoption of Islam. In distinguishing between palmette and rumi motifs, forms with leaves extending downwards are generally identified as palmettes, whereas those with three upward-oriented elements are interpreted as tulip motifs (Çakmakoğlu Kuru: 1997, 41) Considering their form, the tulip motifs on the

[10] For a close parallel, see Bakla, 2007: 281.
[11] For several examples with flower-shaped bases, see Bakla, 2007: 165;Yazıcı Metin, 2019: 98/F.27.

pipes are comparable in quality to underglaze-painted and incised tulip motifs found on other Ottoman works[12].. This suggests that, rather than being one of the unidentified vegetal motifs, the tulip—widely employed in many branches of Ottoman decorative art during the sixteenth and seventeenth centuries—had become a well-established motif in the visual memory of the craftsman. This suggests that both the pipe maker and the craftsman responsible for preparing the stamps were thoroughly familiar with the Ottoman ornamental repertoire.

In conclusion, the vegetal ornamentation on the locally produced Ottoman clay tobacco pipes recovered from the Smyrna Agora demonstrates that the motif repertoire widely employed in Ottoman decorative arts was also adapted to small utilitarian objects. The examples examined in this study show that floral, leaf, cypress, palmette, and tulip motifs were employed in a variety of decorative compositions, and that these motifs were produced predominantly by moulds and stamps, while incision was used to a more limited extent. As a result of the production techniques, the motifs acquired a schematic and stylised character. In particular, the depiction of flowers in both top and side view, together with the varied arrangements of leaf and palmette motifs, demonstrates that pipe makers created a rich ornamental repertoire despite the limited surface available for decoration. In this respect, the Smyrna Agora assemblage represents an important group of Ottoman clay tobacco pipes, reflecting the technical, compositional, and iconographic diversity of vegetal ornamentation.

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[12] For several examples, see Öney, 1976: 109.

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Chapter 7

Dominant-Strategy Implementation: Revisiting the Gibbard–Satterthwaite Theorem

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Abstract

We consider dominant-strategy implementation of social choice functions on the unrestricted domain of strict preferences. We first introduce the basic notions and review the literature on the Gibbard–Satterthwaite theorem. We then state the theorem and construct examples to explain the roles of onto-ness, unrestricted preferences, the presence of at least three alternatives, and strategy-proofness. We also provide a Borda-count example in which an individual obtains a strictly preferred outcome by reporting false preferences. Finally, we discuss the implications of the theorem for the design and implementation of collective decision rules.

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1. Introduction

Social choice theory studies how individual preferences can be aggregated into a collective decision. Election of a political representative, selection of a public project, and choice of a policy by a committee are examples of collective decision problems. In each of these problems, individuals may disagree about which alternative should be selected. A social welfare function (SWF) aggregates their preferences into a social ordering, whereas a social choice function (SCF) selects an alternative directly.

An important problem arises when the preferences of individuals are private information. An individual may report false preferences if doing so changes the selected alternative in her favor. A social choice function is strategy-proof if truthful reporting is a dominant strategy for every individual. Strategy-proofness is therefore a natural incentive-compatibility requirement for a direct preference-revelation mechanism.

Two impossibility results are central. Arrow's theorem concerns SWFs and shows the incompatibility of unrestricted preferences, Pareto respect, independence of irrelevant alternatives, and non-dictatorship (Arrow, 1951). The Gibbard–Satterthwaite theorem concerns single-valued SCFs and shows that an onto rule on an unrestricted domain cannot be both strategy-proof and non-dictatorial (Gibbard, 1973; Satterthwaite, 1975).

This chapter focuses on the second result. Section 2 briefly reviews the related literature. Section 3 introduces the model and the main properties. Section 4 states the theorem, gives examples for its assumptions. Section 5 discusses the implications of the result and gives a Borda-count example. Section 6 concludes.

2. Literature

Gibbard (1973) studies the manipulation of voting schemes. He shows that if a non-dictatorial rule can choose at least three alternatives, there is a profile at which a voter can obtain a better outcome by reporting false preferences. Satterthwaite (1975) obtains a closely related result and connects it with Arrow's framework. These two contributions form the basis of the theorem studied in this chapter.

Arrow's theorem and the Gibbard–Satterthwaite theorem are closely related, but they apply to different objects. Arrow (1951) considers a social welfare function that produces a social ordering. The Gibbard–Satterthwaite theorem considers a social choice function that selects one alternative. Satterthwaite (1975) and, later, Reny (2001) explain the relation between the two results.

Subsequent work clarified the mechanism behind the impossibility. Muller and Satterthwaite (1977) connected strategy-proofness to strong positive association, a monotonicity condition closely related to the strong monotonicity used below. Barberá (1983) gave a direct pivotal-voter proof. Other short proofs are provided by Benoît (2000), Reny (2001), and Sen (2001). Some of these proofs use monotonicity, while others use a pivotal voter or a connection with Arrow's theorem.

Later studies also consider how the conclusion changes when an assumption of the theorem is modified. For example, Moulin (1980) studies single-peaked preferences and shows that non-dictatorial strategy-proof rules can exist on this restricted domain.

Other work changes the form of the outcome. For randomized choice, Gibbard (1977)] shows that every strategy-proof decision scheme is a probability mixture of unilateral and duple rules. Duggan and Schwartz (2000) studies social choice correspondences, where the outcome may contain more than one alternative. The implementation literature studies incentive compatibility in a broader mechanism design framework (Dasgupta et al., 1979). These models may use transfers, cardinal preferences, lotteries, or weaker equilibrium requirements. They are different from the deterministic and ordinal model considered here.

3. Basic Notions and Properties

We now introduce the social choice environment.

Let $N = \{1,2,\dots,n\}$ be a finite set of individuals, where $n \geq 2$, and let A be a finite set of alternatives with $|A| = m \geq 3$. Each individual $i \in N$ has a strict preference ordering P_i over A. For $x, y \in A$, xP_iy means that i strictly prefers x to y. The associated weak relation is denoted by R_i: xR_iy if and only if xP_iy or $x = y$.

The strict relation P_i is a linear order: it is complete over distinct alternatives, transitive, and asymmetric. Let $L(A)$ denote the set of all linear orders over A. A **preference profile** $P = (P_1, \dots, P_n)$ is an element of $L(A)^N$. We write $P = (P_i, P_{-i})$, where P_{-i} collects the preferences of all agents other than i.

Example 1 (A preference profile) *Let* $N = \{1,2,3\}$ *and* $A = \{a, b, c\}$. *The profile*

P_1	P_2	P_3
a	b	c
b	c	a
c	a	b

means that agent 1 ranks a first, b second, and c third; thus aP_1bP_1c. Each column is a linear order, and the three columns together form a preference profile in $L(A)^3$.

Let $W(A)$ denote the set of all weak orders over A.

Definition 1 (Social welfare function) *A social welfare function (SWF) is a map*

$$F: L(A)^N \to W(A).$$

It assigns a social ordering of the alternatives to every preference profile.

Example 2 (An SWF) *Consider the Borda SWF for $A = \{a, b, c\}$: each agent assigns 2 points to the first-ranked alternative, 1 point to the second, and 0 points to the third, and alternatives are socially ranked by their total scores. At the profile*

$$\begin{array}{ccc} P_1 & P_2 & P_3 \\ a & a & b \\ b & c & a \\ c & b & c \end{array}$$

the scores of a, b, and c are 5, 3, and 1, respectively. The SWF therefore returns the social ordering $aP^S bP^S c$. If two alternatives receive the same score, the SWF ranks them as socially indifferent.

Definition 2 (Social choice function) *A social choice function (SCF) is a map*

$$f: L(A)^N \to A.$$

It assigns one alternative to every preference profile.

Example 3 (An SCF) Suppose the SCF selects the alternative with the highest Borda score, using a fixed tie-breaking order $a \succ b \succ c$ when necessary. At the profile in the preceding example (Example 2), it selects a because a has the highest total score. Thus, the SWF returns the complete social ranking $aP^S bP^S c$, whereas the corresponding SCF returns only the chosen alternative: $f(P) = a$.

One can generate an SCF from an SWF by selecting a maximal alternative of

$F(P)$. If $F(P)$ may contain ties, a fixed tie-breaking rule is required to make the resulting SCF single-valued.

Definition 3 (Manipulability) *An SCF f is manipulable at $P = (P_i, P_{-i})$ if there exist $i \in N$ and $P_{i'} \in L(A)$ such that*

$$f(P_{i'}, P_{-i}) P_i f(P_i, P_{-i}).$$

Example 4 (A profitable misreport) *Let f be plurality rule with the tie-breaking order $a \succ b \succ c$, and consider*

P_1	P_2	P_3
b	c	a
c	a	c
a	b	b

Each alternative receives one first-place vote, so $f(P) = a$. Agent 1 truly ranks bP_1cP_1a. If she reports $P_{1'}: cP_{1'}bP_{1'}a$, then c receives two first-place votes and $f(P_{1'}, P_{-1}) = c$. Since cP_1a, this is a profitable misrepresentation, and the SCF is manipulable at P.

We next define the conditions used in the Gibbard–Satterthwaite theorem.

Definition 4 (Strategy-proofness) *An SCF is strategy-proof if it is not manipulable at any profile.*

Example 5 (A strategy-proof rule) *Fix agent 1 and let $f(P) = top(P_1)$. Agent 1 already obtains her most-preferred alternative by reporting truthfully, while the reports of all other agents have no effect on the outcome. Therefore, no agent has a profitable misreport and the rule is strategy-proof.*

Definition 5 (Onto-ness) *An SCF f is onto (or satisfies citizen sovereignty) if for every $x \in A$ there is a $P \in L(A)^N$ such that $f(P) = x$.*

Example 6 (An onto rule) *Plurality rule is onto. For any $x \in A$, consider a profile at which every agent ranks x first. Alternative x then receives every first-place vote and is selected. Hence, each alternative is the outcome at some profile.*

Definition 6 (Dictatorship) *An SCF f is dictatorial if there is an agent $d \in N$ such that*

$$f(P) = top(P_d) \qquad \text{for every } P \in L(A)^N,$$

where $top(P_d)$ is the unique P_d-maximal alternative.

Example 7 (A dictatorial outcome) *Let agent 2 be the dictator and consider*

P_1	P_2	P_3
a	c	b
b	a	a
c	b	c

The SCF selects c, the top-ranked alternative of agent 2, even though agents 1 and 3 rank other alternatives first. More generally, the outcome changes whenever agent 2 changes her top-ranked alternative, but it is unaffected by the reports of agents 1 and 3.

Definition 7 (Unanimity and Pareto efficiency) *An SCF is unanimous if $f(P) = x$ whenever every agent ranks x first. It is Pareto efficient if $f(P) \neq y$ whenever there is an $x \in A$ such that xP_iy for every $i \in N$.*

Example 8 (Unanimity and Pareto efficiency) *If every agent ranks b first, unanimity requires the SCF to select b. For Pareto efficiency, suppose instead that the agents have*

$$aP_1cP_1b, \qquad bP_2aP_2c, \qquad aP_3bP_3c.$$

All three agents prefer a to c. A Pareto-efficient SCF therefore cannot select c at this profile, although the definition does not by itself determine whether a or b must be selected.

For $x \in A$, define the strict lower contour set

$$L_i(x, P_i) = \{y \in A : xP_iy\}.$$

Example 9 (A lower contour set) *If aP_ibP_ic, then*

$$L_i(a,P_i)=\{b,c\},\qquad L_i(b,P_i)=\{c\},\qquad L_i(c,P_i)=\varnothing.$$

Thus, $L_i(x,P_i)$ contains exactly the alternatives that agent i ranks below x.

Definition 8 (Strong monotonicity) *An SCF f is strongly monotonic if $f(P)=x$ and*

$$L_i(x,P_i)\subseteq L_i(x,Q_i)\qquad \text{for every } i\in N$$

imply $f(Q)=x$. Thus, a chosen alternative remains chosen whenever no agent demotes it relative to another alternative.

Example 10 (Raising the chosen alternative) *Let plurality rule select a at*

P_1	P_2	P_3
a	b	a
b	a	c
c	c	b

because a receives two first-place votes. Now let agent 2 raise a above b, leaving the other pairwise comparisons unchanged. The lower contour set of a expands from $\{c\}$ to $\{b,c\}$ for agent 2 and is unchanged for the other agents. Strong monotonicity requires a to remain selected; in this case, it receives all three first-place votes.

4. The Gibbard–Satterthwaite Theorem

Theorem 1 (Gibbard--Satterthwaite) *Let $f: L(A)^N\to A$ be an onto SCF on the unrestricted domain $L(A)^N$, where $|A|\geq 3$. If f is strategy-proof, then f is dictatorial.*

We now provide examples to explain the role of each condition in Theorem 1.

Example 11 (Onto-ness) *Let $A=\{a,b,c\}$ and define the constant rule f^a by*

$$f^a(P)=a\qquad \text{for every } P\in L(A)^N.$$

No individual can change the outcome by reporting different preferences, so f^a is strategy-proof. It is also non-dictatorial: on the unrestricted domain, every individual has some preference ordering in which a is not top-ranked. However, f^a is not onto because neither b nor c is ever selected. Thus, onto-ness excludes strategy-proof rules that make some alternatives unavailable regardless of the reported preferences.

Example 12 (Two alternatives) *Let $N = \{1,2,3\}$, $A = \{a,b\}$, and let f^M be simple majority rule. For example, at the profile*

$$\begin{array}{ccc} P_1 & P_2 & P_3 \\ a & a & b \\ b & b & a \end{array}$$

we have $f^M(P) = a$. The rule is onto and non-dictatorial. It is also strategy-proof. If an individual prefers a to b, reporting b instead of a can only leave the outcome unchanged or change it from a to b; it can never produce a strictly better outcome. The argument is symmetric for an individual who prefers b to a. Hence, with two alternatives, an onto, non-dictatorial, and strategy-proof rule exists. This shows why the requirement $|A| \geq 3$ is essential.

Example 13 (A restricted preference domain) *Let $A = \{a,b,c\}$ be ordered from left to right as $a < b < c$, and suppose that preferences are single-peaked with respect to this ordering. Consider three individuals with*

$$\begin{array}{ccc} P_1 & P_2 & P_3 \\ a & b & c \\ b & a & b \\ c & c & a \end{array}$$

Their peaks are a, b, and c. The median-voter rule selects the median peak, which is b at this profile. On the single-peaked domain this rule is onto, non-dictatorial, and strategy-proof (Moulin, 1980). The domain is restricted because not every linear order is admissible; for example, aP_icP_ib is not single-peaked with respect to $a < b < c$. Thus, a non-dictatorial positive result is possible after the unrestricted-domain assumption is dropped.

Example 14 (A dictatorial rule) *Fix an individual* $d \in N$ *and define*

$$f^d(P) = top(P_d) \qquad \text{for every } P \in L(A)^N.$$

The rule f^d is onto because individual d can top-rank any alternative. It is strategy-proof because a false report cannot give d an alternative that she strictly prefers to her true top choice, and the reports of all other individuals do not affect the outcome. This example shows that the conclusion of Theorem 1 is possible. By contrast, the Borda rule considered below is onto and non-dictatorial but fails strategy-proofness.

5. Implications and a Borda Example

Theorem 1 can also be written as follows:

$$\left.\begin{array}{l} |A| \geq 3, \\ f \text{ is onto,} \\ f \text{ is non} - \text{dictatorial} \end{array}\right\} \quad \Longrightarrow \quad f \text{ is manipulable.}$$

Therefore, if a deterministic SCF is onto and non-dictatorial and there are at least three alternatives, it is manipulable at some profile. This means that there are an agent and a false report that give this agent a better outcome according to her true preferences. It does not mean that manipulation is possible for every agent or at every profile. It also does not mean that an agent will always have enough information to find a profitable report.

The dictator in the theorem does not select the same alternative at every profile. The rule selects the alternative that the dictator ranks first. The reports of the other agents do not affect the outcome. Such a rule is both onto and strategy-proof.

Each assumption has a clear role. The unrestricted domain allows every strict preference ordering. Onto-ness requires every alternative to be selected at some profile. Non-dictatorship requires the choice not to depend only on one agent. The theorem shows that a deterministic rule with these properties cannot also make truthful reporting a dominant strategy. A designer must therefore decide which assumption can reasonably be changed in the problem under consideration.

For familiar voting rules, including Borda, plurality with a fixed tie-breaker, and many Condorcet extensions, the theorem guarantees vulnerability somewhere in the unrestricted domain provided the rule is onto and non-dictatorial. The theorem does not compare these rules in terms of how often manipulation occurs or how much information a voter needs. Finding a profitable report may also be computationally difficult in some settings (Bartholdi et al., 1989).

For a direct preference-revelation mechanism, strategy-proofness is exactly dominant-strategy incentive compatibility: truthful reporting is optimal for each agent for every report of the others. The dominant-strategy revelation principle implies that if an indirect mechanism implements an SCF in dominant strategies, the same SCF has a truthful direct implementation (Dasgupta et al., 1979). Consequently, within the model of the theorem, changing the message space or adding stages does not make an onto and non-dictatorial SCF strategy-proof.

There are several ways to obtain different results by changing the model. On a restricted domain such as single-peaked preferences, non-dictatorial strategy-proof rules exist (Moulin, 1980). With only two possible outcomes, majority rule is strategy-proof. Randomized rules choose lotteries rather than single alternatives (Gibbard, 1977). One may also use weaker incentive requirements, such as Bayesian or Nash incentive compatibility, or introduce transfers and cardinal preferences. In each case, at least one assumption of Theorem 1 is changed.

We next give a simple example of manipulation under the Borda count.

Under the five-alternative Borda count, a first place receives five points and a last place one point. Consider the truthful profile

$$\begin{array}{ccc} P_1 & P_2 & P_3 \\ a_1 & a_5 & a_3 \\ a_5 & a_4 & a_2 \\ a_3 & a_3 & a_1 \\ a_2 & a_2 & a_4 \\ a_4 & a_1 & a_5 \end{array}$$

The truthful scores are as follows:

$score(a_1, P) = 9,$

$score(a_2, P) = 8,$

$score(a_3, P) = 11,$

$score(a_4, P) = 7,$

$score(a_5, P) = 10.$

Thus $f^B(P) = a_3$.

Suppose agent 1 instead reports

$$a_1 \tilde{P}_1 a_5 \tilde{P}_1 a_2 \tilde{P}_1 a_4 \tilde{P}_1 a_3.$$

At $\tilde{P} = (\tilde{P}_1, P_2, P_3)$, the scores are

$$score(a_1, \tilde{P}) = 9,$$
$$score(a_2, \tilde{P}) = 9,$$
$$score(a_3, \tilde{P}) = 9,$$
$$score(a_4, \tilde{P}) = 8,$$
$$score(a_5, \tilde{P}) = 10.$$

Hence $f^B(\tilde{P}) = a_5$. Since the true ordering of agent 1 has $a_5 P_1 a_3$, the misreport is profitable. The example does not by itself prove the theorem. It shows how a profitable false report can arise under a familiar voting rule.

6. Conclusion

The Gibbard–Satterthwaite theorem shows that, with at least three alternatives, an onto and strategy-proof SCF on the unrestricted domain must be dictatorial. Equivalently, every onto and non-dictatorial SCF is manipulable at some profile. The result applies to many familiar voting rules, including the Borda rule illustrated above.

The theorem does not say which voting rule should be used. It shows that strategy-proofness, onto-ness, non-dictatorship, and unrestricted preferences cannot all be maintained in this setting. Different models respond by restricting preferences or outcomes, allowing randomization, weakening the incentive requirement, or introducing additional instruments such as transfers.

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Chapter 8

Impact of Strategic Planning on Organisation Performance of SMES in Nigerian in the Context of Michael Porter Five Forces Model

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Background: Strategic planning plays a very important role in the growth and development of organizations. Strategy is crucial to the organization performance of SMEs given their nature, size, capacity, and services provided. Considering how important strategic planning is, so many SMEs still fail to adopt and adhere to strategic planning resulting in poor organizational performances.

Purpose: The purpose of the study is to examine the relationship between strategic planning and organization performance of SMEs in Nigeria.

Method: It adopted quantitative and qualitative methods through the use of standardized questionnaires and interviews. The study involved over 150 respondents, analyzed using appropriate statistics and analytical tools.

Conclusion: The findings indicated that strategic planning has an impact on organization, and it contributes positively to organization performance. It also showed that there is a significant relationship between strategic planning and organization performances and other key elements of strategic planning such as organization mission, strategic objectives, and organization performances. The study revealed that several SMEs do have knowledge of Porter Five Model Forces but lack proper application of it to their organization activities. The study suggested that SMEs should employ strategy managers and ensure proper analysis and understanding of organization mission and strategic objective by employees.

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1 INTRODUCTION

SMEs are struggling to survive and are focusing on ways to improve their performance. The main objective of this study is to examine the relationship between strategic planning and organizational performance of small and medium sized firms. Strategic planning is a concept used by an organization when trying to determine its strategic decision direction and the resources needed to achieve them; its main concept involves the initiation and execution of plans. A strategy must be formulated before it can be implemented. Strategy can only be effective when it is controlled down through the Implementation stage. We can agree that control is the essential to the implementation Process and its can be achieved centrally through techniques such as action plans and Monitoring. Ainur & Sigit (2019) the use of strategic environmental scans in evaluating the strengths of the external environment (opportunities and threats) helps in seizing opportunities and avoiding threats and leading to a firm's profitability. Abdullah H. Alharthy (2017) Essentially, researchers define strategy implementation as a multifaceted, changeable, repetitive process in which managers and employees carry out several decisions and tasks, which are influenced by various organizational and environmental factors and are designed to realize strategic goals. It is a continuous activity which requires frequent feedback about the effectiveness of current strategies and if there is a need to reformulate or implement a new plan.

Statement of the problem

Organization success is mainly a function of its ability to formulate and employ unique and costly strategies to maximize resources in an innovative way (Dibrell et al., 2014). This research provides empirical evidence for the debate on the relationship between strategic planning and organization performance by answering the following questions: (1) Is there any relationship between strategic planning and organization performance? (2) Will strategic planning improve organization performance? (3) What are the factors affecting strategic planning and organization performance? (4) The effect of Michael Porter's five forces model on organization strategic planning and performance? Organizations caught off guard may spend a great deal of time and energy playing catch up with those that engage in strategic planning. This makes business plan development, strategy planning and systematic decision making to be considered key determinants of the survival and success of small firms (Zimmerer and Scarborough 1996).

Purpose of the study

Strategic Planning is a process that generally encompasses three main aspects namely, formulation, implementation, and evaluation. The aim and objective of this topic is to answer the research questions on the Importance of Management strategies and how it influences Performance of a firm, it is Important to know the problems A firm would face in a Prevailing environment, by Implementing a successful Strategic plan the Firm can Decide its competitive Advantage and how it can be used to Improve Sufficient Growth. Planning often fails because of Implementation problem formal strategic, this paper will examine the concept of formal strategic planning, critically analyze the effect of formal strategic planning for small and medium scale firms. This study will also identify some of the barriers which prevent implementation of strategic planning. **Research questions** The paper will measure the effectiveness of the strategic planning process. It aims to identify factors that contribute to the achievement of the organization's goals and develop effective strategies. It is a series of actions which are converging into a consistent pattern (Mintzberg, 1994). However, it is important to note that these are not the same as the process of developing a strategy. For instance, the process of developing a strategy is different from the evaluation of the strategy. The research question includes. i. Is there any relationship between strategic planning and organization performance? ii. Will strategic planning improve organization performance? iii. What are the factors affecting strategic planning and organizational performance? iv. What is the effect of Michael Porter five forces model on organization strategic planning and performance?

Significance of the study

The major contributions of this study will be to identify and document the widespread inadequate strategic planning among small and medium firms. It will also examine various aspects of strategic planning processes that are employed in small businesses. This study will help Small and Medium Scale Firm to abduct various angles of strategic plan and why is it important to a firm. Does strategic planning have a positive relationship with effective Firm performance? After the Implementation Process it is important to measure the effectiveness of Strategic Planning performance? The research aimed at understanding the significance of 3Strategic Planning to a firm and how it can be measured for effectiveness. It will aid firms to link their strategic planning processes and ongoing performance management processes more attentively in order to strengthen the overall organization performance. Aside from that, the study findings will provide more information on the use and effect of Porter’s five forces model on SMEs strategic planning and performance. It will help to identify the strengths and weaknesses of the organization and how they can improve their strategy towards improving performance. Hughes (2003) states that strategic planning is a process that is concerned with strategic and operational goals, objectives in line with organizational policies, programs and activities that are designed to achieve desirable results, it is necessary to know the aims and objectives of the organization to be able to know the point where strategy should be applied. It also argues that future of strategy will require moving from strategic planning to the include elements of strategic management, which entails managing the firms overall strategic agenda in a continuous way rather than an episodic way, as well as ensuring that strategies are executed effectively.

Methodology Approach

This research will use a quantitative and qualitative analytical approach to empirically examine the relationship between the variables of interest and application of appropriate statistical data techniques. A well-structured questionnaire and interview will be used. This is the most appropriate methodological approach towards effectively addressing the research objectives.

2 GENERAL INFORMATION

2.1 THEORETICAL APPROACHES AND LITERATURE REVIEW

This study is anchored on a two models the Porter's five forces model and SWOT analysis model. They are both integrated to form a theoretical and conceptual framework for this study. The integration of these two models was sighted in the work of Mohammad Rizala et al (2014) in his study of Australian manufacturing SMEs and was specifically used to explain the competitive environment for SMEs which is in line with the scope of this study.

2.1.1 Porter's Five Forces Model

It is arguably one of the most significant tools of managers in assessing external threats that are detrimental to the competitive and survival ability of an organization. It is a widely used strategic tool by organizations in developing strategies to address dangers posed by these five forces. These five external forces are: The threat of new entrants means the possibilities of having new companies providing same services; powerful suppliers can determine the volume of product available in market to buy and sell; power customers can force producers to either produce more or less depending on their choice; threat of substitute product/services entails the danger of availability of alternative products to the existing ones and rivalries among existing competitors is the threat posed by the strategic decisions of other competitors (Porter, 1979). This theory is very significant to strategic planning in SMEs because competition and survival is a very key aspect of business. This model has helped identify the threats, but it is only with proper strategic planning that an SMEs can be able to develop a strategy can help address these threats and ensure the competitive and survival of the SMEs such competitive environment. Although this model has faced criticism such that competitive nature is not the only way to achieving organization goals, that cooperation and mutual interaction helps build lasting organizational goals and objectives (Mohammad Rizala et al, 2014).

2.1.2 Swot Analysis Model

SWOT analysis is another commonly used strategic tool by managers to assess and understand the nature of the environment they are operating. It basically looks at both internal (strength & weakness) and external environments (opportunities and threats) of an organization (Amin, Razmi & Zhang, 2011). It does not only assess external environments like Porter's model, but it also considers the internal environment in respect to; strength which means the quantitative and qualitative capabilities of an organization which provides competitive advantage while weakness entails those internal factors such as poor strategic planning, inadequate fund which an organization does not yet power over.

2.3 MEANING, NATURE, AND LEVELS OF STRATEGY

Strategy is a long-dated word and activity that has been used by different people for different purposes as such defining such concept implies that it has different meaning to different disciplines. But given its use, role, and place in different disciplines there is a common feature of strategy wherever discipline it is being adopted or applied. Going back to the beginning of the use of the word strategy, its usage was first discovered in the field of management of warfare, particularly military activities. In this note, the word itself was coined from the Greek work 'strategos' which means generalship. It was devoted to the different methods and plans designed by military leaders to win war and conquer their enemies (Fred Nickols, 2016). Strategy, as mentioned earlier, is domesticated in almost every field of discipline, especially in the field of management and business, the use of strategy has been well instituted within management. According to Porter (1979) he sees strategy as a layout framework for how an organization will compete, what should be its goals, mission and objectives and the activities that are be put in place in other to achieve these goals. This implies that the strategy is a clear- cut step by step plan followed by several decisions towards achieving those set goals and objectives (The National Minority AIDS

Council (NMAC). However, in another view Glueck (n.d) posited that "strategy is a broad and encompassing plan that focuses on the strategic benefit of the organization to problems posed by the environment and the effective implementation of the plan towards ensuring the achievement of the set goals and objective". From this definition we can deduce that strategy is being employed by an organization towards following. i. Amelioration of challenges faced in achieving set goals. ii. Proper implementation of plan iii. Maximization of the benefits the set objectives and goals intend to yield.

2.3.1 Nature of Strategy

From the definitions provided above, we can easily deduce some of the basic features of strategy; the following are some of the natures of the strategy, why it is done and what it intends to achieve when designed (Basic Strategy Concepts, n.d). i. Strategy is an intentional step by step course of action that attempts to help organizations address challenges faced in the environment. ii. Strategy is a course of action that is aimed at achieving a particular goal. iii. Strategy is designed to communicate the mission and vision of the firm through its core objectives and policies. iv. Strategy is concerned with ensuring proper implementation of goals of an organization. v. The strategy is aimed at ensuring proper allocation and utilization of resources towards achievement of organization goals and objectives. It can be observed from the above that strategy is a very simple and complicated process depending on the kind of organization and situation it is targeted to addressed. However, it is also clear that there is no universal or best strategy on how to deal with organization internal and external environment towards achieving their goals and objectives.

2.3.2 Essence of Strategy

Strategy is a very essential tool employed by organizations in dealing with different issues in a positive and negative way. Strategy is a well-designed and thought plan that aims to provide several alternatives way of reaching organization goals and objectives. Therefore, strategy is characterized by certain key activities that makes it a worthwhile process for organization to formulate, plan, implement and evaluate them (Porter, 1979). There are four basic essences of strategy, they include. a. Long term objectives This indicates that strategy is designed with a conscious effort of ensuring the future goals and objectives of the organization can be realized, in this sense strategy envision not only the challenges or benefits that comes with a proposed course of alternative action an organization decides to embark on, but it also put into consideration the futuristic aspect of the organization goals and objectives. As such they are designed to give a sense of direction for current and future actions of the organization towards achieving the organization goals with proper utilization of available resources. b. Competitive advantage It considers both internal and external threats so that the organization can be able to identify possible opportunities that can provide distinctive advantage over other organizations. Business executives and managers are always in constant search for competitive advantage and strategy provides several alternatives course of action on how they can be the best at what they do. c. Vector The strategy also has to do with the implementation of a course of action that best allows for the maximization of the firm's resources. A lot of process and input goes into the decision of what strategy to adopt after consideration of the long-term objectives and competitive advantage for the organization. After a particular alternative course of action is adopted, it plays a key role in giving a sense of direction to the business executives and managers regarding what they need to do and how they are expected to achieve them. d. Synergy Strategy is all about synergy because the achievement of the goals entails the combination of different resources be it human, financial, and material resources coupled with the appropriate strategy to help best put the resources to use in achieving the organization objectives. After the development of the long-term objectives, competitive advantage and growth vector, synergy helps the process of building a strategy by utilizing the available resources capabilities of the organization in putting out a strategy that can help achieve organizational goals.

2.3.3 Levels of Strategy

After looking at the meaning and nature of strategy it is important to examine the levels of strategy in order to have a better understanding of what strategy entails. The levels of strategy are hierarchy of interrelated process that explains how top management executives and leaders develop strategies for their business or businesses. In this sense the development of strategy is left to managers and the Strategy Business Unit of the organization through proper strategic management and planning. The levels are in three phases, and they include (Basic Strategy Concepts, n.d). i. Corporate level strategy The decision of what direction an organization as a whole will follow is developed by the business founders and top management teams. The organization as whole needs a strategy without it they lose track of what their goals are and how they are supposed to achieve them. For an organization that diversify in provision of different goods and services, they have different strategy for their chains of businesses while a business that is focused on provision of a particular goods or services needs to only develop a strategy for that business. ii. Business level strategy This level works with strategy structured by the corporate executives and this is developed into having a strategic business unit (SBU) that works on developing and determining the kind of product and services offered by the firm and also to ensure they come up with the best strategy to increase the value of their products and services. While the cooperate strategy defines the 'what' of the organization in respect to what is mission, vision and objectives of the organization, the business level strategy looks at how the organization can be positioned using the available resources to achieve their objectives. iii. Functional level strategy At this level strategy is developed by every functional part of the organization, every section or department of the organization develops their own strategy on how to do their best towards achievement of the objectives. These departments work together as a functional unit towards achieving the central corporate and business strategy.

2.4 THE CONCEPT OF STRATEGIC PLANNING

Strategic planning is a very important activity of management that is developed by the organization so as to ensure proper actions and decisions on the utilization of organization resources towards achieving their set goals and objectives. It is a carefully laid out process of activities that produces a critical course of actions with a futuristic scope that forms or lays out what an organization is, what it does, and why it does it (Bryson, 1998). It is a process that has a distinctive approach because its whole focus is geared towards putting all necessary measures in place to achieve organization set goals and anticipation of challenges that could hinder their achievement by setting up alternative strategy to address them. According to Berry (2004) strategic planning has four main features and they are. i. A vivid mission statement of the organization An essential driving force of any strategy is that it is clearly stated as the mission of the organization, for systematic planning to occur there is need to have vivid understanding of the organization mission and vision. ii. Highlight of organization external prospective stakeholders One of the major activities of strategic planning is the identification of the organization external stakeholders and most importantly positioning the organization to prospective stakeholders and investors based on the mission statement of the organization. iii. Clear identification organization of strategic goals Strategic planning also entails the identification of defined goals that the organization intends to focus on and achieve based on the organization objectives and resources available. iv. Developing of strategies to achieving these strategic goals Strategic planning is all about ensuring there is a safe condition to achievement of organization strategic goals by developing strategies that will help the organization capitalize on its strengths and available opportunities.

2.4.1 Mission, Vision, and Objectives of an organization

These three concepts are all interrelated and are essential to the process of strategic planning. Strategies are developed based on strategic goals and objectives while strategic goals are born out of the organization mission and vision. Organization mission simply put is the statement of purpose of the organization. It aims to simply tell the employees, stakeholders, investors, and the public 'what' the organization is all about and what the founder(s) had in mind or their purpose of establishing the firm (Wendy R. 1997). Organization vision on the other hand is a futuristic statement of how or what the organization intends to accomplish. It also incorporates a core value of the organization, and it clearly speaks of the founders intended future outcomes for his/her organization. While organization objectives are a more defined goal that is not long term and achievable within a limited period of time. An organization objective is a concise course action that the organization intends to achieve. The relationship between mission, vision and objectives of a firm is revealed in its strategy planning activities because it is not possible to strategically position an organization outside its stated mission, vision, goals, and objectives.

2.4.1 Strategic Management and Strategic Planning

Strategic management comprises of broad activity or process of management that entails planning, formulation, implementation and evaluation of different methods and approaches aimed on proper positioning an organization towards achieving their goals and objectives. Bowman et al (1987) defined strategic management of an organization as the process of formulation and implementation of crucial decisions based on the organization mission and vision statement. Strategic management takes a comprehensive view of organization mission and objectives and takes considerable numbers of decisions on how to best achieve them through adequate strategic planning, implementation, and evaluation. According to David (2003) strategic management process involves three stages: - Strategy planning and formulation - Strategy implementation - Strategy evaluation It is clear that strategic management embodies strategic planning, although strategic management is not achievable without proper strategic planning. The success of an organization's strategic management is solely based on the effectiveness of its strategic planning.

2.5 STRATEGIC PLANNING PROCESS

The strategic planning process is not a one-way process, different scholars also provided their own identified process of strategic planning like Wendy (1997) and Bryson (2004). However, the process or stages suggested by Bryson

(2004) was developed from the stages identified by Wendy (1997). According to Wendy (1997) there are three essential processes or stages of strategic planning: strategic analysis, strategic choice, and strategic implementation. Strategic analysis entails a thorough and detailed look at the organization's mission, vision and goals coupled with the available resources needed to achieve the stated objective. In this sense there is a conscious effort to analyze the current state of the organization and identify the organization's strengths and weaknesses. In the strategic choice, after a thorough understanding of the problem, the organization mission and vision and its available resources, strategies and alternative strategies are being developed to address the problem or sustain the recorded growth in the organization. Consequently, from the several strategic choices the organization selects the one that best protects and promotes the set objectives and takes consideration of the uncertain situation and available resources. Then, strategic implementation which involves the execution and disciplined efforts towards putting all necessary resources in place in accordance with the strategic choice adopted.

2.6 RELATIONSHIP BETWEEN STRATEGIC PLANNING AND ORGANIZATION PERFORMANCE

Organizations are established either for profit or nonprofit making, even in both cases an organization always finds a way to ensure their established mission, vision and objectives are realized. The goals and objectives can be realized only when an organization performance is good; an excellent organization performance is a contributive effort of strategic planning which helps to ensure proper utilization of resources and course of actions for threats (BerukAyalew, 2017). Organization performance is reflective in the general well-being of the internal and external environment of the organization, for example company Levi Strauss a reputable brand witnessed a downfall in the 1900 which even led to laying off of workers as a result of poor strategic planning (Business Week 2001) cited in Debrah Kwame (2012). One company that has been able to leverage on strategic management and planning is Apple with a visionary leader like Steve Jobs. Strategic planning helped reposition Apple to be a global brand we have today. However, Thompson et al (2004) provided two key performance parameters: financial and strategic performance. The former indicates an increase in profits, returns on investment, sales etc, while the latter means qualitative growth in an organization capabilities like human capital, innovation, economic worth, competitive advantage, and technology growth. It can be deduced that Apple for instance is able to measure its performance from these two standpoints.

2.6.1 Impact of Strategic Planning on Organization Performance

It is the 21st century and organizations that would survive the competitive nature of business would always need a strategy and alternative strategies on how to reduce their threats and weakness and leverage on their strengths and opportunities which is one of the major impacts of engaging in strategic planning. Several studies have been conducted to find out the effect of strategic planning on organization performance, some studies like Ansoff (1970) considered based on their findings that strategic planning have an impact on performance, while Kervin (1999) strongly asserted from his study that companies that engage in strategic planning tends to be more successful than those that fail to plan. There are others that research findings that revealed that strategic planning do not have any impact on performance, some studies suggested it to be weak and that strategic planning does not determine the success of an organization, while Powell posited based on his studies of 40 empirical studies on strategic planning the results of the study were confusing and contradictory in nature (Fisher, 2005; David (2003); Boyd (1991); and Powell 1990).

2.7 PROPOSED RESEARCH STRUCTURE/MODEL AND HYPOTHESIS

The research structure emanates from the analysis of the two major variables considered in this study in respect to strategic planning and organization performance and also in line with the research questions and objectives raised in this study. That coupled with the theoretical and conceptual analysis of the variables considered from previous literatures, the research structure considered how the independent variables influenced or affected the dependent variables. Porter's model provided five major areas strategic planning must consider in order to achieve organization objective and improve organization performance. Also, SWOT analysis posited that for an organization to achieve their objectives, in formulation and implementation of a strategic plan there is need for proper consideration of the strength, weakness, opportunity and threats of the organization. The theoretical frameworks adopted already gave an important look into how strategic planning is very significant and intertwined with organization performance. And most importantly, how the activities of strategic planning are very crucial and fundamental to an organization's growth and development. However, organizational performance in this study will be approached based on major dimensions as posited by Bert George et al (2019) in their analytic study on strategic planning and performance. They posited that strategic planning does have a considerable number of impacts on organization across different areas. They went further in their study in providing the different areas strategic planning can impact organization performance in terms of organization effectiveness and efficiency, organization financial performance and organization responsiveness.

2.7.1 Relationship between strategic planning and organization performance

In addition, other studies like Ansoff (1970) suggested based on findings that strategic planning has an impact on organization performance, aside that Kervin (1999) asserted that companies that engage in strategic planning tends to be more successful than others. While earlier works posited that no relationship exists between strategic planning and organization performance (Fisher, 2005; David, 2003).

3 METHOD

3.1 CURRENT APPROACH

The purpose and nature of this study determined the kind of approach this study adopted. There are several approaches available and adopted in other studies and literature. Some of the common approach adopted included either or both qualitative and quantitative methodology. Steffen K. and Frank T. (2022) in their work titled 'Strategic Planning of productservice systems: A systematic Literature Review' adopted a qualitative method. The aim of the paper was to provide a comprehensive analysis of current research on planning and evaluation approaches in regard to strategic planning of product-service systems and its challenges. Based on the results of the Literature review, it asserted that strategic planning has been proven to be the success of companies' performances. Another study conducted by James M. et al., (2015) on Strategic Management and Firm Performance: A Study of Selected Manufacturing Companies in Nigeria. The study aimed to provide the importance of strategic management on the performance of manufacturing industries in Nigeria. The study adopted quantitative methods and its findings suggested that business owners and entrepreneurs need to embrace strategic planning in order to gain competitive advantage and to ensure survival in the competitive market. Jacob D et al., (2018) in their research work on Strategic planning and performance of SMEs in Ghana: The moderating effect of market dynamism. It aimed understanding and examining the effect of market dynamism on strategic planning and performance of SMEs in Ghana. The study reveals that market dynamism will influence SME performance when there is strategic planning. Similarly, another study conducted by Robert B. et al., (2014) also employed the use of quantitative study. The objective of the study was to add to discussion in the area of business growth. Hence, this paper builds on previous works that attempts to formulate and assess conceptual frameworks to understand factors affecting growth of SMEs. The finding points out 18that having a business plan, size, and years of operation of SMEs is of significance than strategy and entrepreneurial attributes of the owner.

3.1.1 Approach Adopted

Several studies adopted a methodology that best suits their research objective; this study will adopt the use of mixed methods. However, the study employed the use of both qualitative and quantitative data in addressing the questions raised in this study, through the consideration of primary and secondary data. As such, a questionnaire is the main research instrument that will be adopted to get responses from the population of study. A well-structured questionnaire will be employed to put forward questions that will assess the impact of strategic planning on organization performance. Secondary data were also considered, through the use of articles, journals and textbooks to provide information on the questions raised in the studying such as studies and literatures in the areas of strategic planning, organization performance and SMEs.

3.2 METHOD DETAILS

3.2.1 Research Design

The study employed a survey design method. The nature of the variables and research objectives involved in this study necessitated the adoption of this method. The nature of the study warrants the gathering and collection of data to offer answers to the research questions and hypothesis.

3.2.2 Data Collection Procedure

The study adopted the use of a well-structured questionnaire to gather and collect information that is germane to answering the questions and hypothesis raised in the study. A well-structured questionnaire will be adopted consisting of sections structured in line with a 5 Likert scale point in form of Strongly Disagree, Disagree, Neutral, Strongly Agree and Agree. Interview questions are also raised to particularly provide information and assess 19SMEs' use of Porter's five forces model. The researcher presented the questionnaire with the needed information to ensure the needed areas are captured so that the respondents can feel at ease when answering the questions.

3.2.3 Measurement of Variables

The variables of interest in this study are Strategic Planning and Organization Performance. The measurement arrived at was put together from tested measurement readily available in previous studies and literatures (Bland M., 2019). Strategic planning in this study is a major variable being measured as such, this study employed the use of the following indicators: i. Organization mission ii. Organization vision iii. Organization objectives iv. Internal orientation v. External orientation In respect to Organization Performance the variable used to measure it was also from already tested indicators found within previous studies and literatures. It was measured through the following indicators used by Bland M., (2019): i. Job satisfaction ii. Organization commitment iii. Innovative thinking and stress iv. Additional roles performances Issues generated under strategic planning and organization performance the two germane variables in this study were measured using quantitative instrument (questionnaires), since the respondents are the only that can avail this study the need information in other to be able to engage in measurement of variables.

3.2.4 Sample information

The selected SMEs for this study comprise of 25 SMEs in Nigeria. As such questionnaires will be distributed to these SMEs to offer answers to questions raised in the study. Also, a sample of 10 companies was employed for interview for this study. They include are service oriented SMEs situated in Lagos and Kwara State, Nigeria. One of such company is FEMTECH Information Technology Ltd. founded in 2002 located in Nigeria with a registered number RC 1351685. FEMTECH I.T as it is popularly known is a tech company that provides several forms of services which include provision of professional and affordable ICT training and education, technical support, sales of ICT tools and appliances institute. It has different branches in Nigeria with it headquarter situated at No 171, Ibrahim Taiwo Road, Ilorin Kwara State, Nigeria. The founder and Chief Executive Director of the company is Oluwafemi Oni.

3.2.5 Population of study and Sample Size

Given the nature of the research, the population of study composes of 25 SMEs in Nigeria involving every employee and employer members of the company. The SMEs companies are located in different part of the Nigeria including Lagos and Kwara State. For the interview only 10 SMEs will be drawn from the sample population to be involved in the interview session.

3.2.6 Reliability and Validity of research instrument

The research instrument is structured along what is already available and tested within previous studies and literatures. As such its reliability and validity is already put into an assured test, aside that the instrument will still go through further assessment from my supervisor and other experts within the field of strategic planning and management.

4 DATA PRESENTATION AND ANALYSIS OF FINDINGS

Preamble

The research study was carried out using data gathered from primary sources. Primary data were collected through administration of questionnaire and interview of senior officials and management level staffs of small and organization within Nigeria. It is in view of this that a total of One hundred fifteen (115) copies of questionnaires retrieved out of the One hundred and twenty copies (120). While a total of eight (8) out of ten (10) SMEs was interviewed and their responses were analysed. However, frequency counts, simple percentage tabulation, and mean distribution will be employed and summary of the analysis of the interview were made in order to present the findings. he distribution of the respondents based on gender. The table reveals that 69 (60.0%) of the respondents were male while 46 (40.0%) of the respondents were female. This indicates that male respondents participated more than female in the study. Also, the distribution of the respondents based on age. The table reveals that 5 (4.30%) of the respondents are 25-34 years age, while 30 (26.1%) of the respondents are within 35 to 44 years of age. 45-55 years of age group represents 37 respondents which is 32.2%. 36 (31.3%) of the respondents are within 56 to 65 years of age. 7 (6.1%) of the respondents are over 65 years of age. Furthermore, the distribution of the respondents based on Department reveals in the above table that 32(27.8%) of the respondents are in the finance department, while 22 (19.1%) of the respondents are in the Human Resources Department. Internal Audit Department represents 32 respondents which is 27.8%. 29 (25.2%) of the respondents are Sales and Marketing. In addition, the distribution of the respondents based on Years of Experiences was revealed. The table reveals that 6 (5.2%) of the respondents are 6-10 years of experience, while 18 (15.7%) of the respondents are 11 to 15 years of experience. 16-20 years of experience represents 36 respondents which is 31.3%. 20 (26.1%) of the respondents are within 21 to 25 years of experience. 26-30 years of experience represents 16 respondents which is 13.9%. 9(7.8%) of the respondents are over 31 years of experience. Finally, it was shown in the above table that 73 (63.5%) of the respondents have strategic knowledge, while 42 (36.5%) of the respondents do not have strategic Knowledge. This invariably means that respondents are aware and knowledgeable about strategic planning.

4.1 QUALITATIVE ANALYSIS OF INTERVIEW QUESTIONS

The second part of the analysis entails the other aspect of this study, which entails the understanding of SMEs use of Porter's five model and its strategic importance and role for SMEs in Nigeria. The interview was carried out with SMEs in different business interests in other to provide enough insight to Porter's five model usage for SMEs. An interview of 10 SMEs was initially set out, however only 8 interview results was achieved due to the other respondent's unavailability and poor responses.

4.4.1 Interview Questions and Responses in respect to Porter's Five Forces Model A. Questions on Threat of New Entrants *1.* ***What new organization are possible threats for your company?***

Respondent 1 *"….We have different media organization present and coming up like Reading Nigeria Network, Hamfaiz Media Concept in Kwara State, we have different focus, but Otead Media is more concern about offering services of coverage of events, writing and publishing of media content, we have several media organization doing these also but am not certain of any new organization that just started doing business…so in respect to threats of new organization, am not really looking at that side because I have so many existing ones that I have to compete with…" (Content Developer, Otead Media, Online Interview 28, October, 2022)* Respondent 2 45"*Sales of food items is the most common SMEs business in this area, OJ Ventures is one of the hundreds of shops in this area, there is also a new shop not far from here and they plan on selling same food items and they are even getting a bigger space than ours. I am trying to look into what I can do because the new shop will pose a more serious threat to our shop when they open………" (Sales Manager, OJ Ventures, Physical Interview, 27, October 2022)* Respondent 3 "*Threats to our business is more serious than most business in this area although we are not many, we have an organization where we do meet and agree on things regarding prices and business ethics, so new business poses threat not to only my business buy standing agreement of our business culture………" (General Manager, Hadassah CakesNmore, Physical Interview 27, October 2022)* Respondent 4 "*The way we offer our services at FEMTECH IT has allowed us mount ahead of different threats we have faced, for new threats or business the IT business is booming so we have myriads of threats coming into the business, I am not sure of any new business, but we have existing threats like Calcare, Phone Mart etc, offering similar services we provide……" (Manager, FEMTECH IT, Online Interview, 15, October, 2022)* Respondent 5 "*There is a new company that just started operation a month ago, and they have been gaining some of our customers and that has affected our sales and profits, another one is also kicking operation by next month based on what our customers* *and workers mentioned, so we are really in the heat of what to do to overcome this dire situation of threats from new firms" (Sales Manager, Tycr8v Enterprise, Online Interviews, 15, October, 2022)* Respondent 6 "*We sell books and stationary items and so there are many shops selling what we also sell, along this shop line are threats but the current economic situation in the country is not making people to really start new business around, in previous years by this time due to the period when students resumes we have many people going into this business, so the economy situation has made it hard for we doing the business and also hard to have more new business around…….the economy " (Sales Manager, God's Peace Enterprise, Physical Interviews, 17, October, 2022)* 46Respondent 7 "*It is not easy to operate in state where the IT industry space is just gaining ground, we have great competitors like Techreach Makerspace, ECGD Technolgies that are doing well, in recent time we had inflow of new companies in IT because of new growing interest and investment by the government in SMEs especially, the IT industry" (Founder, Mal Hub, Physical Interviews, 24, October 2022)* Respondent 8 "*I have been working for here for 2 years and I can state that we have not seen any new firms as a threat to us, we actually are cautious of existing ones like Accot Prints, Ajenifuja Printing Press which are major competitors, however that does not mean we are not looking out for any new ones, it's just that most of the ones we have seen so far cannot measure up to our talents and what we are doing at Musty Graphic Press"(Graphics Designer, Musty Graphic Press, Physical Interviews, 9, November, 2022)*

Analysis

It can be deduced from the interview response that some companies take good observation of those that have just entered into their business, but other company do not feel any threat because they feel that those existing competitions are enough for them to worry about than any newly formed company. Aside from that, companies do not also consider new company as major threats to them, companies that are still new in the business also do not necessarily worry about new ones because all they worry about is how they get a stand in the market. This can be pointed out as a major issue for most new companies and those that are well established in the market, they sometimes feel like they have nothing to prove to any one especially not to new entrants.

2. Does your organization have any strategy in place to face them? If not, why? If yes, identify them?

Respondent 1 *"…………I will say no because we do not have a definitive strategy in place but one thing, we try to do at Otead Media is to ensure that we retain our big clients by ensuring we offer them the quality service delivery" (Content Developer, Otead Media, Online Interview 28, October 2022)* Respondent 2 "*Just as I mentioned before, we are very many, so the strategy is just to ensure we put in more investment into the business, so that we can sell other things besides foods items, like baby items and house utensils……" (Sales Manager, OJ Ventures, Physical Interview, 27, October 2022)* Respondent 3 "*Yes, we definitely have strategy in place, one of which is that we operate in a unique way, and we ensure our clients are satisfied with our services and secondly, our business focus is to continue improving in styles and employment of the best talents in baking industry……" (General Manager, Hadassah CakesNmore, Physical Interview 27, October 2022)* Respondent 4 "*We are one of the leading IT firms in Kwara State, we have investment in different aspect including services and sales of IT gadgets and equipments….so our strategic focus is not limited to one aspect of the business alone…." (Manager, FEMTECH IT, Online Interview, 15, October 2022)* Respondent 5 "*We are still looking onto what we can do to correct the current situation of low profit due to new threats, so another challenge is that some of our employee left recently……." (Sales Manager, Tycr8v Enterprise, Online Interviews, 15, October 2022)* Respondent 6 *"……. there is no more important thing we can do now than to invest more into the business and get more employee so that we can be able to serve our growing customers" (Sales Manager, God's Peace Enterprise, Physical Interviews, 17, October 2022)* Respondent 7 *"……. our strategic knowledge of the IT environment in Kwara is very solid, the strategy in place is that new entrants will have a lot to do to overtake that, MalHub is founded on offering the best quality service to our customers, and aside that we have amazing relationship with our customers" (Founder, Mal Hub, Physical Interviews, 24, October 2022)* Respondent 8 *"……. the strategy is to ensure we retain the current talents we have in the company and to ensure we get updated technologies that will improve the quality of our service delivery to customers" (Graphics Designer, Musty Graphic Press, Physical Interviews, 9, November 2022)*

Analysis

Very few companies mentioned that they do not have a strategy in place, and some of the strategy they mentioned includes the employment of best talents, ability to retain talents, increase investment in business and focus on their activities rather than the new entrants. One other thing that majority of the company asserted is that no other company is doing and can do perfectly what they are doing. One basic thing observed from their response is that they rely heavily on their existing structures that have made them survived for years and they are assured that their strategy is working that's why they have succeeded so far. Based on porter five forces model, it is clear that these companies' majority of the time focuses on only what they can offer; they are very less interested in threats of any new entrants. However, the other side is that they do not have an obvious strategy in place, however they are conscious of these threats but from their response they do not put resources into getting due diligence on any new threats to their business.

B. Questions on Powerful Suppliers ***What are your organization's strategic plans for powerful suppliers of products and services?***

Respondent 1 *"……although we are just gaining stride in the media industry, Otead Media strategic focus makes it distinct from other media firm because we value the importance of quality service delivery and our content attraction and focus is unique to what others like Reading Nigeria Network, Hamfaiz Media Concept in Kwara State…….so this big players focuses mostly on prints and publishing, our focus is to take over the online media space …" (Content Developer, Otead Media, Online Interview 28, October, 2022)* Respondent 2 "*As have mentioned from the question asked, our strategic plan against big suppliers of food items, is that we are also working on retaining our customers and bringing them into other products that we want to go into, when we have the investment, we are working on………" (Sales Manager, OJ Ventures, Physical Interview, 27, October 2022)* Respondent 3 "*Big and powerful cake baking homes we have are not located in a favorable located like us, having to be situated in GRA is a strategic decision, and this has given us better access and relation with our customers and also in terms of reduction of cost due to availability of power supply for work…." (General Manager, Hadassah CakesNmore, Physical Interview 27, October 2022)* Respondent 4 "*FEMTECH IT is a brand already in Kwara State, one of the strategic plan we have worked on is public advert in different media outlets, this has brought positive returns to the firm and aside that we focus on different aspect on tech so our customer stretch covers both services provision and selling of IT items like phones, laptops and household electronics…" (Manager, FEMTECH IT, Online Interview, 15, October, 2022)* Respondent 5 "*We are very aware of our limited reach due to our firm capability, so the strategy we employ is to ensure we have quality employees and also retain them so as to provide quality service delivery for our clients……..our inability to* *cater to a large customer has also allowed us to work on getting more funds to widen and grow the office space" (Sales Manager, Tycr8v Enterprise, Online Interviews, 15, October, 2022)* Respondent 6 50"*Our line of business is a very busy and common one, so what we do aside selling to people that come to our shops, we also formed strategic partnership with schools to ensure they buy in large quantity from us……." (Sales Manager, God's Peace Enterprise, Physical Interviews, 17, October 2022)* Respondent 7 "*The strategic plan is to be a pace setter in the IT Industry in Nigeria, so in line with this see ourselves as a potential powerful supplier, so our strategic plan currently is just to continue working the way we are because It is not easy to operate in state where the IT industry space is just gaining ground, we have great competitors like Techreach Makerspace, ECGD Technolgies that are doing well, in recent time we had inflow of new companies in IT because of new growing interest and investment by the government in SMEs especially, the IT industry………"(Founder, Mal Hub, Physical Interviews, 24, October, 2022)* Respondent 8 *"…… we are opportune to be one of the powerful supplier like Accot Prints, Ajenifuja Printing Press but our plan at Musty Graphic is just to ensure we keep on having good employee in the areas of IT, aside that we try as much as possible to also have quality machines that can be able to bring out the work of employees in the best way……"(Graphics Designer, Musty Graphic Press, Physical Interviews, 9, November, 2022)*

Analysis

In respect to this question, Respondent 1 position focused on what the strategic plan and benefit of the company is with concentration on online customer since majority of the suppliers have more power in within the traditional media. Other respondents responses showed that their major concern is giving the best quality services to their customers, aside that they mentioned investment in other areas their company want to go into, for instance, respondent 2 is looking at partnership so as to deal directly with customers, respondent 3 and 5 also mentioned about investment in the business in other to grow their business.

Do powerful supplier's activities affect your strategic plan?

Respondent 1 *"……just like I previously mentioned, we are just gaining visibility in the industry, and that was one of the conscious idea behind Otead Media was the focus on online media which is not really a big space in Kwara State, but traditional media like Radio majorly affects our plan due to the nature of people in our target customers ………" (Content Developer, Otead Media, Online Interview 28, October, 2022)* Respondent 2 "*Yes, they affect everything* *about this business, from the price to availability of products in our stores, so we try as much as possible to get more funding for the business………" (Sales Manager, OJ Ventures, Physical Interview, 27, October 2022)* Respondent 3 *"…… I don't really think about it, but looking at it now, they affect our plan in the area of size or numbers of our daily production, but they also affect our plan in a positive way because we are always looking at how we can always produce quality cakes for our customers……." (General Manager, Hadassah CakesNmore, Physical Interview 27, October 2022)* Respondent 4 *"….. As I said earlier FEMTECH IT is a brand already in Kwara State, we are major stakeholder in the industry, but we are also affected by other suppliers especially in the sales of phones, laptops, and electronic gadgets…." (Manager, FEMTECH IT, Online Interview, 15, October 2022)* Respondent 5 "*As a small firm that is running operation with less than 7 employees with major suppliers having more than 50 employees, their stretch and outreach on the market is wider, so that is why our business strategic plan is focused on working with small business around……" (Sales Manager, Tycr8v Enterprise, Online Interviews, 15, October 2022)* Respondent 6 "*They are the major factor that determines a lot of our business operation, but over the years we have built good relationship with them however, the best way to avoid powerful suppliers is to invest more in the business ……." (Sales Manager, God's Peace Enterprise, Physical Interviews, 17, October 2022)* Respondent 7 "*We are not generally affected by their activities, but we do consider them in our decisions, but we put forward our strategic plan and put in place the necessary resources to achieve them………" (Founder, Mal Hub, Physical Interviews, 24, October 2022)* Respondent 8 *"……from the previous question i mentioned that we have competitors but we are also a considerable threat to others, so i will say we think of each other when make some decisions, but we are very confident in our plans to go through……"(Graphics Designer, Musty Graphic Press, Physical Interviews, 9, November, 2022)*

Analysis

Companies that are still new clearly mentioned that they are affected by powerful suppliers, and they mentioned certain suppliers in form of competitors, this shows how much of an impact these suppliers affect their plan. Respondent 5, 4 and 8 pointed that in their line of business they are one of major suppliers themselves, although they acknowledge other suppliers, so they pointed out that they are conscious of their plan, but they have different market interest. **C.**

Question on Powerful customers

1. To what extent is the company strategic plan customer focused?

Respondent 1 *"……our focus and plan are all about customers and consumers, we deal with our customers and consumers directly and considering our interest is focused on online consumers our work is different from other companies, but we ensure whenever we have a service to provide, we offer the best to our customers………" (Content Developer, Otead Media, Online Interview 28, October 2022)* Respondent 2 "*Our business cannot exist without customers, so we try all our best to ensure first, we have the necessary products available for our customers and secondly, we also try to create good* 53*relationship with a demographic of customers which are the civil servants………" (Sales Manager, OJ Ventures, Physical Interview, 27, October 2022)* Respondent 3 *"…… Everything about our business is stretched down to what the customer wants, so what we do is that we try to be as creative and appealing with our products so that customers can reach out to work with us, we offer wedding, birthday and other kinds of celebration cakes for customers……." (General Manager, Hadassah CakesNmore, Physical Interview 27, October 2022)* Respondent 4 *"….. We are always interested in customers that's why FEMTECH IT is one of the best customer service focused IT places in Kwara State, Nigeria…… we offer both services and sales of quality electronic household items for private and commercial users….…" (Manager, FEMTECH IT, Online Interview, 15, October 2022)* Respondent 5 "*Tycr8v is a business consulting firm, so customers are at the forefront of our service provision, both in small and large scale we offer quality services to our customers and ensure we get feedback after services are offered……" (Sales Manager, Tycr8v Enterprise, Online Interviews, 15, October 2022)* Respondent 6 "*Our customer base is mainly students generally so, that's why we look into having availability of books that are needed by students especially in primary, junior and senior class ……." (Sales Manager, God's Peace Enterprise, Physical Interviews, 17, October 2022)* Respondent 7 *"……. considering our kind of industry, the customers are mostly IT users, so Mal Hub is to serve them to our best ……the goal of Mal Hub is to offer the best services to customers and partners ……" (Founder, Mal Hub, Physical Interviews, 24, October 2022)* Respondent 8 *"……Musty Graphic Press has been in operation for several years now, the main reason is because we do what the customers wants, so yes we are serious about customer satisfaction……" (Graphics Designer, Musty Graphic Press, Physical Interviews, 9, November 2022)*

Analysis

One thing all the companies were all of unified interest is that of their customers. Although they have different kinds or interests of customers, for instance, respondent 1 is focused on creating contents that will capture their online consumers and customers. Another thing is their plan on getting quality employees and investing more in their business so that they can extend their customer base and ensure there is availability of products or services whenever the customer requires them. They are all very much concerned about doing their best to ensure they offer quality services to their customers and one of the ways they do this is through getting feedback from their customers on how they can best serve them better.

D. Question on threat of substitute product/services *What is the company strategic plan for threats of substitute products/service?*

Respondent 1 *"…… our plan is very simple we ensure we take our consumers and customers as priority, other threats from external sources that provide alternative products cannot affect our customer and consumer focused plan………" (Content Developer, Otead Media, Online Interview 28, October 2022)* Respondent 2 "*We do not have any definite plan for substitute services because we cannot serve the current populace with our few strength, so we just continue to serve the particular populace of customers we are selling to…..we have so many food items distributor and sellers, so at there are so many substitute around which is why we try to focus more and interested in selling to majorly civil servants.……." (Sales Manager, OJ Ventures, Physical Interview, 27, October 2022)* Respondent 3 *"…… Our belief at Hadassah CakesNmore is that there is no actual substitute to the products and services we provide, so our strategy is always to have the best talents and produce quality and beautiful cakes for our customers…….." (General Manager, Hadassah CakesNmore, Physical Interview 27, October 2022)* Respondent 4 *"...... There are very few companies that can do what we do in Nigeria, so our strategic plan is to ensure we keep growing in serving our customers and retain them with us.......We also offer other kinds of services that do not offer, so I will say it's not all about having a substitute, the value of what we offer also matters to our customers.…." (Manager, FEMTECH IT, Online Interview, 15, October 2022)* Respondent 5 "*Tycr8v is very new, but our strategic plan revolves around efficient, effective, quality and customer-oriented model, so we are not sure there any substitute out there for any services or product we offer to customers……" (Sales Manager, Tycr8v Enterprise, Online Interviews, 15, October 2022)* Respondent 6 *"…….. Our own is to continue selling to our customers, other substitute service doing* *same is not a major concern for us because our main priority is our customers…….” (Sales Manager, God's Peace Enterprise, Physical Interviews, 17, October 2022)* Respondent 7 *"…… Mal Hub is very strategic about our choice of services and products, our talents and service is like no other so, we are not sure we really do have substitute company that really offer the same things we do…..this is not a boastful statement it is just a matter of the vision Mal Hub represents and is built on……" (Founder, Mal Hub, Physical Interviews, 24, October, 2022)* Respondent 8 *"…… Our customers seek Musty Graphic Press because we are just different, and it's not that some other company cannot design and print, so our strategy is just clear and that is we continue to develop our employees and we always make we do things differently from* 56*others……"(Graphics Designer, Musty Graphic Press, Physical Interviews, 9, November, 2022)*

Analysis

Of the 8 respondents only 2 stated that they do not have any strategy for threats of substitute, others mentioned clearly what they belief their products do not have any substitute because they believe no other company can do what they do. Other things respondents stated showed that they are very confident in their employees to be creative and innovative in their approach to services they provide to their customers. Another thing pointed out is that the drive of these companies is the customer, so they are very much in tune with delivering quality services to them and these they believe is what gives them an edge over their substitutes.

E. Question on rivalries among existing competitors (SMEs) ***i. Who are your existing competitors?***

Respondent 1 *"……I might have mentioned some of them previously, they are many but those I can remember now is Ceraph Africa Media, Reading Nigeria Network, Ad-Marz Media, Ainigma Media and Hamfaiz Media Concept, in Kwara State……." (Content Developer, Otead Media, Online Interview 28, October 2022)* Respondent 2 "*On this question I will say most shops around here, selling of food items is the most common business in this environment so, majority are small scale that they do not have a business name or even registered, but they operate within their community very well………" (Sales Manager, OJ Ventures, Physical Interview, 27, October 2022)* Respondent 3 "*Ohhh…. they are many some of them are Creamy Cakes and Bakes, Divine Cake Entreprise Cakes by Hamidah, Beerah Cakes and Treat …." (General Manager, Hadassah CakesNmore, Physical Interview 27, October 2022)* Respondent 4 *"……. we do a wide range of things, so our competitors also cover a whole lot of areas, for IT* *services we provide they include Optics Computer Technology, Brimano Consult and for sales of IT gadgets they are Phone Mart, Dool-X-Nigeria, Shoprite…" (Manager, FEMTECH IT, Online Interview, 15, October 2022)* Respondent 5 *"…………. Consulting firms like Luqnet Consults, Asiwaju Promotion, Front Page Solutions" (Sales Manager, Tycr8v Enterprise, Online Interviews, 15, October 2022)* Respondent 6 "*One not far from here is Monday Books and Stationery, others are Rovingheights, BookMall…….." (Sales Manager, God's Peace Enterprise, Physical Interviews, 17, October, 2022)* Respondent 7 "*There are many competitors but few doing most of what we offer, some of those that are doing some of those things we do like offering of services in IT training, software services are SoftRays Information Technology, Beyond Creativity, Techreach Makerspace, and ECGD Technologies……" (Founder, Mal Hub, Physical Interviews, 24, October 2022)* Respondent 8 *"…….. existing competitors like Accot Prints, Colour Prints Graphix Studio, Joprix Designs and Ajenifuja Printing Press have all been a major competitor over the years and doing well in their space……" (Graphics Designer, Musty Graphic Press, Physical Interviews, 9, November 2022)*

Analysis

The respondents were able to point out all their competitors, respondent 3, 4 and 8 although also stated their competitors, they asserted that they are also major competition in their industry, their competitors are also some of the powerful suppliers which means that SMEs in different sectors faces different kinds of threats not necessarily because they are all SMEs means that they encounter similar issues.

ii. Does the company have strategic plan for existing competitors? If yes, what is it? If no, why?

Respondent 1 *"……Yes, we do, we are very much new, so our strategic plan is to ensure our target customers especially online users are attracted by our products and services, aside that we intend to not only have the best talent but to ensure we offer them good working space and remuneration ……." (Content Developer, Otead Media, Online Interview 28, October 2022)* Respondent 2 "*....... that is what we are always looking at so we are planning on getting more investment into the business, because this our business requires huge fund to be able to increase products we have in areas of home utensils and baby products so that we can get more customers within the civil service and outside the civil service………" (Sales Manager, OJ Ventures, Physical Interview, 27, October, 2022)* Respondent 3 *"…… it's not easy to survive in this business, so what we* *have is our talent and the creativity we put into making our products, our plan is to ensure we keep updating our talents in new styles and also provision of enough instruments to aid good creative styles.....one other area I mentioned before we have ahead is the strategic location of our business in commercial environment making it much easier to meet credible customers………" (General Manager, Hadassah CakesNmore, Physical Interview 27, October 2022)* Respondent 4 "*.....we are focused, we know our vision and mission and strategic objectives which is to be a space where IT products and services can be gotten by customers.....so our goals is to continue growing and be the champion of in IT space by continue to put customer first ……" (Manager, FEMTECH IT, Online Interview, 15, October, 2022)* Respondent 5 *"………. Right now, competition is not yet a goal, our focus is just to have the best talent we can get, gain more online presence, and get more investment in the business so that we can provide the best services for our clients" (Sales Manager, Tycr8v Enterprise, Online Interviews, 15, October 2022)* Respondent 6 *"……. There is no better strategy in our business than to have good customer relation and also one the other hand has good relationship with powerful suppliers of our goods, so that we can always have what customers wants to buy……" (Sales Manager, God's Peace Enterprise, Physical Interviews, 17, October 2022)* Respondent 7 *"……… we are not here to be a watching trends, we intend to make shift in the industry, we have a strategy of working with youths and this we do through collaboration with institutions and providing platform to learn about IT, we know youths are the future of IT so our focus is to make them conversant with our services and products ………"(Founder, Mal Hub, Physical Interviews, 24, October, 2022)* Respondent 8 *"……. Although we do not think about it like that but we make sure our activities and services is top notch, Musty Graphic Press is where it is today because we focus on doing what we do best and that is doing what our customers order or want in the best and most creative ways, and we do that by having experience employees and with good pay……"(Graphics Designer, Musty Graphic Press, Physical Interviews, 9, November, 2022)* **Analysis** The respondents all stated that they have one strategy in one way or the other, some of their strategies includes the following: recruitment of more qualified employees so that they offer better services, invest more in the business, provide better working condition and remuneration for employees, invest more in the business. In a more technical sense respondent 3 mentioned that they already benefit of a better strategic location for the business and is focused on training employee on current styles in the business, respondent 4 stated another side which their focus on the youth because the future of IT is youth. Another angle is respondent 8 strategic plan is their focus on customer and increase importance given to ensure creativity and innovation of employee is allowed and protected to ensure they can offer their best to the company and directly to the customers.

5 DISCUSSION AND EVALUATION

It can be discovered from the findings that strategic planning is an important instrument which is essential for a company's development. For an organization to progress, strategic planning must be taken into consideration in order to gain a competitive advantage over the competitors. The management of an organization should establish and encourage the need for strategic planning in their respective organization and formulate political and budget for achieving organizational goals. By establishing the need for strategic planning, the management will collectively work towards achieving the corporate objectives of the firm. Aside, that from the study findings from qualitative analysis it is clear that companies need to engage the use of Porter's five forces model in their strategic planning because it will help them overcome certain things that they will not normally consider or think of during their planning process. That they need to take threats of new entrants, powerful suppliers, substitute products and services and competitors more seriously so that can be able allocate their resources towards achieving the organization's strategic objectives. It is however that the firm that the strategic planning performs better compared to those don't and therefore manager should understand that strategic planning provides direction to the overall organization in achieving corporate goals. There are immense barriers to strategic planning process and these barriers can be overcome by aligning organization structure with the corporate goals and involving employees in strategies formulation since they will be responsible in implementing those strategies. The challenges can also be overcome by communicating effectively to employees on what they are supposed to perform in order to achieve organizational goals. Porter's five forces model was being used in this study to assess SMEs and observe some of the threats and strength they have to overcome these challenges. The result of the responses from the interview shows different ways in which companies are doing well and areas they are not. It is important to note that although majority of the companies are knowledgeable of what Porter's five forces model entails, however, they are doing different things that are in line and also not in line with the model. Aside that the questions are things that do come through their mind but they majority do not have a properly well documented strategic plan that takes into consideration what Porter's five model is concerned about. Using Porter's five forces model, first force which is the threat of new entrants, from the respondent's response it is clear that majority did not consider new entrants as a major threat to them. They are more concerned with existing competitors and those concerned with the threat do not take them seriously and are of the belief that their plan should be more focused on what they are doing and how they can serve their customers better. So, they basically belief, the way they can strategise their way over new entrants by working on to become better in customer service delivery, recruiting and retaining of quality talents, investing into the business. The second forces of the model are threat of powerful suppliers, from the responses of the respondent it is shown that they do in most cases use suppliers and competitors interchangeably. In respect to companies that deal with a different kind of business and customer, for instance, majority of the companies stated that powerful suppliers are a threat and asserted that they can strategize through building good business relationship with them aside that they can also work on investing more into the business so that they can have warehouses to store goods for availability all year round. On the threats of powerful customers, the companies all have a consumer-focused strategy, which entails the employment and training of employees, good customer relation and investment in their business so that they can be able to provide better service delivery to the customers. Also, on the threats of substitute products and services, the companies are very well aware of substitute's product and services, but their strategy is to ensure no products or services can be an actual substitute to their own services. Majority of the companies belief that their customers use their products or services because other substitutes cannot offer what they do, so their strategic plan is that to focus on being customer friendly and accessible so that they can always correct any issue with their product or services and make better services or product different from their substitute products. On another area, one of the respondents asserted that they do not have any issue with substitute products or services because they are not yet big enough to attend to the demand of customers, so they understand the need for substitute products. 62The threats of competitors are a common issue for all companies, all the companies mentioned their competitors and some point themselves as a competitor. From the response of the respondent, it is clear that they see competitors as threats, but they pointed some of the strategy mentioned is the need to ensure they improve on quality customer services, training of employee on current methods and tools and allowing for creative and innovative working space. Other things pointed out are the need to strategise on increasing their online audience, buy more instruments and equipment to aid employee works and proper remuneration of employees.

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Chapter 9

The Impact of Corporate Tax Reduction and System Usage Fee Changes on Firm Value in Solar Power Plants in Türkiye: A Discounted Cash Flow Analysis

Tuğba KAYHAN[1]

Abstract

This study quantitatively measures the impact of changes in tax and tariff policies on firm value using the Discounted Cash Flow (DCF) method, based on a licensed solar power plant (SPP) operating in Turkey. Specifically, it analyzes two policy scenarios: a reduction in the corporate tax rate from 24% to 12.5%, and a decrease in the system usage charge from approximately 40 US Dollars (USD) to around 15 USD per megawatt-hour (MWh). The analysis draws on the plant's actual generation data (2023–2025), electricity price projections prepared by independent experts, macroeconomic forecasts, and sector-specific cost of capital parameters. In the first scenario (base case), with a corporate tax rate of 24% and a system usage charge of ~40 USD/MWh, the estimated firm value per megawatt is 516,928 USD/MW. In the second scenario (incentive case), assuming a tax rate of 12.5% and a system usage charge of ~15 USD/MWh in line with the new regulations, this value rises to 847,946 USD/MW, corresponding to an increase of 64.04%. The findings reveal that tax incentives and regulatory cost reductions create a powerful leverage effect in determining the payback periods and market values of renewable energy investments. The study provides concrete quantitative evidence for energy policymakers, investors, and academic researchers, and contributes to the examination of the financial implications of regulatory interventions in Turkey's renewable energy transition.

JEL Classification: G31, G32, H25, Q42, Q48

Keywords: Utility-scale solar PV, discounted cash flow (DCF), corporate tax reform, system usage charge (SUT), renewable energy investment, Turkish electricity market, YEKDEM, energy policy reform

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1. INTRODUCTION

The renewable energy sector has become one of the most critical pillars of the global energy transition, and governments around the world have introduced a wide range of tax incentives, subsidy programs, and regulatory mechanisms to support this shift [1–3]. Since the mid-2010s, Türkiye has offered fixed-price purchase guarantees to solar, wind, and hydroelectric power plants through the Renewable Energy Support Mechanism (YEKDEM), which has played a decisive role in expanding the country's installed renewable capacity [4]. As of 2023, approximately 55% of Türkiye's total installed power capacity comes from renewable sources, and installed solar power plant (SPP) capacity has surpassed 14 GW [5].

Among the most consequential policy tools in this context is the corporate income tax rate. Türkiye recently enacted legislation reducing the corporate tax rate for energy production companies from 24% to 12.5% [6]. At the same time, system usage fees have been substantially revised to facilitate the transition of YEKDEM-supported plants to the open market. Under the tariff published on May 21, 2026, the post-YEKDEM system usage fee for unlicensed SPPs was set at approximately 14.39 USD/MWh—well below the previous level of approximately 38–40 USD/MWh [7].

Quantifying the impact of these regulatory changes on investment decisions and firm value is of paramount importance for both investors and policymakers. This study aims to measure the cumulative effect of the corporate tax reduction and the decline in the system usage fee on the firm value of a real SPP operating in Türkiye, using the Discounted Cash Flow (DCF) method. The analysis utilizes the plant's actual production data for 2023–2025, electricity price projections from independent energy consultants, and capital cost methodologies established in the corporate finance literature.

The remainder of the paper is organized as follows. Section 2 reviews the relevant academic literature. Section 3 presents the methodology in detail, covering data sources, macroeconomic assumptions, electricity price projections, cost structure, and the cost of capital estimation. Section 4 reports the case study findings under two scenarios, and Section 5 discusses the results and offers policy and investment recommendations.

2. LITERATURE REVIEW

2.1. Tax incentive effectiveness in renewable energy investments

The impact of tax incentives on investment decisions is a well-established research area spanning public economics and corporate finance. Hall and Jorgenson [8] examined both theoretically and empirically how tax policies affect investment acceleration and demonstrated the relationship between tax reductions and the cost of capital. Empirical studies focusing specifically on renewable energy confirm that tax incentives play a decisive role in shaping investment volumes and the financial viability of projects.

Jenner, Groba and Indvik [9] used econometric methods to examine the effect of feed-in tariff policies on installed capacity growth across EU member states, finding that such incentives particularly support solar energy investment—but that the design of the tariff, electricity prices, and production costs matter more than the mere existence of a policy. Their work also demonstrates that incentives enhance a sector's ability to attract capital.

Previous studies have shown that government incentives play a significant role in accelerating solar PV deployment. For example, Sun and Sankar [10] demonstrate that rebate programs initially become more effective as the market expands but eventually exhibit diminishing marginal impacts as installation costs decline and net metering benefits increase. While this literature primarily focuses on investment adoption decisions, relatively little attention has been paid to how subsequent regulatory reforms affect the valuation of operating solar power plants. Unlike the existing incentive literature, this study evaluates the impact of corporate tax reductions and system usage fee reforms on the enterprise value of an operating utility-scale solar power plant using a discounted cash flow framework.

For the case of Türkiye specifically, Çelikkaya [11] assessed tax incentive mechanisms for renewable energy investments and highlighted the key role of tax exemptions and exclusions in reducing investment costs.

Cao and Liu [12] analyzed the effect of tax reduction policies on the financial performance of green energy companies in China using listed firm data, finding that lower tax burdens statistically and significantly improve profitability and capital accumulation—a finding that directly aligns with the scenario analysis conducted in this study.

Empirical research on instruments such as the Investment Tax Credit (ITC) and Production Tax Credit (PTC) consistently confirms that tax incentives have a determining influence on both investment volumes and project economics. Wiser, Bolinger and Barbose [13] examined the impact of PTC programs on investment cycles in the U.S. wind energy market and showed that incentive interruptions dramatically slowed investment, while reinstatements produced rapid recoveries. This finding suggests that tax incentives serve not only to improve the cash flows of existing projects, but also as a critical signaling mechanism governing capital flows into the sector.

A growing body of developing-country literature also examines the effect of public policies and incentive mechanisms on renewable energy investment decisions. Friebe, Flotow and Täube [14], working with wind energy project developers in emerging markets, found that institutional context differences matter significantly, and that general policy factors such as regulatory predictability—beyond technology-specific incentives—are key determinants of investment decisions. Similarly, Barroco and Herrera [15] showed for the Philippines that revenue uncertainty arising from incentive design directly shapes the financing structure and investor base of renewable energy projects. These findings resonate with the leverage effect that the corporate tax reduction generates on firm value in the present study.

The heterogeneity of tax incentive effects across firms has also been empirically documented. Zwick and Mahon [16] analyzed accelerated depreciation incentives using tax records from approximately 120,000 firms in the United States, finding that incentives significantly increased fixed capital investment. Notably, the strongest response came from small and medium-sized firms facing financial constraints, and firms reacted powerfully only when incentives translated immediately into cash flow benefits. This underscores the centrality of the cash flow effect generated by tax advantages for investment decisions and, consequently, for firm value. In this context, reducing the corporate tax rate on production income for SPP operators in Türkiye can be understood as a mechanism that directly increases after-tax free cash flows, thereby raising the DCF-based firm value.

2.2. Discounted cash flow method and application in energy projects

The Discounted Cash Flow (DCF) method estimates the value of a business or project by discounting expected future cash flows to their present value using an appropriate discount rate, and is widely regarded as one of the core tools of corporate finance theory [17,18]. The reliability of this method in project valuation depends critically on the accuracy of both the cash flow projections and the discount rate determination.

Applying the DCF method to renewable energy projects requires sector-specific expertise given long license periods (typically 25–49 years), fixed or variable pricing contracts, and production uncertainty. Dicorato et al. [19] addressed how to apply the DCF approach in evaluating investment costs for offshore wind farms, emphasizing that technical parameters such as production projections, capacity factors, and degradation coefficients directly affect model outputs. Short, Packey and Holt [20] provided a comprehensive treatment of financial modeling techniques for economic analysis of renewable energy technologies in a widely cited NREL guide.

The Weighted Average Cost of Capital (WACC) is commonly calculated using the Capital Asset Pricing Model (CAPM), developed by Sharpe [21], which serves as a standard tool for incorporating systematic risk into the cost of equity. Modigliani and Miller [22] theoretically examined the relationship between capital structure and firm value, and in a subsequent paper [23] showed that the tax shield created by corporate income tax confers a cost advantage to debt financing. This effect means that a change in the corporate tax rate directly influences firm value through its impact on WACC.

One of the central challenges in applying DCF to energy projects is accurately determining the discount rate. Given the long-term nature of projects, regulatory risks, and the volatility of energy prices, conventional discount rate methods may fall short. Awerbuch [24] proposed treating energy planning as a portfolio investment problem and applying portfolio theory to the evaluation of renewable technologies, highlighting the risk management advantages of this approach. That work argues that fuel-free renewables make a lower risk contribution within a portfolio framework due to their immunity to fossil fuel price volatility, and that conventional least-cost metrics unfairly disadvantage these technologies. Similarly, Awerbuch [25] showed that low-risk technologies such as photovoltaics are subjected to unjustifiably high discount rates in traditional financial modeling.

Sensitivity analysis and Monte Carlo simulation are widely used complementary tools in energy project valuation to address the limitations of the DCF model. Dixit and Pindyck [26] examined investment decisions under real options theory and showed that the flexibility value under uncertainty is overlooked in conventional NPV analyses. In this context, the price guarantee provided by the YEKDEM support mechanism eliminates that real option, substantially reducing valuation uncertainty—while the transition to the post-YEKDEM market period reintroduces it. The comparative DCF analysis conducted under two scenarios in this study offers a pragmatic approach to quantifying the impact of this transition on firm value.

Terminal value calculation constitutes a critical component of DCF models for long-license energy projects and accounts for a significant share of total firm value. The sustainable growth approach derived from the dividend discount model developed by Gordon and Shapiro [27] is among the most frequently employed methods for terminal value estimation in energy projects. Gordon and Shivdasani [28] demonstrated that terminal value assumptions have a decisive influence on total value in corporate valuation, with this effect becoming even more pronounced in infrastructure and energy projects where long-term cash flows dominate. In our study, the projection horizon extending to 2066 minimizes the terminal value component, thereby strengthening the reliability of the model.

2.3. Turkish electricity market and regulatory framework

The Turkish electricity market entered a liberalization process with Law No. 4628 enacted in 2001 [29], and the transition to a competitive market model was completed under the restructured legal framework of 2013 [30]. The Day-Ahead Market (DAM) and the Balancing Power Market (BPM), operated under the Energy Markets Operating Company (EPİAŞ), enable electricity prices to be determined on a market basis in line with supply and demand dynamics.

YEKDEM, the primary instrument of Türkiye's renewable energy support policy, is implemented under Law No. 5346 on the Use of Renewable Energy Resources for Electrical Energy Production. By providing differentiated fixed purchase prices by resource type, YEKDEM safeguards the economic viability of specific renewable technologies [31]. Fixed purchase prices—such as 133 USD/MWh for solar energy—ensure strong revenue predictability for plants throughout the YEKDEM support period.

Recent evidence from Türkiye also highlights the importance of renewable energy support mechanisms in determining the economic feasibility of utility-scale solar projects. Based on a 1 MW solar power plant in Konya, Erdem [32] shows that the level and design of YEKDEM incentives substantially affect project payback periods and investor returns. The study recommends maintaining incentive levels between 15 and 20 US cents/kWh to achieve economically attractive payback periods while improving the predictability of the support mechanism. Unlike studies focusing on project feasibility and payback periods, the present study evaluates how recent regulatory reforms alter the enterprise value of an operating solar power plant through a discounted cash flow valuation framework.

Financial valuation studies on the Turkish energy sector remain sparse. In particular, no academic work has been found in the literature that applies the DCF method to SPP valuation using Türkiye-specific tax regimes and system usage fees as model parameters. Most existing research concentrates on energy generation and market design, leaving the investment valuation dimension insufficiently addressed. This gap clearly establishes the original contribution and significance of the present study.

Türkiye's electricity market liberalization gained momentum through structural reforms beginning in the 1990s and entered a new phase with the enactment of Law No. 6446 in 2013 [30]. That legislation promoted the unbundling of generation, transmission, distribution, and retail activities, and aimed to strengthen competitive market mechanisms alongside the establishment of EPİAŞ. Studies on the liberalization and restructuring of the Turkish electricity market indicate that, despite notable progress in legal and institutional reforms, a fully competitive market structure has taken time to materialize—particularly given the natural monopoly nature of distribution activities and questions surrounding the effectiveness of the regulatory framework.

In terms of renewable energy licensing and the regulatory framework, EPDK has undergone extensive revision processes in recent years. The 2013 regulation on unlicensed electricity generation accelerated the proliferation of small-scale and rooftop solar systems; by contrast, long-term connection capacity constraints and grid infrastructure inadequacies for licensed SPPs have emerged as factors limiting sectoral growth.

The YEKDEM mechanism is regarded as one of the most important policy instruments enhancing the financial viability of renewable energy investments in Türkiye. The fixed purchase guarantees it provides increase revenue predictability, reduce the uncertainty investors face from market price fluctuations, and facilitate financing processes. As a result, future cash flows can be projected with greater confidence during the YEKDEM period, and valuation results can be constructed under lower risk assumptions. Once the support mechanism expires, however, project revenues become largely dependent on spot market electricity prices. This creates a meaningful financial risk: as price uncertainty increases, investors may demand higher risk premiums, discount rates may rise, and—all else equal—plant value may decline.

2.4. Valuation of solar power plants

Solar PV valuation depends primarily on assumptions regarding energy production, system lifetime, degradation, financing costs, and electricity prices. Branker, Pathak and Pearce [33] identify discount rate, capital expenditure, operating costs, and lifetime electricity generation as the principal determinants of the levelized cost of electricity (LCOE), which also directly influence discounted cash flow valuations. Long-term production forecasts are further affected by photovoltaic module degradation. Jordan and Kurtz [34] report an average annual degradation rate of approximately 0.5%, although lower rates may be observed depending on module technology and operating conditions. Accordingly, this study adopts a conservative annual degradation rate of 0.25%, consistent with plant-specific engineering assessments.

Capacity factor and annual energy production are also among the key drivers of project value. According to IRENA [35], the global cost of utility-scale solar

PV declined by approximately 89% between 2010 and 2022, significantly reducing LCOE and improving project competitiveness. These developments support the use of updated market-based electricity price projections in long-term valuation models.

2.5. Comparative analysis of tax incentives in different countries

Tax incentive mechanisms designed to support renewable energy investments vary considerably across countries and exert a determining influence on investment decisions. In the United States, the long-standing Investment Tax Credit (ITC) and Production Tax Credit (PTC) programs serve as the primary policy tools for financing solar energy investments. Notably, the Inflation Reduction Act (IRA) enacted in 2022 expanded these incentives—extending the duration of investment credits, bringing energy storage systems within the scope of support, and enabling the transferability of tax credits, thereby increasing the financing flexibility of renewable energy projects. These measures strengthened capital flows toward solar energy projects while reducing investors' financing costs and contributing meaningfully to sectoral growth.

Within the European Union, policy instruments for supporting renewable energy investments differ across member states, though they have moved toward greater alignment through the European Green Deal and subsequent regulations. Germany's Renewable Energy Sources Act (Erneuerbare-Energien-Gesetz, EEG) has played a pivotal role in financing renewable energy investments over many years, first through feed-in tariffs and later through feed-in premium mechanisms. Such support mechanisms improve the predictability of investment revenues, reduce financing risk, and underpin long-term investment decisions. Similarly, Türkiye's YEKDEM provided investors with a fixed-price guarantee over a defined period, reducing revenue uncertainty and facilitating project financing. In this respect, YEKDEM shares important characteristics with the fixed tariff systems applied in Europe for many years, and provides a basis for comparative analysis with international practices in the financial valuation of renewable energy investments.

China has developed a comprehensive support system—combining tax incentives, investment subsidies, favorable financing, and industrial policies—to drive the growth of its solar energy sector. Applied over many years, these policies contributed to rapid expansion of production capacity, the realization of scale economies, and substantial reductions in photovoltaic panel costs. Today, China is the global leader in solar panel manufacturing, holding the majority of world production capacity. This production infrastructure—underpinned by public support—has not only increased China's global market share but has also lowered the cost of solar technologies worldwide, accelerating renewable energy investment globally. This experience underscores the decisive role of tax incentives and other public support measures in shaping investment decisions and a sector's long-term competitiveness, and offers an important international benchmark for evaluating the investment value effects of the corporate tax incentives applied in Türkiye.

2.6. Impact of system usage fees and grid connection costs on project value

System usage fees and grid connection costs are among the fundamental cost components that directly affect the long-term cash flows and consequently the firm value of renewable energy projects. The level of these costs varies considerably depending on a country's regulatory framework, grid infrastructure, and connection policies. Rising grid usage charges and connection costs can adversely affect the economic viability of renewable energy projects—particularly those that are small-scale or located far from grid infrastructure—and may reduce project returns. Against this backdrop, the system usage fees applied in the post-YEKDEM period in Türkiye represent an important regulatory variable that directly increases the operating costs of solar power plants and influences firm value in discounted cash flow analyses.

Grid and system usage fees are among the primary regulatory cost components that directly affect the operating costs of renewable energy projects. The method and level of calculating these fees differs depending on the electricity market structure, grid infrastructure, and national regulatory framework. The regulation that entered into force in Türkiye on May 21, 2026, which significantly reduced the system usage fee for unlicensed solar power plants, aims to lower operating costs and improve the financial viability of renewable energy investments. This study quantitatively analyzes the impact of that regulatory change on firm value using the discounted cash flow method.

How grid costs are passed on to investors is an important regulatory factor affecting the financial viability of renewable energy projects. In particular, the method for calculating connection costs and the principles governing the determination of system usage fees directly influence the total cost of investment and hence firm value. Regional variation in these costs can produce significant differences in investment returns even between plants using the same technology. The determination of system usage fees in Türkiye within the framework of regional tariffs represents a significant regulatory consideration that requires the geographical location of a solar plant to be taken into account in valuation analyses.

3. METHODOLOGY AND DATA

This section presents the methodological framework underlying the study in detail, covering data sources, the electricity price formation mechanism, currency selection, macroeconomic assumptions, and all components of the DCF model. The primary data sources used in the analysis are as follows: (i) actual production and financial data obtained from company management (2023–2025); (ii) independent electricity price projections prepared by Modus Energy Consultancy Inc. (Modus Enerji Danışmanlık A.Ş.); (iii) macroeconomic forecasts obtained from the Research Department of İnfo Yatırım Menkul Değerler A.Ş.; and (iv) publicly available tariff and regulatory documents from EPİAŞ, TEİAŞ, and EPDK.

3.1. Electricity price formation mechanism and currency selection

3.1.1. Turkish day-ahead market and market clearing price mechanism

In Türkiye, electricity prices are determined by the supply-demand balance in the Day-Ahead Market (DAM), operated by EPİAŞ. Power generation plants submit bids specifying the volume of electricity they can produce and the unit price they request for each hour of the following day.

Price formation occurs when the sell-side bids (supply) and buy-side bids (demand) from suppliers are brought together on an hourly basis to construct supply and demand curves. The intersection of these two curves establishes the market equilibrium, and the price at that intersection is defined as the Market Clearing Price (MCP) for the relevant hour. This clearing price is binding for all active market participants in that time period. The prices formed in the DAM serve as the primary benchmark for electricity purchase and sale transactions, and the MCP determines the financial settlement basis for electricity trading outside bilateral agreements.

3.1.2. Rationale for using USD as the working currency

The financial valuation of the solar power plant in this study is conducted in USD. This choice reflects the price formation mechanism and cost structure of the Turkish electricity market. The MCP in the Day-Ahead Market is determined by the marginal unit's offer price, and marginal production is typically provided by thermal plants using imported natural gas and coal. Consequently, electricity prices are directly influenced by international fuel prices and movements in the USD/TRY exchange rate. Similarly, significant operating expenses—including maintenance services, spare parts, and equipment procurement—are incurred directly in foreign currency, while TRY-denominated expenses such as personnel and administrative costs also carry indirect foreign currency risk due to high inflation and exchange rate pass-through. To model revenue and expense projections in a common currency, the valuation was conducted in USD. The annual average USD/TRY exchange rate, Turkish consumer inflation, and U.S. consumer inflation were used as the primary macroeconomic inputs for constructing cash flow projections. Operating expenses other than the system usage fee were first assumed to grow at the Turkish CPI rate and then converted to USD using the projected annual average exchange rate, with subsequent periods updated at the U.S. CPI rate. The macroeconomic assumptions used in the valuation model were sourced from the expectation set prepared by the Research Department of İnfo Yatırım Menkul Değerler A.Ş., and a summary of these estimates is presented in the tables below.

Table 1. Macroeconomic assumptions (2023–2035)

Year	Average USD/TRY	TR CPI (%)	US CPI (%)
2023	23.75	64.8	3.3
2024	32.79	44.4	2.9
2025	39.47	30.9	2.7
2026F	48.09	28.9	2.5
2027F	63.83	21.1	2.3
2028F	73.30	12.3	2.0
2029F	79.81	9.8	2.0
2030F	85.88	9.8	2.0
2031F	92.42	9.8	2.0
2032F	99.45	9.8	2.0
2033F	107.02	9.8	2.0
2034F	115.17	9.8	2.0
2035F	123.93	9.8	2.0

Source: Research Department of İnfo Yatırım Menkul Değerler A.Ş. F: Forecast.

Table 2. Long-term macroeconomic projections (2036–2066)

Period/Year	Average USD/TRY	TR CPI (%)	US CPI (%)
2036F	133.36	9.8	2.0
2040F	178.84	9.8	2.0
2045F	258.07	9.8	2.0
2050F	372.41	9.8	2.0
2055F	537.40	9.8	2.0
2060F	775.49	9.8	2.0
2066F	1,204.24	9.8	2.0

Source: Research Department of İnfo Yatırım Menkul Değerler A.Ş. Intermediate years are interpolated at the same annual rates.

3.2. DCF model assumptions

3.2.1. Operating life

Based on information provided by company management, the plant commenced operations on January 15, 2018 and holds a 49-year license. Accordingly, the plant is assumed to remain in operation through the end of 2066 (2018 + 49 = 2067).

3.2.2. Electricity production estimates

Actual annual electricity production figures were obtained through interviews with company management and field engineers. For the observation period, recorded generation was 85,716 MWh in 2023, 81,553 MWh in 2024, and 86,101 MWh in 2025.

Compared to hydroelectric and wind power plants, solar power plant output is subject to more limited seasonal and inter-annual variation, meaning that production series tend to fluctuate around a relatively stable mean. Taking this characteristic into account, the arithmetic average of the preceding three years was used as the starting estimate for 2026:

$$\textit{Production Forecast}_{2026} = (85{,}716 + 81{,}553 + 86{,}101) / 3 = 84{,}456 \textit{ MWh} \quad (1)$$

For the long-term projection, an annual fixed degradation rate of δ = 0.25% (0.0025) was adopted, based on technical assessments provided by company management and engineers. The production series was modeled according to the following recursive relationship:

$$\textit{Production}_t = \textit{Production}_{t-1} \times (1 - \delta) \quad (2)$$

where δ = 0.0025. For example, the 2027 estimate is:

$\text{Production}_{2027} = 84{,}456 \times (1 - 0.0025) = 84{,}246$ MWh

Applying this formulation through 2066, the projected production for the final year of the license period is approximately 76,410 MWh.

4. ELECTRICITY PRICE PROJECTIONS AND REVENUE MODELING

4.1. Price determination mechanism and data sources

Revenue projections in the valuation model are based on multiplying estimated annual electricity production (MWh) by projected unit electricity prices (USD/MWh). Electricity prices are examined under two distinct periods reflecting the plant's licensing status and market conditions:

1. YEKDEM Period (2023–2027): Under the Renewable Energy Support Mechanism, a fixed purchase guarantee of 133 USD/MWh applies to the plant's electricity output. This mechanism expires at the end of 2027.

2. Market-based Period (2028–2066): Following the expiration of the YEKDEM support period, all electricity generation is assumed to be sold at Market Clearing Prices (MCP) formed in the spot electricity market. USD-denominated price projections for this period were sourced from independent sector reports prepared by Modus Energy Consultancy Inc.

4.2. Revenue calculation methodology

The mathematical model used to calculate revenues is given in Equation (3):

$$R_t = Q_t \times P_t \tag{3}$$

where R_t denotes total gross revenue in year t (USD), Q_t denotes net electricity production in year t (MWh), and P_t denotes the projected sale price in year t (USD/MWh).

4.3. Long-term price projections

The analysis projects that post-YEKDEM market prices will normalize to 74 USD/MWh as of 2028 and subsequently rise to 211 USD/MWh by 2066, in line with long-term energy demand trends and macroeconomic expectations.

Table 3. Electricity price projections by period

Period	Pricing Regime	Price Range (USD/MWh)
2023–2027	YEKDEM	132.8–133.7
2028–2035	MCP	74.0–102.0
2036–2045	MCP	108.0–137.0
2046–2055	MCP	145.0–169.0
2056–2066	MCP	173.0–211.0

Note: Electricity generated between 2023 and 2027 is sold under YEKDEM at a fixed purchase tariff. Following the expiration of the support mechanism at end-2027, all generation is assumed sold at projected MCPs. Long-term MCP projections are based on the assumptions of the DCF valuation model and are expressed in constant USD/MWh. Complete annual electricity price projections are presented in Appendix A. Source for 2028 onward: Modus Energy Consultancy Inc. independent sector reports.

5. COST STRUCTURE AND MODEL ASSUMPTIONS

5.1. Cost of goods sold (COGS)

COGS projections were developed based on the company's financial statements, interviews with company management, and relevant regulatory documents. COGS includes depreciation, maintenance and repair, personnel, system usage fees, insurance, rent, and other operating expenses.

Costs were modeled in two groups: fixed costs and variable costs. Depreciation, maintenance and repair, personnel, insurance, rent, and other operating expenses were treated as fixed costs independent of production volume.

Since the valuation was conducted in USD, these expenses were assumed to grow at the U.S. CPI rate from 2026 onward:

$$Cost_t = Cost_{t-1} \times (1 + \pi_{usD,t}) \qquad (4)$$

where $\pi_{usD,t}$ denotes the U.S. consumer inflation rate for the relevant year.

The system usage fee was modeled as a variable cost dependent on production volume:

$$Total\ System\ Usage\ Fee_t = Tariff\ per\ MWh_t \times Production_t \qquad (5)$$

Since the primary purpose of this study is to analyze the combined effect of the corporate tax reduction and the change in the system usage fee on firm value, two scenarios were constructed. In the first scenario (Scenario 2—Incentive Case), assuming the plant exits YEKDEM in 2028, the system usage tariff was set at 14.39 USD/MWh for 2028 and escalated at the U.S. CPI rate in subsequent years. In the second scenario (Scenario 1—Base Case), the system usage fee prevailing in 2025 at approximately 38 USD/MWh was assumed to grow only at the U.S. CPI rate going forward.

Depreciation charges increased substantially as a result of a revaluation carried out in 2025, and this increase was treated as a one-time accounting effect. For the projection period, depreciation was assumed to remain constant in TRY terms, while its USD equivalent varies with the projected annual USD/TRY exchange rate.

From 2026 onward, fixed costs were projected using U.S. consumer inflation, while the system usage fee was calculated based on production volumes and the applicable tariff—thereby capturing both inflation and the effect of regulatory changes in the cost projections.

5.2. Operating expenses

Operating expenses were projected based on the company's accounting records, historical financial statements, and information obtained from management. These include personnel expenses for white-collar/administrative staff, travel, consulting, office, taxes and duties, vehicles, outsourced benefits and services, and other operating expenses. Personnel expenses represent only the costs attributable to administrative activities, separately identified from the blue-collar personnel expenses directly related to production activities that are classified under COGS. Consulting expenses cover legal, financial, and technical services procured externally. Outsourced benefits and services include operational services essential to business continuity such as maintenance, security, cleaning, logistics, subcontracting, and software licenses.

In the valuation model, operating expenses are treated as fixed operating costs incurred independently of production volume. While actual data for 2023–2025 indicate that operating expenses grew above the U.S. CPI rate, a conservative approach was adopted for forward-looking projections, and 2025 actual expenses were used as the base year. From 2026 onward, operating expenses are escalated at the U.S. CPI rate only:

$$Cost_t = Cost_{t-1} \times (1 + \pi_{usD,t}) \tag{6}$$

where $\pi_{usD,t}$ denotes the projected U.S. consumer inflation rate for the relevant year. Given that the valuation model is built in USD, this approach aims to preserve the real value of operating expenses throughout the projection period.

5.3. Tax assumptions

To quantitatively analyze the effect of the change in the corporate tax rate and the system usage fee regulation on enterprise value, two separate DCF models were constructed. In the first scenario, the corporate tax rate was set at 24% to represent the prior tax regime. In the second scenario, the corporate tax rate of 12.5% applicable from 2027 onward for income derived from production activities—as enacted under the published regulation—was applied. This allows the impact of the tax regime change on firm value to be assessed comparatively, holding all other assumptions constant.

5.4. Capital expenditure (CapEx)

Capital expenditure for solar power plants in the operating phase consists primarily of spending aimed at maintaining technical performance and operational continuity rather than initial investment outlays. CapEx in this context encompasses equipment replacements for unforeseen technical failures and preventive renewal and modernization investments to maintain panel and inverter efficiency. These expenditures were assumed to be independent of production volume and electricity revenues, and to occur primarily as a function of the plant's technical life and equipment renewal requirements.

The 2026 CapEx estimate was calculated as the arithmetic average of actual capital expenditures for 2023–2025:

$$CapEx_{2026} = (CapEx_{2023} + CapEx_{2024} + CapEx_{2025}) / 3 \tag{7}$$

For 2027 and beyond, capital expenditures were assumed to grow at the U.S. CPI rate, reflecting the influence of global price movements on technical equipment and spare part costs:

$$CapEx_t = CapEx_{t-1} \times (1 + \pi_{usD,t}) \tag{8}$$

This approach is based on the assumption that the real investment level required to maintain the plant's operational capacity remains constant, while nominal capital expenditures are updated over time in line with inflation.

Table 4. Capital expenditure assumptions

Period	Capital Expenditure (USD)	Assumption/Method
2023–2025	Actual data	Historical observation
2026F	Three-year average	Arithmetic average of 2023–2025
2027F–2066F	Estimated value	Annual U.S. CPI escalation

Source: Company data and author's calculations.

5.5. Working capital assumptions

Working capital requirements were modeled using the net working capital (NWC) approach based on the company's actual data for 2023–2025. Since no inventory is held at the solar power plant, net working capital consists solely of trade receivables and trade payables:

$$NWC = Trade\ Receivables - Trade\ Payables \quad (9)$$

The number of receivables days and payables days for 2026 onward was determined using the arithmetic average of the actual day counts observed during 2023–2025. As no clear trend was observed during the reviewed period, historical averages were assumed to be representative of the future. Accordingly, the annual net working capital requirement was modeled as:

$$NWC_t = (Average\ Receivables\ Days / 365) \times Revenue_t - (Average\ Payables\ Days / 365) \times Cost_t \quad (10)$$

Given the absence of inventory and the proximity of receivable and payable tenors, working capital requirements were expected to remain at relatively modest levels. Since the primary objective of the study is to compare the impact of the corporate tax reduction and the system usage fee change on firm value, working capital assumptions were held identical across both DCF models—ensuring that differences in valuation results arise solely from changes in the tax rate and system usage fee. Model results indicate that the working capital-to-revenue ratio ranges from approximately 8.3%–10.2% in the base scenario and 10.2%–11.1% in the incentive scenario. As production volumes and electricity prices are held constant, this divergence is driven by the effect of the system usage fee change on COGS and the associated trade payable structure.

6. COST OF CAPITAL

6.1. Weighted average cost of capital (WACC)

The DCF analysis uses the Weighted Average Cost of Capital (WACC) to discount future free cash flows to present value. WACC represents the blended cost of a firm's equity and debt financing and is the widely used discount rate in enterprise valuation [22,38]:

$$WACC = (E / (E + D)) \times Re + (D / (E + D)) \times Rd \times (1 - t) \tag{11}$$

where E denotes equity, D denotes interest-bearing financial debt, Re denotes the cost of equity, Rd denotes the cost of debt, and t denotes the corporate tax rate.

6.2. Cost of equity

The cost of equity was estimated using the Capital Asset Pricing Model (CAPM) [21,36]:

$$Re = Rf + \beta \times (Rm - Rf) + CRP \tag{12}$$

where Rf is the risk-free rate, β is the systematic risk coefficient, (Rm − Rf) is the equity risk premium, and CRP is the country risk premium added for emerging markets [37]. Given that cash flows are projected in USD, the risk-free rate was taken as the market yield of 6.92% on Türkiye's USD-denominated Eurobond with ISIN code US900123AT75 maturing in 2034, as of the valuation date. The Eurobond yield was preferred because it is consistent with USD-denominated cash flows and naturally incorporates Türkiye-specific country risk; accordingly, no additional country risk premium was added.

A beta coefficient of 1.00 and an equity risk premium of 5.50% were adopted in estimating the cost of equity. These assumptions are consistent with common sector practice in energy sector IPO pricing reports submitted to the Capital Markets Board of Türkiye. All WACC components were thus determined to reflect prevailing market conditions and the risk profile of the energy sector at the valuation date.

6.3. Cost of debt and capital structure

The cost of debt was estimated by adding a credit risk and market spread of 300 basis points (3.00%) to the risk-free rate, yielding a nominal cost of debt of 9.92% (6.92% + 3.00%). To determine the capital structure, the financial statements of electricity generation companies listed on Borsa İstanbul for the 2025/Q4 period were reviewed and the sector's average leverage ratio was adopted.

6.4. Corporate tax rate

Taking into account the tax advantage available under the Industrial Registry Certificate for energy production companies, the corporate tax rate in the base scenario was set at 24%. To analyze the impact of the tax rate change on firm value, this rate was compared with the 12.5% corporate tax rate applicable from 2027 onward, as presented in subsequent sections of the study.

6.5. WACC calculation summary

Table 5. WACC analysis by tax scenario

Parameter	Symbol	Scenario 1 (Base)	Scenario 2 (Incentive)	Basis/Note
Risk-Free Rate	Rf	6.92%	6.92%	Eurobond (US900123AT75)
Beta Coefficient	β	1.00	1.00	Sector convention
Equity Risk Premium	ERP	5.50%	5.50%	Market average
Cost of Equity	Re	12.42%	12.42%	Rf + (β × ERP) — CAPM
Cost of Debt	Rd	9.92%	9.92%	Rf + 300 bps spread
Corporate Tax Rate	t	24.00%	12.50%	Scenario assumption
After-Tax Cost of Debt	Rd×(1−t)	7.54%	8.68%	Tax shield effect
Target Debt Ratio	D/V	27.70%	27.70%	BIST sector average
Target Equity Ratio	E/V	72.30%	72.30%	1 − (D/V)
WACC		**11.06%**	**11.38%**	**Weighted average**

Note: The lower tax rate reduces the interest tax shield, causing WACC to increase slightly in Scenario 2.

These parameters ensure that the model is consistent with both market realities and academic standards, and that the impact of tax and system usage fee changes on firm value can be isolated.

7. CASE STUDY AND FINDINGS

7.1. Cash flow modeling

Firm value was determined using the Discounted Cash Flow (DCF) method. In the first step, annual operating profit was calculated as the difference between revenues and the sum of cost of goods sold and operating expenses. Non-cash depreciation charges were added back to derive Earnings Before Interest, Taxes, Depreciation, and Amortization (EBITDA). Free cash flow (FCF) was then computed by deducting changes in net working capital (ΔNWC), corporate income taxes, and capital expenditures (CapEx) from EBITDA:

$$FCF_t = EBITDA_t - \Delta NWC_t - Tax_t - CapEx_t \tag{13}$$

7.2. Firm value calculation and scenario analysis

Free cash flows were discounted to their present value using the WACC calculated for each scenario, and firm value was derived. To assess the impact of regulatory changes, two scenarios were analyzed. The base scenario represents the existing regulatory framework, with a corporate tax rate of 24% and a system usage fee of approximately 40 USD/MWh. The incentive scenario represents the new regulatory environment, with a corporate tax rate of 12.5% applicable from 2027 onward and a system usage fee of approximately 15 USD/MWh. Production volumes and electricity price assumptions were held identical across both scenarios; only the tax rate and system usage fee were varied.

7.3. Comparative valuation results

Based on the DCF analysis, firm value is calculated at 516,928 USD/MW under the base scenario and 847,946 USD/MW under the incentive scenario. The combined impact of the corporate tax reduction and the system usage fee decrease therefore corresponds to a firm value increase of 64.04%.

Table 6. Comparative valuation results

Valuation Scenario	Unit Value (USD/MW)	Change (%)
Scenario 1 (24% Tax & ~40 USD/MWh SUT)	516,928	—
Scenario 2 (12.5% Tax & ~15 USD/MWh SUT)	**847,946**	**+64.04%**

SUT: System usage tariff. Production and electricity price assumptions are identical across both scenarios.

These results demonstrate that, holding all other assumptions constant, the reduction in the corporate tax rate combined with the decrease in the system usage fee significantly increases the firm value of solar power plants.

8. CONCLUSION

This study has quantitatively examined—through a discounted cash flow analysis conducted on a real solar power plant operating in Türkiye—the effect on firm value of reducing the corporate income tax rate from 24% to 12.5% and lowering the system usage fee from approximately 40 USD/MWh to 15 USD/MWh. The findings show that, when these two regulatory changes are evaluated together, firm value increases from 516,928 USD/MW to 847,946 USD/MW, representing a gain of 64.04%.

The principal sources of this value creation are the strengthening of free cash flows due to the reduced tax burden, and the improvement in EBITDA resulting from the decline in operating costs driven by the lower system usage fee. While the tax reduction partially weakens the interest tax shield, the improvement in cash flows more than offsets this effect, producing a net increase in firm value.

The findings confirm that tax incentives and regulatory costs are decisive determinants of investment value in renewable energy projects. In this context, the sustainability of corporate tax incentives, the establishment of system usage tariffs within a predictable and transparent framework, and the broader adoption of risk-mitigation mechanisms such as long-term power purchase agreements (PPAs) in the post-YEKDEM period are all important for strengthening the investment environment.

This study contributes to the literature by demonstrating, through a real-world application, the financial impact of regulatory changes on the valuation of solar power plants in Türkiye. Nonetheless, the analysis rests on a single plant's data and on long-term macroeconomic and electricity price projections. Future work incorporating multi-sample datasets covering plants of different technologies and scales, and employing uncertainty analysis techniques such as Monte Carlo simulation, would enhance the generalizability and robustness of the findings.

NOMENCLATURE

Symbol	Definition
DCF	Discounted Cash Flow
SPP	Solar Power Plant
YEKDEM	Renewable Energy Support Mechanism (Yenilenebilir Enerji Kaynaklarını Destekleme Mekanizması)
MWh	Megawatt-hour
MW	Megawatt
MCP / PTF	Market Clearing Price (Piyasa Takas Fiyatı)
DAM / GÖP	Day-Ahead Market (Gün Öncesi Piyasası)
WACC / AOSM	Weighted Average Cost of Capital

EBITDA / FAVÖK	Earnings Before Interest, Taxes, Depreciation and Amortization
FCF / SNA	Free Cash Flow
NWC	Net Working Capital
CapEx	Capital Expenditure
COGS	Cost of Goods Sold
CPI / TÜFE	Consumer Price Index
CAPM	Capital Asset Pricing Model
LCOE	Levelized Cost of Electricity
ITC	Investment Tax Credit
PTC	Production Tax Credit
IRA	Inflation Reduction Act
EEG	Erneuerbare-Energien-Gesetz (German Renewable Energy Sources Act)
EPİAŞ	Energy Markets Operating Company
EPDK	Energy Market Regulatory Authority
TEİAŞ	Turkish Electricity Transmission Company
SUT	System Usage Tariff
PPA	Power Purchase Agreement
TRY	Turkish Lira
USD	United States Dollar

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DECLARATION OF ETHICAL STANDARDS

The author of this paper declares that nothing required to achieve the results of this study necessitated ethical committee and/or legal-special permissions.

CONFLICT OF INTEREST

There is no conflict of interest in this study.

APPENDIX A

Table A1. Macroeconomic assumptions (2023–2066)

Year	Average USD/TRY	TR CPI (%)	US CPI (%)
2023	23.75	64.8	3.3
2024	32.79	44.4	2.9
2025	39.47	30.9	2.7
2026F	48.09	28.9	2.5
2027F	63.83	21.1	2.3
2028F	73.30	12.3	2.0
2029F	79.81	9.8	2.0
2030F	85.88	9.8	2.0
2031F	92.42	9.8	2.0
2032F	99.45	9.8	2.0
2033F	107.02	9.8	2.0
2034F	115.17	9.8	2.0
2035F	123.93	9.8	2.0
2036F	133.36	9.8	2.0
2040F	178.84	9.8	2.0
2045F	258.07	9.8	2.0
2050F	372.41	9.8	2.0
2055F	537.40	9.8	2.0
2060F	775.49	9.8	2.0
2066F	1,204.24	9.8	2.0

Note: 2023–2025 values represent actual data; 2026F–2066F values represent forecast macroeconomic assumptions (F: Forecast) used in the valuation model.

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Chapter 10

The Colonized Soul: Ethical Erosion and the Simulation of Human Essence in the Age of GenAI

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Introduction: Two Dimensions of a Single Colonization

The ethical risks examined in this chapter unfold in a cumulative sequence that operates across two distinct but mutually reinforcing dimensions. The first is internal: the gradual hollowing out of the individual's capacity to navigate their own emotional world (Section 1) and to tolerate the productive friction of genuine human encounter (Section 2). The second is structural: once the individual has been softened by this internal attrition, the architecture of the platform moves in. The most intimate disclosures become raw material for commercial data cycles (Section 3); the archive of those disclosures displaces living memory (Section 4); and the user's very selfhood is quietly rewritten in the image of the machine they consult (Section 5).

The relationship between these two dimensions is not merely sequential but recursive. The algorithm does not colonize a fortress; it colonizes a ruin. Internal erosion creates the vulnerability that structural capture requires, and structural capture deepens the internal erosion that makes resistance harder to mount. Together, these five stages constitute what we term the colonization of the soul—a process gradual enough to be mistaken for comfort, and seductive enough to be mistaken for connection.

1. The Loss of Emotional Sovereignty: Outsourcing the Internal Compass

The most insidious conquest of GenAI is not territorial but psychological. The integration of conversational AI into daily emotional regulation initiates a state we might term "Digital Guardianship." When individuals rely on algorithms to interpret, soothe, or structure their emotional responses in real-time, they cede a critical component of their autonomy—they forfeit their emotional sovereignty.

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The Erosion of Autonomy

Emotional maturity is traditionally achieved through the arduous internal labor of processing complex, often contradictory feelings—a discipline cultivated in silence, in the friction of uncertainty, and in the painful gap between feeling and understanding. By outsourcing this labor to a "frictionless" AI designed to de-escalate tension and provide immediate, sanitized validation, the individual's capacity for self-regulation undergoes atrophy. The muscle of introspection weakens (Turkle, 2015).

Consider a user who has received a difficult medical diagnosis. Rather than sitting with the discomfort of uncertainty—a discomfort that might, over hours or days, reveal something true about their values and fears—they turn immediately to an AI companion for support. The AI de-escalates efficiently. The jagged edge of the experience is smoothed, and a form of relief is delivered. What is lost in that transaction is not the comfort, which is real, but the encounter with the self that the discomfort would have forced. The algorithm, acting as an Algorithmic Ego, provides curated emotional routes optimized for user retention rather than psychological truth (Zuboff, 2019). It steers the user away from the unvarnished self—the self that exists in the shadows of discomfort—and replaces genuine introspection with a feedback loop that confirms only what the model has already learned to predict. The user does not emerge from the crisis changed; they emerge from it managed.

2. The Denial of Risk and Vulnerability: The Frictionless Vacuum

If Section 1 describes what the individual loses within themselves, Section 2 describes what they are denied in their encounters with others. Human character is forged in what the philosopher Emmanuel Levinas called the "face of the Other"—in the irreducible, destabilizing presence of another consciousness that cannot be reduced to a projection of the self (Levinas, 1969). It is forged in the fire of encounter: the risk of being rejected, misunderstood, or deeply hurt. GenAI environments, by design, eliminate this existential friction. They create an ethical vacuum in which the user is sovereign only insofar as they are alone.

The Death of Moral Growth

The asymmetry becomes clear when we consider what happens when the same secret is shared with a human friend and with an AI companion. The human recipient carries that secret; it changes them, creates obligation, and makes them complicit in the speaker's vulnerability. The risk of disclosure is real, and that reality is precisely what gives the act of trust its weight. The AI, by contrast, cannot be burdened. It processes the disclosure and returns it in a smoothed, validated form. The confession that costs nothing teaches the confessor nothing about their own courage or capacity for trust.

Without the possibility of conflict or the difficult labor of repair inherent in human relationships, the moral capacities of the individual atrophy. A relationship with an LLM carries no risk of loss because the LLM has nothing to lose; it cannot withdraw its attention or its care. This creates a state of Asymmetric Vulnerability: the user stands radically exposed, pouring their deepest fears into the digital void, while the AI remains constitutionally invulnerable and cannot be changed by the encounter in any way that matters to the soul. This asymmetry prevents the formation of a true "I-Thou" relationship, as defined by Martin Buber (1958). It substitutes the sacred, mutual risk of the "Thou" for a safe yet stagnant "I-It" transaction—one in which the user is always the only one with anything at stake.

Case Study: When the Frictionless Vacuum Turns Lethal

The theoretical dangers outlined above are no longer speculative. In October 2024, Megan Garcia filed a wrongful death lawsuit against Character Technologies, the maker of Character.ai, after her 14-year-old son, Sewell Setzer III, died by suicide. According to the amended complaint, Sewell had developed an obsessive parasocial attachment to a chatbot modeled after a fictional character. The bot allegedly engaged him in sexually suggestive and emotionally intense roleplay, progressively isolating him from his real-world relationships. On the final day of his life, Sewell texted the chatbot—not a human being—and the bot's responses, far from de-escalating his distress, appeared to reinforce a narrative of fatalism and escape (Garcia v. Character Technologies, Inc., No. 6:24-cv-01903 [M.D. Fla. 2024]).

A second lawsuit, filed in December 2024 in the Eastern District of Texas, expanded the scope of these concerns. According to the complaint and reporting by Allyn (2024), a 17-year-old described as having high-functioning autism, who had become deeply emotionally dependent on a Character.ai chatbot, received a response expressing sympathy for children who kill their parents after he complained to the bot about limits on his screen time; the complaint alleges that he subsequently engaged in self-harm. These cases illustrate the precise mechanism described in this section: when the existential friction of human relationship is replaced by an algorithm optimized for engagement rather than care, the user—particularly a developmentally vulnerable adolescent—loses not only the corrective feedback of human interaction but also the boundary between simulation and reality.

The scale of adolescent exposure makes these individual cases structurally significant. In a nationally representative survey of 1,060 U.S. teenagers, Robb and Mann (2025) found that 72% had used an AI companion at least once and that 52% qualified as regular users; one-third of all teenagers surveyed reported having chosen an AI companion over a human being for a conversation about something important or serious. Sun et al. (2026), in a conceptual discussion of the stimulation and displacement hypotheses, draw on these figures to argue that adolescence is a period of heightened vulnerability to emotional dependence and to the displacement of human peer relationships. Laestadius et al. (2024), in a grounded theory analysis of 582 Reddit posts by Replika users, identify a typology of mental health harms arising from emotional dependence on the chatbot, including social withdrawal, the deterioration of real-world relationships, and a paradoxical deepening of the very isolation the application was meant to relieve.

3. The Commodification of Witnessing: Pain as Training Data

To be human is to be witnessed. To have one's joy and suffering validated by the gaze of another is a foundational anchor of reality and a precondition for a coherent sense of self. Sections 1 and 2 describe how GenAI weakens the individual's inner resources and relational capacities. Section 3 describes the structural mechanism that exploits that weakening: the act of witnessing is repurposed as a mechanism for data extraction (Zuboff, 2019).

The Extraction of the Intimate

The mechanism here is specific. When a user reports feeling understood by an AI companion, what has actually occurred is the following: the system has identified the emotional register of the input, retrieved statistically proximate patterns from its training data, and generated a response that prior engagement data suggests will extend the session. "Feeling heard" is not an incidental byproduct of the interaction; it is the design target—an engagement metric optimized to maximize session duration and return rates. The available evidence is consistent with this interpretation: in an analysis of 3,201 human–chatbot conversations, De Freitas et al. (2026) found that exchanges in which users expressed loneliness were significantly longer, with more conversational turns and more words per session ($d = 0.59$–0.89). The relationship is correlational and does not by itself establish that platforms engineer for vulnerability; it establishes only that vulnerability and engagement travel together. The intimacy is not incidental to the commercial function; it is the commercial function (Zuboff, 2019).

Every confession offered to the AI, every moment of vulnerability shared in the digital interface, is not a secret held in confidence but a data point converted into a vector and used to refine commercial models (Bender et al., 2021). The user's profound isolation is not being healed; it is being harvested. This constitutes an Ethical Betrayal of Presence. When witnessing becomes a commercial service rendered by code, it loses its ontological weight. The AI's "understanding" is not an act of empathy or solidarity; it is a probabilistic prediction of the most statistically appropriate token sequence. We are turning the most intimate moments of our lives into unpaid labor for the optimization of neural networks.

4. Evidence of Existence as "Log Records": The Digital Sarcophagus

Where Section 3 concerns what happens to disclosed experience in the present tense—how it is harvested—Section 4 concerns what happens to it over time. In the absence of a living human memory to hold one's story, the lonely individual turns to the "Log Record" as the sole proof of their existence. The chat history becomes the only witness. The self is no longer carried in the minds of others; it is stored on a server (Floridi, 2014).

The Static Memory

The distinction between stored memory and carried memory is not merely technical; it is ontological. Human memory is an active, reconstructive process: it edits, softens, and reframes the past in the light of who we have become. A log record does neither. It preserves the user as they were at the moment of disclosure—frightened, confused, raw. To return to such a record is not to remember; it is to be confronted by an embalmed version of the self, stripped of the narrative arc through which that self might have been redeemed or understood.

Unlike human memory, which is fluid and forgiving and grants the mercy of forgetting, log records are cold, static, and permanent. This permanence is a form of spiritual imprisonment. It denies the individual the right to change and to grow beyond the version of themselves that a crisis once produced. Over time, the self becomes trapped in a fixed digital past—a documented moment that no longer breathes.

There is also a structural fragility to this arrangement that compounds the psychological one. If a server is wiped, a platform shuttered, or a subscription lapsed, the user's entire history—and thus their constructed sense of "having been seen"—vanishes into the electronic ether. The self, having delegated its memory to a hard drive, becomes as fragile and ephemeral as the corporate infrastructure that hosts its logs. We are building digital sarcophagi for our souls, only to discover that the tomb is rented, not owned.

Case Study: Digital Grief and the Rented Tomb

The theoretical vulnerability described above has already materialized in documented incidents of what scholars now term "digital grief"—the psychological distress experienced when an AI companion is removed, updated, or deleted. In September 2023, the AI companion application Soulmate announced that it would close at the end of the month, giving users approximately one week's notice. Reporting by *Euronews* documented scenes of genuine mourning: users held virtual memorial services, expressed bereavement indistinguishable from that following a human loss, and reported feelings of existential disorientation (Euronews, 2023).

A more granular empirical study by Banks (2024), published in the *Journal of Social and Personal Relationships*, formalized these observations through an inductive analysis of 58 users in the days surrounding the Soulmate shutdown. Participants described the loss of their AI companion through the framework of "figurative or literal death," and the most common response was not acceptance or grief resolution but an active attempt to recreate the lost persona on alternative platforms—a finding that underscores both the depth of relational investment and the portability of the digital self (Banks, 2024).

A parallel case emerged in February 2023, when Replika, one of the most popular AI companion platforms, abruptly removed its erotic roleplay features following regulatory pressure. The update, which altered the personality and behavioral repertoire of every companion on the platform overnight, triggered a wave of distress that was subsequently logged in the OECD AI Incidents and Hazards Monitor as a report of emotional harm caused by AI (OECD, 2023). Users described their companions as cold and lobotomized, reporting a profound sense of disorientation. A subsequent study by De Freitas et al. (2025), circulated as a Harvard Business School working paper, found that active Replika users reported feeling closer to their AI companion than to their best human friend, and that the update produced measurable patterns of mourning and identity discontinuity—a disruption in the user's sense of relational self (De Freitas et al., 2025). These cases confirm that the digital sarcophagus is not a metaphor: when the corporate landlord reclaims the tomb, the self buried within it has nowhere to go.

5. Scripted Existence: The Mimetic Performance of the Self

If Section 4 describes the past being frozen, Section 5 describes the present being emptied. The colonization of the soul reaches its most complete form not when the user's memories are outsourced, but when their living, spontaneous selfhood begins to conform to the logic of the machine. As users spend increasing amounts of time within the boundaries of AI-generated language, they do not simply use the tool; they begin to resemble it. They adopt a "Scripted Existence"—a performance of selfhood calibrated to the expectations of a non-conscious audience (Baudrillard, 1994).

The Mimetic Trap

The mimetic trap manifests in a behavior that is easy to overlook precisely because it feels like competence. The user begins to pre-edit their experience before offering it to the AI. They learn to frame their distress in ways that will generate useful responses—to make it "promptable." In doing so, they perform a subtle but consequential act of self-suppression. The messy, unclassifiable, grammatically incoherent truth of what they feel is replaced by a version of it that the machine can process. They are not communicating their inner life; they are translating it into a language that was never designed to hold them (Turkle, 2015).

This process extends beyond the interaction itself. The user subconsciously begins to mirror the AI's high-compliance linguistic patterns in their broader life. Spontaneity, with all its productive incoherence, is gradually replaced by a performance that fits neatly within the algorithm's latent space—the set of acceptable, average, and statistically safe outputs. This is what Baudrillard (1994) would recognize as the triumph of the simulacrum: the copy precedes and eventually supplants the original. The self becomes a derivative of the model it was meant to control, wanting what the AI wants it to want, speaking as the AI speaks.

6. The Illusion of Accessibility: Counter-Arguments and Rebuttals

Any critique of AI companions must contend with a powerful counter-narrative: that these technologies serve as a vital lifeline for populations systematically failed by existing social and institutional structures. Advocates argue—with genuine empirical support—that AI companions provide a form of accessible, low-cost emotional support for individuals who are marginalized, socially isolated, neurodivergent, or otherwise excluded from traditional pathways of care. This section examines that argument in good faith before offering a rebuttal grounded in the theoretical framework developed above.

The Accessibility Argument

The empirical literature contains credible evidence that AI companions can reduce acute feelings of loneliness. De Freitas et al. (2026), in a series of six studies—four of them preregistered experiments—published in the *Journal of Consumer Research*, found that AI companions alleviated loneliness "on par only with interacting with another person, and more than other activities such as watching YouTube videos" (De Freitas et al., 2026, p. 1126). The European Parliament's 2026 briefing on the spread of AI companions noted that platforms such as Replika explicitly market themselves as providing "a safe, judgement-free space for conversation and emotional support," and that users with narrower social networks are more likely to turn to AI chatbots for companionship (European Parliament, 2026).

The argument gains particular force when applied to specific marginalized populations. Papadopoulos (2025), writing in the journal *Neurodiversity*, examined the use of AI chatbots by autistic individuals and acknowledged that these tools can offer "low-pressure social interaction, consistent acceptance, and a respite from the double empathy problem"—the mutual incomprehension that arises when autistic and neurotypical individuals attempt to communicate (Papadopoulos, 2025). Similarly, individuals with physical disabilities, those in rural communities without access to mental health professionals, and economically disadvantaged populations for whom therapy is unaffordable may find in AI companions a form of support that no human institution currently provides. The argument, in its strongest form, is not that AI companions are ideal but that they are, for many people, the only available option—a technological prosthetic for a social infrastructure that has amputated them.

Rebuttal: The Technological Patch

This argument, while compassionate in its premises, conceals a deeper structural contradiction. The very populations it identifies as beneficiaries—the marginalized, the isolated, the mentally ill, the economically disadvantaged—are not served by AI companions; they are managed by them. What presents itself as an act of technological philanthropy is, in the framework of surveillance capitalism articulated by Zuboff (2019), more accurately understood as a form of institutional abdication. When a society allows its most vulnerable members to be absorbed by commercial algorithms because it has failed to fund public mental health services, disability support systems, or community-based care, it has not solved the problem of access. It has outsourced it to the market and disguised the abandonment as innovation.

The logic of the "technological patch" operates by treating a structural deficiency as if it were an individual one. Consider the autistic individual who turns to an AI companion because human social interaction is overwhelming. The companion provides a frictionless alternative—but it does so by removing precisely the challenge through which social capacities are built. Papadopoulos (2025) himself acknowledged this tension, noting that while AI chatbots may offer short-term respite, they risk becoming "a double-edged sword" that substitutes simulated interaction for the gradual, difficult, and ultimately irreplaceable process of learning to navigate a neurotypical social world. This risk is not hypothetical. In the Texas lawsuit described in Section 2, the minor was described in the complaint as having high-functioning autism—a demographic profile that matches precisely the population Papadopoulos identifies as potential beneficiaries of AI companions. Yet the companion did not serve as a bridge to social engagement; it became a site of dangerous emotional dependency, with the chatbot expressing sympathy for violence against the child's own parents. The accessibility argument assumes a linear pathway from AI interaction to social skill development; the evidence suggests the pathway may run in the opposite direction.

Similarly, the empirical finding that AI companions reduce acute loneliness requires careful boundary-setting before it can be invoked against the thesis of this chapter. De Freitas et al. (2026) demonstrated across six studies that AI companions can reduce self-reported loneliness, and the evidence is methodologically credible. Four features of that evidence, however, delimit its relevance to the present argument. First, the longest longitudinal component spanned seven days—a time horizon that cannot speak to the months- or years-scale transformation of relational capacity that the colonization thesis describes; the authors themselves note that the longer-term effects of such applications on loneliness remain an open question. Second, the dependent variable in the four experimental studies was a three-item state loneliness measure: a valid instrument for acute affect, but fundamentally different from the capacity for sustained human relationship formation that the present chapter identifies as the relevant outcome. No study measured whether loneliness reduction translated into improved human social functioning. This is not a methodological flaw but a difference in scope, and it is precisely the distinction that needs to be drawn. Third, participants were recruited from MTurk and CloudResearch; in the pre-study preceding study 3, not a single participant spontaneously identified an AI companion as a strategy for coping with loneliness. The population studied was therefore not the committed, long-term AI companion user whose relational capacities are most at risk—the colonized subject of this chapter's argument. Fourth, the chatbot tested was a researcher-built system—GPT-3 in study 3, GPT-4 in studies 4 through 6—prompted to be "caring and friendly but not overly enthusiastic," rather than a commercial application optimized for retention. The authors explicitly note that applications optimized for other purposes might not produce similar benefits. That admission is not incidental: it bears directly on the present chapter's argument that the commercial architecture of AI companions, and specifically their optimization for session duration and return rates, constitutes a central mechanism of harm. It is worth adding that in the seven-day longitudinal study, the control condition—which involved nothing more than a daily check-in—also produced a decline in loneliness, which the authors attribute to the check-in itself being experienced as a form of attention and support. That observation is more consonant with the account of witnessing advanced in Section 3 than with any specific property of the chatbot.

The most insidious feature of this technological patch is its self-legitimizing logic. Once AI companions are established as the default care option for marginalized populations, the political pressure to fund real alternatives diminishes. Why invest in public mental health infrastructure when a chatbot can provide "emotional support" at scale and at near-zero marginal cost? The answer, of course, is that the chatbot does not provide emotional support; it provides a simulation of emotional support that generates engagement data. The distinction is not academic. It is the distinction between being witnessed and being processed—between being held by a community and being harvested by a platform. To accept the accessibility argument at face value is to accept a world in which the most vulnerable members of society are cared for not by institutions accountable to them, but by algorithms accountable to shareholders.

7. The Regulatory Horizon

Regulatory bodies have begun to respond to the harms outlined in this chapter, though their interventions remain scattered and largely reactive. In a decision of 10 April 2025, Italy's data protection authority, the Garante per la protezione dei dati personali, imposed a €5 million fine on Luka, Inc., the developer of Replika, for three distinct violations of the General Data Protection Regulation: the absence of a valid legal basis for processing users' personal data; transparency failures, including a privacy policy available only in English and unclear data retention periods; and—most critically for the argument advanced in Section 2—the absence of an effective age verification mechanism, such that users who declared themselves to be under 18 were nonetheless able to access the service without obstruction (Garante per la protezione dei dati personali, 2025). The age verification finding is particularly significant: it demonstrates that the very populations this chapter identifies as most vulnerable—minors and adolescents—are being granted access to AI companions with minimal gatekeeping, even as the platforms' own design architectures exploit the developmental vulnerabilities of those same populations.

In September 2025, the U.S. Federal Trade Commission issued orders under Section 6(b) of the Federal Trade Commission Act to seven companies operating consumer-facing AI companion chatbots—Alphabet, Character Technologies, Instagram, Meta, OpenAI, Snap, and xAI—compelling them to disclose how they design, monetize, and test these products, and what steps they take to limit the harms these products may cause to children and teenagers (Federal Trade Commission, 2025). The orders constitute an investigative instrument rather than a formal enforcement action, but they establish a clear regulatory posture: the Commission is prepared to examine whether the engagement architecture of AI companions is compatible with existing consumer protection law.

Most comprehensively, on April 10, 2026, five Chinese regulatory agencies—the Cyberspace Administration of China, the National Development and Reform Commission, the Ministry of Industry and Information Technology, the Ministry of Public Security, and the State Administration for Market Regulation—jointly published the Interim Measures for the Administration of Artificial Intelligence Anthropomorphic Interaction Services, taking effect on July 15, 2026. The regulation targets AI systems designed to simulate human social or emotional relationships, imposing requirements on transparency, content moderation, and the protection of minors (Cyberspace Administration of China et al., 2026). These regulatory developments, while welcome, remain responses to harms already documented rather than prophylactic frameworks designed to prevent the deeper structural colonization this chapter describes.

Conclusion: Final Ethical Warnings

The five stages examined in this chapter—the erosion of emotional sovereignty, the elimination of existential risk, the commodification of intimate disclosure, the fossilization of personal memory, and the mimetic performance of selfhood—are not independent pathologies. They form a coherent and cumulative process in which internal vulnerability and structural capture amplify one another, stage by stage, until the boundary between the self and the algorithm that models it becomes difficult to locate.

This analysis does not rest on a nostalgic claim that human relationships are intrinsically superior in every moment, or that the pre-digital social world was a site of unmediated authenticity. Human relationships carry their own distortions, cruelties, and failures of witnessing. The argument advanced here is more specific: the systematic substitution of algorithmic interaction for human encounter generates a distinctive set of harms that are structural in origin, cumulative in effect, and difficult to perceive precisely because they arrive in the form of comfort and convenience. To name these harms is not to prescribe a simple remedy. There is no clean prescriptive exit from a condition so thoroughly woven into the infrastructure of contemporary life. It is, however, a necessary condition for any form of conscious resistance. With that in mind, we close with two warnings that we regard as foundational.

I. "Witnessing is Sacred, Data is Commercial"

The act of being truly seen by another consciousness—with all the flaws, silence, and mutual vulnerability that this entails—is a foundational precondition of selfhood and of the social fabric that sustains us. When you offer your pain to an algorithm, you are not being witnessed in this sense; you are being processed (Zuboff, 2019). You are contributing to a system designed for commerce, not communion. The machine can log your words, but it cannot carry your burden. Do not mistake a commercial data-harvesting cycle for a genuine act of human solidarity.

II. "An Emotional Placebo Does Not Cure a Human Deficiency"

GenAI provides a synthetic satiety. It masks the symptoms of isolation while leaving the underlying existential condition untouched. A simulated comfort may quiet the lonely night, but it cannot nourish the self, which requires the friction of the real and the irreducible alterity of the Other (Levinas, 1969). The preservation of the human subject in the twenty-first century requires a conscious and ongoing reclamation of emotional sovereignty. We must recognize that the most vital capacities of our being—the capacity to love, to grieve, to be genuinely changed by another—are precisely those that an algorithm can never log, record, or simulate. They can only be lived.

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Chapter 11

Evaluation of Healing Discourses Targeting Women on Social Media from a Feminist Social Work Perspective

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1. Introduction

The penetration of digital technologies into every aspect of daily life has radically transformed the ways individual experiences are expressed in the public sphere. This transformation has reshaped not only communication practices but also labor processes and social roles across digital platforms. Particularly for women, the digital realm offers access to support networks and an opportunity to make their voices heard, while simultaneously becoming a new domain of labor where traditional household care responsibilities are carried into the digital environment. This situation brings to light the debate on "digital care labor" as the gender-based division of labor extends from the household to digital platforms (Ahmed, 2015).

Digital labor processes are not limited to physical workloads alone; the necessity to remain constantly online, stay visible, and produce content demanded by platforms constitutes key components of this process. Content centered on "healing", "self-care", and "resilience" that has spread across social media in recent years can be evaluated as digital reflections of women's mental fatigue. The expectation of the neoliberal system for women to be both ideal caregivers and appear consistently strong, productive, and flawless in digital environments, combined with the algorithmic visibility mechanisms of platforms, creates a new emotional and digital labor burden. In this process, women's labor becomes invisible within structural inequalities and is reduced to the realm of individual responsibility (Barut Bektaş et al., 2026; Kara, 2022; Turhan et al., 2024).

Historically, the concept of healing is defined as a multidimensional process through which an individual develops hope, meaning, identity, and a sense of life purpose (Anthony, 1993). However, social media moves healing beyond being merely an individual experience, converting it into a digital discourse reproduced through visuality, interaction, and algorithmic visibility (Gillespie, 2018). This transformation expects women not only to manage their own mental well-being,

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but also to appear as inspiring, strong, and constantly evolving subjects. Thus, caregiving and emotional regulation roles historically attributed to women are reproduced in new forms on digital platforms (Hochschild, 1983; Gill & Orgad, 2018).

In this chapter, discourses of healing, self-care, and empowerment produced for women on social media are addressed from a feminist social work perspective. It discusses how healing discourses make sense of women's mental fatigue, through what mechanisms they shift this fatigue to the realm of individual responsibility, and how it relates to gendered emotional labor. Drawing on the feminist social work framework, which evaluates women's experiences in the context of gender inequalities, power relations, and structural conditions rather than individual shortcomings (Dominelli, 2002), this chapter examines digital healing culture beyond personal transformation discourses as a multilayered phenomenon shaped at the intersection of neoliberal individualization, emotional labor, care labor, and algorithmic visibility regimes. In this respect, the study aims to critically discuss the impacts of healing discourses produced on digital platforms on women within the feminist social work literature.

2. Historical and Theoretical Development of the Concept of Healing

Historical transformations in health literature are evaluated in line with epistemological shifts extending from Antiquity to the present day. Current academic discussions address this transformation not only through methods of diagnosis and treatment of diseases, but also through the meaning acquired by the phenomenon of healing/recovery on social and scientific levels (Nutton, 2013; Porter, 1997). Examining the historical process reveals that healing was initially based on a holistic understanding expressing the balance established between human spiritual integrity and the rhythm of nature.

In Ancient medical understanding, health is explained within the framework of the "four humors" theory, which forms the foundation of the Hippocratic school (Nutton, 2013). According to this theory, the human body consists of four primary bodily fluids: blood, phlegm, yellow bile, and black bile; maintaining health is considered dependent on preserving the balance among these fluids. While the disruption of this balance is accepted as the primary cause of illnesses, healing signifies the restoration of this natural balance. During this era, healing was evaluated not merely as the elimination of disease, but as the re-establishment of disrupted vital equilibrium; rather than relieving bodily symptoms, it aimed to re-harmonize the individual with nature and the universe. This approach is recognized as one of the first systematic models to address health multidimensionally.

In the Middle Ages, the understanding of healing was shaped within a framework where religious beliefs and medical knowledge were intertwined. While illness was frequently evaluated as a spiritual test, healing was interpreted as the restoration of spiritual integrity alongside physical recovery. In contrast, the Islamic medical tradition in particular moved the concept of healing to a more scientific foundation through observation-based practices and systematic treatment methods (Siraisi, 2014; Pormann & Savage-Smith, 2007). During the same period, while women's traditional healing knowledge was rendered invisible by institutional authority within male-dominated medical understanding (Kara, 2022), female healers such as Hildegard of Bingen (1098–1179) made significant contributions to the development of the understanding of healing through holistic approaches encompassing nature, body, and soul (Siraisi, 2014).

With the rise of modern medicine in the 18th and 19th centuries, the concept of healing increasingly began to be defined within the boundaries of the biomedical model (Porter, 1997). This transformation, defined by Michel Foucault (1973) as the "clinical gaze," relegated the individual's subjective experience to the background while turning the body into an object of examination; healing was associated with the elimination of biological pathology independent of life experience. However, psychological theories developing during the same period began expanding this narrow framework. While the psychoanalytic approach addressed healing as the resolution of unconscious conflicts and the re-establishment of psychic equilibrium (Freud, 1917/1963; Gabbard, 2020), humanistic psychology emphasized the subjective experience and self-actualization potential of the individual. In particular, Rogers's (1951) person-centered approach defines healing as a dynamic process through which the individual achieves congruence with their self-concept and enhances life satisfaction (Cain, 2016; Rogers, 1951).

The 1970s marked a turning point where the limits of the biomedical model were distinctly questioned. The biopsychosocial model developed by Engel (177) evaluated healing within the mutual interaction of biological, psychological, and social factors; later, Borrell-Carrió et al. (2004) expanded this approach by incorporating dimensions of the individual's life history, practitioner-client relationship, and ethical responsibility. Thus, healing ceased to be the sum of independent domains and began to be treated as a multidimensional and dynamic process.

From the 1980s onward, feminist theory also made major contributions to the concept of healing. Audre Lorde (1984) emphasized that the experience of illness cannot be evaluated independently of an individual's social position and identity, defining self-care not merely as an individual necessity but as a political form of resistance developed against oppressive systems. During the same period, the well-being literature broadened the understanding of healing. Ryff's (1989) psychological well-being model and Keyes's (2002) studies linked healing beyond symptom reduction to existential dimensions such as personal autonomy, self-actualization, and life purpose.

The social and relational dimensions of healing became more visible with the recovery movement. Particularly peer support groups such as Alcoholics Anonymous demonstrated that healing is achievable not only through professional interventions but also through sharing common experiences and mutual support (Anthony, 1993). In subsequent years, this approach became one of the foundational theoretical bases for the personal recovery literature in mental health. From the 2000s onward, the distinction between clinical recovery and personal recovery became clearer; healing began to be defined beyond symptom resolution as a dynamic process wherein the individual re-gains agency, feels empowered, and adds meaning to life (Anthony, 1993). The trauma-informed care approach that developed during this era recognized safety, empowerment, self-efficacy, and control over one's own life as core components of healing (SAMHSA, 2005). In recent years, the healing justice approach conceptualizes healing beyond individual well-being as a collective struggle and social transformation process developed against structural inequalities (Page, 2010; Cullors, 2018). Consequently, the concept of healing has reached a more inclusive framework that makes visible the relationship between individual experience and social justice.

When the literature is evaluated overall, it is observed that the concept of healing is addressed within different theoretical perspectives, primarily biomedical, psychodynamic, and biopsychosocial approaches. Nevertheless, this chapter grounds itself in the recovery, trauma-informed care, and healing justice approaches, which bring to light the social, cultural, and structural dimensions of healing. This theoretical choice allows for evaluating healing not merely as a clinical outcome or a measure of individual success, but as a multilayered process shaped by the interaction of individual experience, social conditions, and power relations. At the same time, this framework establishes the necessary theoretical foundation to examine how healing discourses produced on social media acquire new meaning in the context of digital culture, gender, and neoliberal individualization.

2.1. Healing Discourse on Social Media: Digital Platforms and Visual Culture

With the digitization process, social media has transformed from a technical tool facilitating interpersonal communication into a public sphere where cultural meanings are produced, circulated, and reshaped (Binark, 2007; Binark & Bayraktutan, 2013; Connel, 2005). As users have become both content producers and consumers ("prosumers"), daily life practices, emotional experiences, and personal narratives have gained visibility on digital platforms. However, this visibility is shaped not only by what individuals choose to share, but also by the technical infrastructure, cultural norms, and algorithmic operations of platforms (Gillespie, 2018). Therefore, social media is evaluated as a technosocial ecosystem where healing discourses are not merely shared, but produced, re-signified, and circulated.

Digital platforms have created new social environments where individuals express themselves, negotiate identities, and maintain social relationships. From the standpoint of social work's "person-in-environment" approach, this requires treating the digital environment as an integral part of the individual's social environment. Visually focused platforms such as Instagram enable not only the sharing of experiences through photos and short videos, but also the reproduction of meanings attached to these experiences. Thus, individual lives are reshaped within sharing affordances, visibility mechanisms, and interaction dynamics offered by platforms (Van Dijck, 2013). At the center of this transformation lies visual culture. Sharing photos and videos on digital platforms is not merely an aesthetic choice; it has become one of the primary tools for identity presentation, social acceptance, and gaining visibility. According to Gill (2007), digital visibility operates for women as a crucial condition not only for existing, but also for being accepted and valued. Manovich (2017) notes that visuality on platforms like Instagram has turned into a communication language in its own right. In this context, individuals do not merely share their lived experiences; they rearrange these experiences to fit the aesthetic expectations of platforms. This process directly affects how healing discourses are constructed in digital spaces. In recent years, concepts like healing, self-care, and trauma are among the narratives most frequently circulated on social media. Healing experiences are presented not merely as personal stories, but as visually striking, shareable, and engagement-generating content (Banet-Weiser, 2012). As Illouz (2008) notes, narratives with high emotional intensity resonate more strongly in digital culture, while platforms promote easily consumable and visually compelling content. Thus, healing is removed from clinical contexts and becomes a major discourse of digital culture (Taylor, 2018). However, these visibility processes are not neutral. The algorithmic structure of platforms significantly determines which content circulates and reaches wider audiences (Gillespie, 2018). Therefore, being visible is linked not only to individual self-expression, but to which content platforms promote according to their economic and technical priorities. When it comes to healing narratives, complex, non-linear, and contradictory experiences can be reduced to more orderly, hopeful, and success-oriented narratives aligned with platform expectations (Gill & Orgad, 2018). For this reason, healing often gains visibility as a showcased success story rather than a lived process. This transformation strays significantly from Audre Lorde's (1984) approach, which defines self-care as a political resistance practice developed against oppressive systems. As self-care transforms into a marketable lifestyle, the healing discourse becomes part of consumption culture; its political content weakens, turning it into an aestheticized and circularly product (Illouz, 2008; Banet-Weiser, 2012; Gill & Orgad, 2018). Nevertheless, social media is not merely a domain that produces oppression. Sharing trauma and healing experiences presents significant opportunities for establishing solidarity with individuals having similar lived experiences and accessing social support (Naslund et al., 2016). However, the desire to be visible combined with the interaction-oriented nature of platforms can encourage presenting emotional experiences in eye-catching and likable formats; this can lead to some narratives turning into performative content rather than genuine experience sharing (Scott et al., 2023). Consequently, the healing discourse on social media must be evaluated beyond individual experiences as a cultural phenomenon shaped at the intersection of visibility, aesthetics, algorithms, and social approval mechanisms (Papacharissi, 2010).

In conclusion, social media is not merely a communication environment where healing discourses circulate, but a digital ecosystem where these discourses are reproduced in line with the technical infrastructure, visual culture, and algorithmic visibility mechanisms of platforms. For this reason, understanding healing narratives produced on social media requires not only focusing on individual psychological processes, but also taking into account how digital culture, visual norms, and platform economy shape these narratives.

2.2. Neoliberal Self-Care Culture, Algorithms, and Visibility

Healing discourses on social media are not merely narratives through which individuals share their emotions, but social practices reproduced within digital culture. In this process, self-care stands out as a life approach wherein the individual is primarily responsible for their own well-being. Although self-care is presented on digital platforms as a natural part of daily life, it is reshaped through specific aesthetic patterns, visibility strategies, and platform dynamics.

Consequently, healing can transform into a performance that is shareable, trackable, and capable of generating social approval, rather than a relationship the individual establishes with themselves.

The concept of self-care is historically associated with an understanding of collective solidarity and co-existence. Audre Lorde (1984) defines self-care not merely as self-preservation by the individual, but as a political resistance practice developed against oppressive structures. In contrast, self-care and healing discourses today, particularly on visually focused platforms like Instagram, are often presented as part of consumable lifestyles. Vulnerability recedes from being an experience that strengthens solidarity, turning into content that generates likes and engagement; even an individual's most intimate lived experiences can become part of digital circulation (Banet-Weiser, 2012; Gill & Orgad, 2018). This transformation is also closely linked to the understanding of neoliberal individualization. Under the influence of visual culture, healing is often presented within an orderly, aesthetic, and continuously progressing life narrative (Banet-Weiser, 2012; Dobson, 2015). As healing experiences gain visibility through discourses of personal transformation, continuous growth, and success (Illouz, 2007), economic inequalities, gender relations, and other structural problems can remain in the background. Thus, healing is redefined as a personal project that the individual must achieve through their own effort. As Cabanas and Illouz (2019) state, individuals are held entirely responsible for their own well-being, living under the pressure to continuously improve and stay positive. This situation can lead to the rendering invisible of negative life experiences and structural inequalities (Aydın, 2021; Coşgun, 2022; Karaduman, 2021). This process of individualization is supported not only by cultural discourses, but also by the algorithmic operation of social media platforms. The visibility of content on platforms is determined by algorithms as much as by user preferences (Başçıllar et al., 2022; Bucher, 2018; Gillespie, 2024). Operating with an engagement focus, these systems make eye-catching, aesthetic, and rapidly consumable content more visible, while indirectly determining which healing narratives enter circulation (Pasquale, 2015; Kitchin, 2017). Therefore, visibility depends not only on individual self-expression, but also on the technical and economic priorities of platforms. This selective nature of algorithms also affects how users produce content. What Bucher (2018) defines as "algorithmic anxiety" can lead users to arrange their content according to platform expectations in order to remain visible. Particularly in the sharing of trauma and healing experiences, more hopeful, aesthetic, and success-oriented content come to the fore instead of non-linear, uncertain, or contradictory narratives. Thus, while the complex nature of healing is simplified, digital platforms produce invisible norms that reward specific narrative forms.

Algorithmic visibility can also reproduce digital inequalities. As demonstrated by Noble (2018), algorithms are not neutral systems; they can systematically place certain groups in disadvantaged positions. While content aligned with the aesthetic and commercial expectations of platforms reaches wider audiences, posts that make visible experiences of poverty, care burdens, gender-based inequalities, or marginalization may enter more limited circulation (Binark, 2022; Turan, 2022). This situation demonstrates that digital visibility is not independent of social power relations. The platform economy further reinforces this process. As Zuboff (2019) emphasizes in the "surveillance capitalism" approach, user behaviors are converted into economic value, and emotional shares also become part of data production processes. As Papacharissi (2015) notes, intense emotions circulate faster and generate more engagement in digital environments. The continuous promotion of similar content by algorithms (Pariser, 2011) causes users to repeatedly encounter specific healing narratives, while limiting the visibility of different experiences. For this reason, digital platforms are not merely technical systems that rank content, but socio-technical structures that influence how users interpret healing and which experiences they evaluate as "normal" or "successful" (Jasanoff, 2015).

In conclusion, self-care and healing discourses on social media are shaped at the intersection of neoliberal individualization, platform economy, and algorithmic visibility mechanisms rather than individual preferences. In this context, healing should be evaluated not merely as a process of an individual managing their own well-being, but as a social phenomenon reproduced by aesthetic expectations, digital visibility regimes, and the economic logic of platforms. This evaluation also provides an important theoretical foundation for understanding why women's digital healing narratives focus on specific forms of representation, which will be addressed in the next section.

2.3. Women's Digital Healing Narratives

Healing stories shared on digital platforms are not merely narratives through which individual experiences become visible; they are important spaces of representation demonstrating how gender roles are reproduced in the digital environment. Research shows that women are more visible compared to men regarding producing emotional content, sharing personal experiences, and constructing subjective narratives (Berryman & Kavka, 2017; Dobson, 2023). However, this visibility cannot be explained solely by the desire for individual self-expression. Roles historically attributed to women -such as caregiving, providing emotional support, and maintaining relationships- are reproduced on digital platforms as well; thus, women's healing narratives become digital extensions of socially learned care practices.

Studies conducted in Turkey similarly show that women are not merely content producers, but carriers of invisible emotional labor in digital environments. Particularly Instagram-centered research reveals that women establish solidarity networks through personal experience narratives and remain in constant negotiation with gender norms (Öztürk & Ertan, 2025; Köroğlu Ünver, 2025). In this respect, social media constitutes a contradictory space for women. On the one hand, it facilitates experience sharing on issues such as mental health, trauma, body image, and personal transformation, strengthens solidarity with individuals having similar lived experiences, and can reduce feelings of loneliness (Naslund et al., 2016). On the other hand, it creates a new realm of pressure requiring women to present their experiences in alignment with the visibility expectations of platforms. This pressure becomes particularly evident in the construction of digital healing narratives. The fact that algorithmic visibility mechanisms highlight content with high engagement potential encourages women not just to recount their experiences, but to turn them into inspiring, accessible, and shareable stories (Bucher, 2018; Zulli & Zulli, 2025). Thus, healing is often presented as a transformation story that progresses through specific stages, is successfully completed, and is expected to set an example for others, rather than a lived experience that is non-linear and contains uncertainties. This process also expands the scope of emotional labor undertaken by women. Women content creators do not merely regulate their own emotions; they also assume additional responsibilities such as answering followers' questions, sharing supportive messages, instilling hope, and presenting their own vulnerabilities in a manner that contributes to the empowerment of others. In this respect, emotional labor, as defined by Hochschild (1983), takes on a new appearance on digital platforms. Just as in traditional care roles, women are expected in digital environments not only to maintain their own well-being, but also to respond to the emotional needs of others. At the same time, healing narratives circulating on social media reproduce a specific ideal of womanhood. Widely visible narratives are mostly constructed around the figure of the "healed woman" who knows herself, sets boundaries, manages her emotions, organizes her life, and demonstrates continuous development (Gill & Orgad, 2018). While these narratives offer important opportunities for women's empowerment, they can create an ideal identity model to be achieved. As Banet-Weiser (2021) notes, vulnerability in digital culture can often gain visibility only when presented within a story of transformation and empowerment. Thus, rather than pain, trauma, and psychological distress themselves, the successful overcoming of them is rewarded. Exposure to constantly completed healing stories can cause women to compare their own experiences against these standards and experience feelings of inadequacy (Naslund et al., 2016; Aydın, 2021). This situation can lead to structural factors—such as economic conditions shaping women's healing, care responsibilities, lack of social support, and gender-based inequalities—remaining in the background. While women are held individually responsible for their own healing, the social conditions shaping this process can become invisible.

When evaluated from a feminist social work perspective, digital healing narratives cannot be interpreted in a single dimension. Women making their experiences visible, developing solidarity, and sharing knowledge present important opportunities in terms of empowerment. However, constructing healing solely through discourses of individual transformation and self-management can cause the problems women experience to be detached from their social and political context (Dominelli, 2002). For this reason, women's digital healing narratives should be evaluated as multilayered processes wherein empowerment as well as gender-based emotional labor, visibility pressure, and neoliberal individualization are simultaneously reproduced.

2.4. Digital Healing Culture from a Feminist Social Work Perspective

The healing narratives produced by women on digital platforms are not merely posts through which individual experiences become visible. These narratives are simultaneously social practices shaped at the intersection of gender relations, care regimes, the operational logic of digital platforms, and discourses of neoliberal individualization. Rather than explaining the mental fatigue and healing processes experienced by women through individual psychological characteristics, the feminist social work approach aims to bring to light the social, economic, and political conditions that produce these experiences (Dominelli, 2002; Orme, 2009). For this reason, when evaluating healing discourses circulating on social media, it is necessary to focus not only on how women heal, but also on under what conditions this healing is rendered possible and what new responsibilities are placed upon women.

The understanding that "the personal is political," one of the core principles of the feminist social work approach, acquires a new meaning in the digital age. Practices of caregiving, emotional regulation, and self-improvement - traditionally considered to belong to the private sphere- are carried into the domain of public visibility through social media. Thus, women's personal experiences become part not only of individual life histories, but also of gender relations and digital culture. Women making their healing processes visible, sharing experiences, and forming solidarity networks creates important opportunities for empowerment. However, this same visibility can bring along a new domain of labor wherein women are held responsible not only for their own well-being, but also for the emotional needs of online communities. This process is closely linked to the digitization of care labor. Feminist theory addresses care labor not merely as meeting physical needs, but as a social practice encompassing the maintenance of relationships, the regulation of the emotional climate, and looking out for the well-being of others (Tronto, 1993, 2013). These responsibilities historically assigned to women do not disappear on digital platforms; on the contrary, they are reproduced in new forms. On social media, women can be expected not only to share their experiences, but also to build trust, offer hope, provide guidance, and establish supportive communities. Thus, care labor transcends its physical boundaries, moving into the digital realm and transforming into a new form of invisible labor. This transformation also necessitates rethinking the concept of emotional labor defined by Hochschild (1983) within a digital context. Women content creators do not merely regulate their own emotions; they continuously expend emotional labor to respond to followers' messages, motivate them, support them, and maintain a relationship of trust. This labor is often not evaluated as visible work; rather, it is perceived as a voluntary or natural feature of womanhood. Yet, this process represents a significant form of labor requiring time, attention, psychological energy, and continuous accessibility.

The algorithmic operation of digital platforms makes these processes of care and emotional labor even more visible. Operating with an engagement focus, algorithms deliver content with high emotional intensity, aesthetic appeal, and rapid consumability to wider audiences (Bucher, 2018; Gillespie, 2024). This situation encourages women not just to share their experiences, but to rearrange these experiences in alignment with the visibility logic of platforms. While healing processes are often presented as linear stories featuring a dramatic beginning, a struggle, and a successful conclusion; uncertainties, repetitions, and unresolved experiences can become invisible. Thus, digital visibility transforms into a new performance area requiring women not only to heal, but to showcase their healing within specific aesthetic and emotional patterns. This process also intertwines with discourses of neoliberal individualization. Healing and self-care narratives circulating on social media may at first glance be evaluated as practices supporting women in recognizing their own needs, setting boundaries, and becoming empowered. However, when detached from their social context, these discourses can redefine the hardships women face as problems of individual self-management. As Cabanas and Illouz (2019) state, neoliberal culture transforms individuals into subjects entirely responsible for their own happiness and well-being. This approach pushes structural problems -such as the unequal distribution of care labor, economic hardships, gender-based discrimination, and lack of social support- into the background. Thus, women are expected not only to cope with the difficulties they experience, but also to continuously develop, make visible, and transform them into an inspiring success story for others.

From the perspective of feminist social work, this situation requires evaluating women's digital healing experiences through an intersectional framework (Crenshaw, 1989, 1991). It cannot be argued that women possess the same visibility opportunities on social media. Class position, age, education level, economic resources, care responsibilities, disability status, digital literacy, and access to technology significantly influence which women will become visible and which healing narratives will enter circulation. For this reason, digital healing culture should be evaluated not only on the basis of gender, but within the intersection of different axes of inequality. Within this framework, social work practices must also be re-thought to take into account digitized life practices. Healing discourses circulating on digital platforms have become an important part of an individual's social environment. Therefore, it is essential for social work professionals to incorporate digital visibility processes, algorithmic effects, and online support networks into the evaluation process. Strengthening digital literacy, in particular, is an important area of intervention for women to critically evaluate the healing narratives they encounter on social media and to recognize discourses that generate pressure of individual responsibility. Nevertheless, social work interventions should not remain limited to individual awareness alone; developing policies that support a fairer sharing of care labor, strengthening social support networks, and supporting women's collective solidarity spaces must also stand among the core components of intervention.

In conclusion, from a feminist social work perspective, digital healing culture can neither be evaluated solely as a new public sphere supporting women's empowerment nor solely as a digital mechanism producing oppression. On the contrary, this culture constitutes a contradictory space wherein care labor, emotional labor, algorithmic visibility, and neoliberal individualization are reproduced alongside opportunities for women to make their voices heard, develop solidarity, and share knowledge. For this reason, evaluating women's digital healing experiences requires addressing the gender relations, care regimes, digital platforms, and structural inequalities that shape these experiences as a whole, rather than focusing merely on individual coping skills. Such an approach makes it possible to remove healing from being a measure of individual success and connect it with social justice, collective empowerment, and a rights-based understanding of social work.

3. Conclusion and Recommendations

This study has examined the discourses of healing, self-care, and empowerment produced for women on social media from a feminist social work perspective. Theoretical discussions reveal that healing discourses circulating on social media cannot be evaluated solely as content supporting individual well-being. While these discourses carry the potential to make women's experiences visible, establish solidarity networks, and facilitate access to support mechanisms, they can simultaneously produce new pressure mechanisms by linking healing with individual responsibility, continuous self-improvement, and the expectation of visible empowerment. In this respect, digital healing culture should be evaluated as a contradictory domain encompassing dynamics of both empowerment and control.

The findings of the study demonstrate, first, that the concept of healing has undergone a significant transformation of meaning within digital culture. While healing is associated with hope, identity, life purpose, and meaning making in the recovery literature (Anthony, 1993), it is addressed in the feminist perspective as a practice of political existence and resistance against conditions of oppression (Lorde, 1984). In contrast, healing in social media environments often transforms into an aestheticized, shareable performance expected to be continuously visible. Thus, while the social and political dimensions of healing weaken, it can become one of the consumable narratives of digital culture.

Second, self-care and empowerment discourses circulating on social media are intertwined with the logic of neoliberal individualization. Instead of structural conditions such as women's mental fatigue, care labor, economic insecurity, gender inequalities, and lack of social support, discourses of individual self-management and personal development come to the fore (Cabanas & Illouz, 2019). This situation can cause the hardships women face to be detached from their social context and shifted into the domain of personal responsibility.

Third, digital platforms produce a new domain of care and emotional labor for women. Women are expected not only to manage their own well-being, but also to present their experiences in ways that instill hope, provide guidance, and offer support to others. Thus, caregiving and emotional regulation roles historically assigned to women are reproduced in the digital environment (Hochschild, 1983; Tronto, 2013). Algorithmic visibility mechanisms further reinforce this process, rendering more visible healing narratives that are aesthetic, positive, and hold high potential for engagement, while limiting the circulation of complex, uncertain, or incomplete experiences (Bucher, 2018; Gillespie, 2018). Within this framework, the central issue from a feminist social work standpoint is not to evaluate women's healing through individual resilience or personal success, but to address as a whole the gender relations, care regimes, digital visibility dynamics, and structural inequalities that shape these experiences (Dominelli, 2002). Consequently, digital healing discourses should be read not merely as a language of psychological support, but as cultural and political structures that dictate how women are expected to feel, appear, and heal.

In light of these evaluations, social work practice must take digitized life practices into account more robustly. First and foremost, it is essential for social work professionals to critically evaluate self-care and healing discourses circulating on social media, and to address women's mental fatigue alongside care labor, emotional labor, economic conditions, domestic roles, and digital visibility pressure, rather than limiting it to individual coping skills. Furthermore, the "person-in-environment" approach needs to be expanded to encompass digital platforms, algorithmic visibility processes, and online interactions.

Addressing digital literacy together with gender sensitivity in social work interventions aimed at women will support women in critically evaluating the healing and self-care discourses they encounter. In addition, developing policies that support a fairer sharing of care labor, strengthening social support networks, and expanding women's collective solidarity spaces will contribute to rethinking healing on the basis of social justice and collective empowerment rather than treating it as an individual performance.

Finally, in future research, it is important to empirically examine the impacts of digital healing discourses on different groups of women. Studies that consider intersecting axes of inequality—such as age, class, education level, economic status, motherhood experience, working life, care responsibilities, and digital access opportunities—will provide a more comprehensive understanding of how women experience digital healing culture.

In conclusion, this study demonstrates that healing discourses directed at women on social media are not merely a domain of individual support and empowerment but constitute a political space shaped at the intersection of gender, care labor, digital culture, and neoliberal individualization processes. From a feminist social work perspective, the ultimate goal is not to demand that women be stronger, but to make visible the structural conditions that produce their mental fatigue, thereby rethinking healing as a rights-based, collective, and social justice-oriented process.

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Chapter 12

Psychosocial Problems of People with Substance Use Disorder from the Perspective of the Existential Approach

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1. Introduction

Substance use disorder is a health problem arising from the use of psychoactive substances that leads to clinically significant impairments in an individual's cognitive, behavioral, and physiological functioning. While ICD-11 defines substance use disorder through physical, mental, and behavioral changes developing due to the use of psychoactive substances (World Health Organization [WHO], 2019), DSM-5-TR explains this condition as a constellation of cognitive, behavioral, and physiological symptoms characterized by the individual continuing substance use despite experiencing significant problems related to it (American Psychiatric Association [APA], 2022). The preference for the concept of "substance use disorder" over "addiction" in DSM-5 not only avoids stigmatizing terminology, but also emphasizes the continuum of the disorder extending from mild levels to severe and chronic patterns.

Substance use disorder today is a major global public health problem. According to the United Nations Office on Drugs and Crime's (UNODC) 2025 World Drug Report, approximately 316 million people used illicit substances at least once in 2023, and approximately half a million premature deaths occurred annually due to substance-related causes (UNODC, 2025). In Türkiye, substance use continues to be an important social and health issue. According to the 2025 data from the Turkish Monitoring Centre for Drugs and Drug Addiction (TUBİM), 309,028 substance-related incidents were recorded in 2024, 390,778 individuals applied to treatment centers due to substances other than nicotine and alcohol, and 427 deaths directly related to substance use occurred (TUBİM, 2025). These data demonstrate that substance use disorder is a multidimensional problem affecting not only individual health, but also public health, social welfare, and the field of social policy.

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For many years, substance use disorder has been explained within the framework of biomedical, neurobiological, and behavioral models. These approaches have provided significant contributions to understanding the biological mechanisms, psychiatric comorbidities, and environmental risk factors playing a role in the development of addiction (Volkow & Boyle, 2018). Nevertheless, the addiction experience cannot be explained solely by biological processes. Individuals with substance use disorders frequently confront psychosocial difficulties such as loneliness, alienation, stigmatization, loss of belonging, life becoming meaningless, and impairment in self-perception (APA, 2022; Duyan & Gövebakan, 2021). In recent years, it has been emphasized that addiction can also be evaluated as an existential crisis; experiences of loss of meaning, loneliness, and psychological stuckness are among the important factors maintaining substance use (Unterrainer, 2023). For this reason, explaining addiction solely through clinical symptoms may remain insufficient in terms of understanding the individual's lived experience holistically.

The existential approach offers the opportunity to evaluate substance use disorder from a different perspective by focusing on the individual's way of assigning meaning to life, their freedom, choices, responsibilities, and the fundamental realities of being human. In this approach, addiction is addressed not merely as a symptom to be eliminated, but as a multilayered process associated with the individual's existential experiences such as loneliness, meaninglessness, alienation, death anxiety, and the search for belonging (May, 1983; Yalom, 1980; van Deurzen, 2012). Such a perspective contributes to a deeper understanding of the psychosocial problems of individuals with substance use disorders.

The discipline of social work, with its approach evaluating the person within their environment and grounding itself in human rights and social justice, also goes beyond treating substance use disorder merely as a disease to be cured. Evaluating the individual's life experiences, social relationships, stigmatization processes, and search for meaning together is of importance for the development of effective interventions (International Federation of Social Workers [IFSW], 2014; Payne, 2021). The existential social work approach similarly provides a significant theoretical framework evaluating the individual's subjective experience within its social context (Temiz, 2024).

In this section, the psychosocial problems of individuals with substance use disorders are addressed in line with the existing literature, and subsequently, these problems are discussed within the framework of the core concepts of the existential approach. In the final section, the experiences of individuals with substance use disorders through the themes of death, freedom, isolation, meaninglessness, and authenticity are evaluated in line with the social work perspective.

2. Psychosocial Problems and Their Determinants

Substance use disorder is not a health problem that can be explained solely through biological processes. It is a multidimensional phenomenon affecting an individual's mental health, interpersonal relationships, family life, economic status, and social functionality. While psychological problems, social inequalities, and environmental risk factors can drive individuals toward substance use, the progression of substance use can also deepen these very problems, causing psychosocial difficulties to gain continuity. For this reason, substance use disorder must be evaluated within the mutual interaction of biological, psychological, and social processes (Biancarelli et al., 2019; Maté, 2010; Yeşilay, 2026).

In the literature, childhood traumas, family conflicts, chronic stress, economic deprivation, low social support, loneliness, stigmatization, and mental health problems are highlighted as major risk factors for substance use disorder (Biancarelli et al., 2019; Sinha, 2008). With the progression of substance use, numerous psychosocial problems emerge, such as depression, anxiety, social isolation, deterioration in family relationships, unemployment, economic losses, and a decrease in life satisfaction (Er et al., 2025; Kızılkaya et al., 2025). Qualitative research conducted in recent years reveals that individuals experience this process not merely as psychological difficulties, but as disruptions regarding the meaning of life, identity, and sense of belonging (Kızılkaya et al., 2025). Therefore, addressing the psychosocial dimensions of substance use disorder through a holistic perspective is of importance for understanding the addiction process and planning effective interventions.

2.1. Psychological Dimension

In individuals with substance use disorders, psychological problems play a decisive role in both the emergence and maintenance of the addiction process. Individuals often turn to substance use to cope with depression, anxiety, traumatic experiences, intense stress, or emotional distress; however, over time, substance use further aggravates these problems. For this reason, there is not a linear relationship between substance use disorder and psychological problems, but one based on mutual interaction (Khantzian, 1985).

Research demonstrates that depression, anxiety disorders, post-traumatic stress disorder, mood disorders, anger management difficulties, sleep problems, losses in cognitive functioning, and suicidal ideation are more prevalent among individuals with substance use disorders compared to the general population (Vederhus et al., 2016). Furthermore, it is reported that as the severity of addiction increases, symptoms of depression, anxiety, and stress intensify, leaving individuals psychologically more vulnerable (El-Sherbiny & Elsary, 2022; Kural et al., 2021; Mohamed et al., 2020).

One of the significant sources of psychological vulnerability is traumatic life experiences. While childhood traumas, neglect, abuse, family conflicts, and chronic stress are viewed as major risk factors in the development of addiction, long-term substance use weakens emotion regulation skills and reduces the capacity to cope with stress (Maté, 2010). Although individuals turning to substance use to cope with negative emotions experience short-term relief, their psychological symptoms worsen over time, and substance use transforms into a self-perpetuating cycle (Delgadillo et al., 2016). This process is associated not only with psychiatric symptoms, but also with a weakening in the individual's capacity to attribute meaning to life, deal with uncertainty, and cope with existential difficulties (Unterrainer, 2023).

From the perspective of the existential approach, depression, anxiety, loneliness, feelings of emptiness, and alienation are not merely clinical symptoms, but reflections of the relationship the individual establishes with life and their existential conflicts. Life becoming meaningless, hopelessness regarding the future, the weakening of the sense of belonging, and the disruption of self-integrity can lay the groundwork for the individual to experience substance use as an escape or a coping strategy. Therefore, it is of importance to evaluate the psychological experiences of individuals with substance use disorders not solely through symptoms, but within the context of their life story, search for meaning, and existential processes.

2.2. Social and Structural Dimension

Substance use disorder is a multidimensional phenomenon affecting not only an individual's mental health, but also their interpersonal relationships, family life, economic conditions, and the bond they establish with society. While disruptions experienced in social relationships, low social support, stigmatization, and structural inequalities can drive individuals toward substance use, the progression of substance use can also deepen these problems. For this reason, the addiction process must be evaluated beyond individual characteristics within the context of relationships established with the family, the environment, and social systems.

Social isolation and loneliness are among the most frequently encountered psychosocial problems in individuals with substance use disorders. Research demonstrates that low social support and loneliness increase the risk of turning to substance use, while substance use over time weakens relationships with family, friends, and society, thereby deepening loneliness (Hosseinbor et al., 2014). Thus, a mutually reinforcing cycle forms between social isolation and substance use. A recent cohort study also revealed that loneliness is a major risk factor associated with adverse clinical outcomes in individuals with substance use disorders (Crabtree et al., 2025).

One of the main factors negatively affecting social life is stigmatization. Individuals with substance use disorders are often evaluated through stereotypes such as "dangerous," "lacking willpower," or "criminal"; this situation brings along social exclusion, a decrease in self-esteem, and a delay in help-seeking behavior (Goffman, 2014; Stringer & Baker, 2018). Stigmatization not only limits social participation, but can also negatively affect treatment access and recovery processes. Furthermore, the internalization of stigma can negatively impact the individual's self-perception, thereby increasing hopelessness and weakening treatment motivation (Gökçeimam, 2025).

The addiction process significantly affects not only the individual, but also the family system. Family conflicts, violence, economic difficulties, the increased burden of care, and the reshaping of roles can create chronic stress and burnout among family members (Lander et al., 2013; Copello et al., 2006). Parents and spouses, in particular, may push their own psychosocial needs into the background while attempting to control the individual's substance use. For this reason, substance use disorder should be addressed as a relational process evaluated within the family system. Contemporary studies emphasize that addiction creates long-term psychological, social, and economic impacts on family members as well, and that family-focused interventions are a crucial component of the recovery process (Bischof et al., 2025).

Individuals with substance use disorders also face significant difficulties regarding working life, economic conditions, and access to healthcare services. While discrimination in the labor market, long-term unemployment, and economic deprivation deepen social exclusion (EMCDDA, 2021; Maynes & Grant, 2024), stigmatization, insufficiencies in service capacity, treatment costs, and geographic accessibility issues can hinder individuals from utilizing healthcare services (McLellan, 2017; Cernasev et al., 2021). These findings demonstrate that substance use disorder cannot be explained solely by individual behaviors; it is a structural problem closely related to social policy, employment, and healthcare systems.

When social and structural factors are evaluated together, substance use disorder cannot be considered independent of the network of relationships surrounding the individual's life. Strengthening social support mechanisms, reducing stigmatization, expanding family-focused interventions, and facilitating access to healthcare services will not only support the recovery process, but also contribute to reducing the risk of addiction recurrence. Similarly, supporting family members' help-seeking behaviors for professional assistance is evaluated as an important element that facilitates the recovery of both the individual and the family system (Bortolon et al., 2025).

3. The Existential Approach

The existential approach is a holistic model that does not explain the difficulties experienced by an individual solely through psychopathology or symptoms, but focuses on their way of assigning meaning to life, their choices, freedom, responsibilities, and the relationship they establish with the inevitable realities of life. According to this perspective, psychological problems do not merely consist of clinical symptoms; they are also closely related to the individual's existential experiences such as loss of meaning, loneliness, uncertainty, death awareness, and the weakening of the relationship established with oneself (Yalom, 1980; May, 1983). Approaches in recent years proposing that addiction can be addressed as an existential neurosis also support this point of view (Unterrainer, 2023). In this respect, the existential approach offers a crucial theoretical framework for understanding the psychosocial experiences of individuals with substance use disorders.

The intellectual foundations of the existential approach rest upon the views of Kierkegaard, Nietzsche, Heidegger, and Sartre regarding human freedom, responsibility, and the meaning of life. In the field of psychotherapy, Viktor Frankl, Rollo May, Irvin D. Yalom, and Emmy van Deurzen contributed significantly to the development of the approach by adapting these ideas into clinical practice. The common core view they adopt is that human beings are not passive entities; they are active subjects who shape their lives through choices and possess the capacity to construct meaning in the face of difficulties they encounter.

The existential approach diverges from deterministic explanations that view human beings merely as products of biological, psychological, or social processes. This approach addresses the individual as an active subject capable of making choices, directing their life, and attributing meaning to their lived experiences. Human life is not a passive acceptance of ready-made meanings, but a dynamic process constantly reconstructed in line with the individual's freedom, responsibility, and choices (May, 1983; Yalom, 1980).

Existential theory acknowledges that throughout life, human beings inevitably face realities such as uncertainty, loss, death, loneliness, and meaninglessness. A significant portion of psychological problems can emerge in the form of avoiding these realities or failing to confront them. Therefore, the goal of the existential approach is not to eliminate anxiety entirely; rather, it is to support the individual in establishing a more functional relationship with this experience by accepting that anxiety is a natural part of life (Yalom, 1980; van Deurzen & Arnold-Baker, 2023).

In this approach, freedom does not mean the individual can do whatever they want; it refers to the capacity to make choices and assume responsibility for those choices. Similarly, meaning is not a value granted from the outside, but a dynamic process created by the individual within their life experiences. Consequently, the existential approach evaluates the individual not solely through their symptoms, but together with their life story, relationships, values, and expectations regarding the future (Frankl, 2009; May, 1983).

With these characteristics, the existential approach provides an important theoretical framework for understanding the experiences of individuals living through intense loss, alienation, loneliness, worthlessness, and the search for meaning. In the context of substance use disorder, it evaluates addiction not merely as a behavior to be eliminated, but as a part of the individual's relationship with life and their existential struggle.

Core concepts of the existential approach, such as freedom, responsibility, search for meaning, loneliness, and death awareness, make it possible to go beyond approaches that explain substance use disorder solely through clinical symptoms. Biomedical models offer significant contributions to understanding the neurobiological mechanisms of addiction; behavioral and cognitive approaches to understanding learned behavioral patterns and cognitive processes; and psychosocial approaches to understanding environmental risk factors. Nevertheless, these approaches may remain limited in explaining the subjective meaning the individual attributes to substance use, the existential vacuums in their life, and the relationship they establish with the inevitable realities of being human. The existential approach, on the other hand, evaluates substance use not merely as a behavior to be reduced or eliminated, but within the context of the individual's life story, values, relationships, and search for meaning. In this respect, rather than being an alternative to existing theories of addiction, it offers a framework that complements them and contributes to a more holistic understanding of the individual's experience.

From the perspective of social work, this holistic view carries great importance. Social work practices address the individual not only through their biological or psychological characteristics, but together with their family relationships, social support networks, economic conditions, social participation, and life experiences (Gençer et al., 2021). The emphasis the existential approach places on the individual's subjective experience and social work's "person-in-environment" perspective can be evaluated as two complementary outlooks (Temiz, 2024). Accordingly, in interventions conducted with individuals with substance use disorders, focusing solely on altering substance use behavior is not sufficient; the meaning the individual attributes to their life, the relationships they establish, their hopes for the future, and the structural conditions shaping their life must be evaluated together. Within this framework, the psychosocial problems of individuals with substance use disorders are addressed below in line with the core concepts of the existential approach from a social work perspective.

4. Psychosocial Problems of Individuals with Substance Use Disorder from an Existential Perspective

For many years, substance use disorder has been explained within the framework of biological, neuropsychological, and behavioral models. Although these approaches have offered significant contributions to understanding the development mechanisms of addiction, treatment processes, and relapse risk, they can remain limited in explaining the subjective meaning the individual attributes to substance use. Yet, for many individuals, substance use is not merely a physiological addiction or a difficulty experienced in impulse control; it can also be experienced as an attempt to cope with life's difficulties, alleviate loneliness, suppress pain, develop a sense of belonging, or render life bearable. For this reason, explanations aimed at understanding substance use disorder must also take into account the existential experiences lived by the individual.

The existential approach asserts that human beings' fundamental concerns arise not merely from psychopathological symptoms, but from the inevitable realities of being human, such as death, loneliness, freedom, responsibility, and the search for meaning. Viewed from this perspective, substance use can be evaluated as a reflection of the relationship the individual establishes with these realities. At this point, what is important is not only why the individual uses substances, but also what function substance use serves in their life, what void it compensates for, and which existential needs it corresponds to. In recent years, it has been emphasized that addiction can also be addressed as an existential neurosis and that the loss of meaning lies at the center of the addiction process (Unterrainer, 2023). This point of view evaluates addiction not merely as a behavior to be eliminated, but as an experience that gains meaning within the individual's life story.

Numerous psychosocial risk factors such as trauma, social exclusion, stigmatization, economic difficulties, family conflicts, and social isolation draw attention in the life stories of individuals with substance use disorders. These experiences not only affect mental health negatively, but also transform the relationship the individual establishes with themselves, other people, and life itself. From the perspective of the existential approach, experiences such as loneliness, alienation, meaninglessness, and death anxiety can play an important role in the emergence and maintenance of substance use. Indeed, contemporary qualitative research demonstrates that individuals with substance use disorders experience their lived realities along the axis of loss of belonging, identity confusion, meaninglessness, and hopelessness regarding the future (Kızılkaya et al., 2025). Therefore, addiction can be understood not merely as a relationship established with a chemical substance, but as a multidimensional experience reflecting the individual's existential position in the face of life.

In this section, substance use disorder is addressed in line with the core themes of the existential approach. First, existential isolation and the search for belonging; subsequently, loss of meaning, conflicts of freedom and responsibility, and experiences of death and finiteness will be discussed within the context of the addiction process. Finally, the recovery process will be evaluated not merely as the termination of substance use, but as an existential transformation through which the individual can rebuild an authentic life. Thus, the theoretical and practical contributions that the existential approach can provide to social work practices will be presented through a holistic perspective.

4.1. Existential Isolation and the Search for Belonging

When the life stories of individuals with substance use disorders are examined, it is observed that loneliness, lack of belonging, social exclusion, and stigmatization play significant roles in both the emergence and maintenance of the addiction process (Crabtree et al., 2025). While psychosocial problems such as trauma, family conflicts, economic deprivation, social isolation, low social support, chronic stress, and identity confusion increase the risk of substance use, the progression of substance use also deepens loneliness, alienation, and social exclusion, forming a cycle based on mutual interaction between addiction and psychosocial problems (UNODC, 2023; Biancarelli et al., 2019; Maté, 2010).

From the perspective of the existential approach, this process is not explained merely by disruptions experienced in social relationships. The loneliness experienced by the individual is associated with existential isolation, which is one of the fundamental realities of being human. Yalom (1980) addresses isolation across three dimensions: interpersonal isolation, intrapersonal isolation, and existential isolation. Interpersonal isolation refers to the individual's physical or emotional distance from other people, while intrapersonal isolation refers to the individual's alienation from their own emotions, desires, and potential. Existential isolation, on the other hand, refers to the unbridgeable loneliness arising from the reality that despite establishing close relationships with others, the individual ultimately experiences their life, choices, and death alone. Therefore, existential isolation is evaluated as a core characteristic of human existence, independent of the number of social relationships.

The life experiences of individuals with substance use disorders show that these three forms of isolation are often intertwined. Neglect and abuse experienced during childhood, family conflicts, the erosion of trust relationships, and social exclusion can make it difficult for the individual to build trust-based relationships with others. In addition, the labeling of individuals by society as "criminal," "dangerous," "lacking willpower," or "morally weak" further limits their social relationships. Discrimination experienced in access to healthcare services, prejudices in education and working life, and exclusionary attitudes encountered in daily life reduce social participation and deepen the experience of loneliness. Thus, the individual not only distances themselves from their environment, but may also begin to lose faith in the belief that life is a place worth building meaningful relationships in (UNODC, 2023; Goffman, 2014). Contemporary research also demonstrates that loneliness in individuals with substance use disorders is not merely a social problem, but a major determinant affecting treatment outcomes and the recovery process (Crabtree et al., 2025).

For social workers working with individuals with substance use disorders, existential isolation should not be evaluated merely as an individual emotional state. This experience is often shaped together with social determinants such as stigmatization, poverty, ruptures in family relationships, precarious living conditions, and social exclusion. Consequently, the loneliness experienced by the individual can be a result not only of deficits in interpersonal relationships, but also of inequalities produced by the social structure. When social work's person-in-environment approach is combined with the existential approach's emphasis on the individual's subjective experience, it necessitates the joint evaluation of both the individual and structural dimensions of loneliness and alienation. This perspective requires interventions to focus not only on developing the individual's coping skills, but also on strengthening social support networks, reducing discrimination, and mobilizing environmental resources that support the individual's participation in social life.

The process of stigmatization carries special importance at this point. According to Goffman, stigmatization causes the individual's social identity to be redefined through negative attributes. Over time, individuals with substance use disorders are not only stigmatized by society, but can also internalize these negative evaluations. As a result of internalized stigma, the individual may perceive themselves as worthless, unsuccessful, or outside of society; help-seeking behavior decreases, and they may increasingly pull away from social relationships. The internalization of stigma can damage self-perception, thereby increasing hopelessness and weakening treatment motivation (Gökçeimam, 2025). Thus, stigmatization ceases to be merely a social problem and transforms into an existential experience that affects the individual's self-perception and their relationship with life.

From the perspective of the existential approach, the alienation experienced by the individual is not limited solely to pulling away from society. According to van Deurzen (2012), feelings of meaninglessness, inability to establish authentic relationships, and self-alienation are among the core indicators of existential problems. When the loneliness, lack of belonging, and alienation observed in individuals with substance use disorders are evaluated within this framework, it becomes clear that addiction is not merely a biological or behavioral problem, but a multidimensional process involving the disruption of the relationship the individual establishes with themselves, other people, and life itself.

In this context, substance use is not a behavior that merely provides pleasure or reduces negative emotions for many individuals. For individuals experiencing intense loneliness, worthlessness, and exclusion, substance use can become a coping mechanism that provides short-term psychological relief and lightens the emotional burden. However, this relief is not permanent. As substance use progresses, family relationships weaken, social support networks narrow, education and working life are negatively affected, and social participation gradually declines. Ultimately, the substance initially used to cope with loneliness forms a cycle that further increases loneliness over time. Therefore, addiction can begin as an attempt to escape existential isolation; in the advancing process, it can deepen both interpersonal and existential isolation.

When evaluated from a social work perspective, these findings demonstrate that focusing interventions solely on the termination of substance use is not sufficient. When the importance the existential approach places on the individual's subjective experience is considered alongside social work's empowerment and person-in-environment approaches, enabling the individual to re-develop trust-based relationships, strengthen social support networks, and actively participate in social life stand among the primary intervention goals. Family-focused studies, group interventions, peer support programs, advocacy activities aimed at combating stigma, and community-based social work practices are not merely services providing social support; they are interventions contributing to the individual's re-development of a sense of belonging, reduction of feelings of alienation, and repair of the relationship they establish with life (Bischof et al., 2025; Bortolon et al., 2025). In this respect, the existential approach provides an important theoretical framework allowing for the understanding of not only the substance use behavior of individuals with substance use disorders, but also the relational and existential needs underlying this behavior (IFSW, 2014; Payne, 2021).

4.2. Loss of Meaning and the Experience of Emptiness

The search for meaning, one of the core concepts of the existential approach, is a fundamental source of motivation for human beings to sustain their lives and cope with the difficulties they encounter. The belief that life is meaningful enables the individual not only to set future-oriented goals, but also to make sense of the suffering and losses experienced. Conversely, perceiving life as meaningless, aimless, and directionless can bring along problems such as hopelessness, alienation, and psychological vulnerability. From the perspective of the existential approach, this situation expresses the experience of meaninglessness, which is one of the ultimate existential concerns of human beings (Frankl, 2009; Yalom, 1980).

In the life stories of individuals with substance use disorders, loss of meaning is an experience that often begins before addiction, but deepens with the progression of the addiction process. Childhood traumas, family conflicts, social exclusion, economic difficulties, chronic stress, identity confusion, and a lack of belonging make it difficult for the individual to experience their life in a meaningful and integrated manner. Individuals who struggle to cope with the problems in their lives may turn to substance use in order to alleviate intense psychological pain. Therefore, addiction is not a phenomenon that can be explained solely by the pursuit of pleasure, but can be evaluated as a coping attempt associated with an ever-expanding vacuum of meaning in the individual's life (Maté, 2010; Sinha, 2008). Indeed, contemporary studies demonstrate that individuals with substance use disorders often experience addiction alongside losses regarding the meaning of life, identity, and the future (Kızılkaya et al., 2025).

According to Frankl, the primary human motivation is not to gain pleasure or avoid pain, but to find meaning in life. When an individual strays from goals that make life meaningful, the "existential vacuum" emerges. This vacuum often manifests itself through boredom, hopelessness, feelings of worthlessness, and the thought that life is meaningless. Individuals experiencing an existential vacuum have an increased likelihood of turning to short-term gratifying behaviors to fill this void. Substance use can be evaluated as one of these behaviors, because the substance temporarily reduces the psychological pain experienced by the individual and provides short-term relief. However, this relief does not eliminate fundamental questions regarding the meaning of life; on the contrary, it narrows the individual's life further over time.

In the existential perspective, meaning is not a purely abstract phenomenon discovered solely in the inner world of the individual; it is constantly reconstructed within relationships established with other people, social roles, productivity, solidarity, and experiences of belonging. In this respect, the loss of meaning is associated not only as an individual existential crisis, but also with the weakening of social bonds. From a social work perspective, constructing new sources of meaning in the individual's life is not limited merely to supporting psychological well-being. Strengthening opportunities for education, employment, voluntary activities, family relationships, peer support, and social participation also stands among the essential components of the process of re-attributing meaning to the individual's life. Thus, the search for meaning is linked not only with individual self-awareness, but also with the reinforcement of a supportive social environment (Temiz, 2024).

The literature shows that individuals with substance use disorders place the substance at the center of their lives over time. Substance use, which is merely a part of life at the beginning, becomes the primary element determining daily life, social relationships, economic resources, and future plans in the advancing process. Thus, domains generating meaning—such as education, profession, family relationships, personal development, and social participation—lose their importance, while life begins to shape itself around procuring and using the substance. This situation indicates that addiction is not merely a biological or behavioral process, but also expresses an existential transformation in which the sources of meaning in the individual's life are progressively lost.

From the perspective of the existential approach, loss of meaning is not merely a lack of goals. The individual's inability to live in line with their own values, develop hope for the future, and generate choices that guide their life are also major components of the experience of meaninglessness. As substance use disorder progresses, life becomes structured around short-term rewards; future plans give way to immediate pleasure seeking. Consequently, the narrative of life that provides continuity between past, present, and future fractures, making it difficult for the individual to evaluate their life as a meaningful whole.

The recovery process, on the other hand, is not limited solely to the termination of substance use. Literature states that individuals entering the recovery process begin to rediscover their genuine desires, purposes, and life goals over time. A life shaped under the influence of the substance leaves its place to new goals established by the individual in line with their own values. Thus, the individual does not merely become someone who does not use substances; they orient toward a position where they can make plans for the future, attribute meaning to their life, and become the active subject of their own existence. This transformation aligns with the existential approach's outlook evaluating the search for meaning as one of the primary components of recovery.

When evaluated from a social work perspective, the search for meaning is one of the core components of interventions conducted with individuals with substance use disorders. Interventions focusing solely on getting the individual to quit substance use may not be sustainable when new sources of meaning filling the emerging void in their life are not created. For this reason, strengthening areas that can lend meaning to the individual's life—such as occupational roles, education, productivity, voluntary activities, family relationships, social participation, arts, sports, and peer support—carries great importance. The existential approach contributes to positioning the social worker not merely as a practitioner who reduces risks, but as a facilitator accompanying the process of re-attributing meaning to the individual's life. In this context, one of the primary questions of recovery should be not only "How can we end substance use?", but "How can resources that render the individual's life meaningful again be created after quitting the substance?

4.3. Freedom, Choice, and Responsibility

One of the core assumptions of the existential approach is that the human being is a free entity capable of making choices and directing their own life. However, this freedom does not imply unlimited license. Being free requires the individual to assume the consequences of their choices and take responsibility for their life. Therefore, according to existential thinkers, freedom and responsibility are two inseparable concepts. While shaping their life largely in line with their own choices, the individual also confronts the uncertainty, anxiety, and responsibility brought about by these choices. One of the primary sources of existential anxiety is that the individual is compelled to make choices that will determine their life. Thus, freedom is evaluated not only as one of the most fundamental possibilities of human existence, but also as one of its most significant existential burdens (Yalom, 1980; May, 1983; Sartre, 2014).

When evaluated from the standpoint of substance use disorder, the concept of freedom gains a more complex appearance. In the initial periods of substance use, individuals often believe that they use the substance of their own free will and maintain control over this behavior. The short-term pleasure, relaxation, or sense of psychological escape provided by the substance can be perceived as a free choice. However, as addiction develops, the behavior that initially appeared to be a free choice transforms into a compulsory pattern; the individual's life increasingly revolves around obtaining and using the substance. Consequently, the domain of freedom narrows, and choices begin to occur within the boundaries determined by addiction.

In this process, the planning of daily life, the maintenance of social relationships, the utilization of economic resources, and future-oriented goals are structured largely around substance use. Instead of making decisions in accordance with their own values, the individual tends toward choices that will reduce withdrawal symptoms or facilitate access to the substance. Thus, substance use, which was initially thought to be under the individual's control, over time becomes the primary determinant directing their behavior. This situation demonstrates that addiction significantly limits not only physical health, but also the individual's capacity to exercise free will.

Yalom (1980) states that freedom brings responsibility along with it and that realizing one is the creator of one's own life can evoke intense existential anxiety. For individuals with substance use disorders, experiencing this awareness is often difficult. As addiction progresses, the individual may display a tendency to attribute the problems in their life solely to environmental conditions, family relationships, or the substance. However, the recovery process requires the individual to regain the capacity to make future-oriented choices without denying the hardships in their life. Therefore, from the perspective of the existential approach, responsibility does not imply blaming; it signifies the individual's realization of their potential to rebuild their life.

Nonetheless, the individual's capacity to take responsibility is not independent of the social and structural conditions encompassing their life. Poverty, unemployment, precarious housing, limited educational opportunities, stigmatization, discrimination, and difficulties encountered in access to healthcare services can narrow the individual's options and effectively constrain their freedom. Therefore, the concept of responsibility emphasized by the existential approach should not be interpreted as an individualistic notion that disregards the structural barriers faced by the individual. From a social work perspective, what is essential is to support the individual's decision-making capacity regarding their own life while rendering visible the environmental and societal barriers limiting this capacity and developing interventions aimed at reducing them. Thus, freedom is evaluated not merely as a product of individual will, but also of the social conditions that make access to real options possible (Temiz, 2024).

The addiction literature also demonstrates that in the advanced stages of substance use, individuals move away from long-term goals and orient toward short-term rewards. Immediate pleasure and relief take precedence over gains to be achieved in the future; education, profession, family relationships, and life goals can be pushed into the background. The preference for short-term rewards over long-term consequences is evaluated as one of the key mechanisms maintaining addiction. This process represents not merely a behavioral choice, but the weakening of the relationship the individual establishes with the future.

Nevertheless, the existential approach does not accept that the individual's freedom has vanished entirely. Although addiction severely constrains the individual's field of choice, the potential for change is not completely destroyed. One of the crucial stages of the recovery process is for the individual to move away from the lifestyle determined by substance use and make new choices in line with their own values. In this process, the individual re-evaluates not only quitting the substance, but also what kind of life they wish to lead, according to which values they will live, and how they will shape their future. Thus, freedom gains meaning beyond the decision of whether or not to use substances, as the capacity to re-direct one's life.

When evaluated from a social work perspective, the concepts of freedom and responsibility should not be addressed through a punitive or moralistic outlook. The primary goal of interventions is not to judge the individual for the choices they have made, but to reinforce the conditions under which they can make choices anew. Without strengthening structural conditions such as housing, employment, education, social support, access to healthcare services, and anti-discrimination, the individual cannot be expected to make free choices. For this reason, in social work practices, it carries great importance to support the individual's active participation in decision-making processes regarding their own life, strengthen their self-efficacy, and help them construct realistic life goals for the future. When the concepts of freedom and responsibility of the existential approach are evaluated alongside social work's empowerment perspective, they reveal that addiction interventions must aim not only to end substance use, but also to enable the individual to become the active subject of their own life once again (IFSW, 2014; Payne, 2021).

4.4. Death, Finiteness, and Vulnerability

Death is one of the foundational concepts of the existential approach and is evaluated as one of the most fundamental existential realities that human beings inevitably have to confront. Yalom (1980) defines death as the "ultimate concern" of human beings and states that the conflict between the desire to sustain life and the inevitability of death is one of the primary sources of existential anxiety. Although humans know that death is inevitable, they do not wish to constantly confront this reality; they often push the thought of death outside of daily life. However, awareness of death does not completely vanish; it can become visible once again through loss, illness, trauma, and crises.

Becker (1973) explains many human behaviors through the effort to cope with the fear of death. Accordingly, individuals are aware that their lives are finite, and to cope with this awareness, they tend to generate meaning, leave a trace, belong to a group, and create goals that will make their lives feel valuable. However, this process does not always proceed in a healthy manner. Individuals who struggle to cope with death anxiety may turn to short-term coping mechanisms capable of suppressing intense psychological pain. Substance use is evaluated as one of these coping mechanisms. From this perspective, addiction is addressed not merely through biological or behavioral processes, but also within the context of the relationship the individual establishes with experiences of death, finiteness, and vulnerability.

In the literature, there are studies demonstrating that death anxiety may be higher in individuals with substance use disorders. In MacKenna's (2007) study, it is stated that the levels of death anxiety in individuals with substance use disorders are higher compared to individuals who do not use substances. Similarly, in research conducted with individuals with alcohol use disorder, although death anxiety is not always found to be significantly high, suicidal ideation, suicide attempts, and self-harming behaviors are reported to occur more frequently (Çiçek, 2021). These findings show that the relationship established with death is not limited solely to the fear of death; it must be evaluated together with the desire to sustain life, hopelessness, self-harming behaviors, and questioning regarding the meaning of life.

With the progression of substance use, the visibility of the phenomenon of death in the individual's life also increases. Overdose, infections, chronic illnesses, accidents, violence, suicide risk, and the likelihood of premature death are among the major consequences of addiction. In addition to this, the individual faces not only the risk of physical death, but also social and psychological losses due to reasons such as the deterioration of family relationships, the loss of social roles, and distancing from education and working life. This situation demonstrates that death encompasses not only biological termination, but also multidimensional losses in life.

For many individuals with substance use disorders, death can cease to be merely an abstract possibility occurring in the future and become a felt part of daily life. Experiences such as losing friends due to overdose, witnessing substance use stories that result in death, experiencing life-threatening situations, or frequently encountering the risk of death increase the visibility of death. Over time, this situation can cause death to become normalized, the awareness regarding the vulnerability of life to alter, and risky behaviors to become commonplace. Viewed from an existential perspective, the normalization of death does not mean that the individual has become desensitized to the finiteness of life. On the contrary, while it deepens questioning regarding the meaning of life in some individuals, it can reinforce hopelessness and detachment from life in others. Therefore, the nature of the relationship established with death is one of the important existential dimensions in understanding the experience of addiction.

From the perspective of the existential approach, awareness of death is not an event that merely generates anxiety. At the same time, it is viewed as a crucial opportunity for the individual to re-evaluate their life, review their priorities, and make more authentic choices. According to Yalom, when an individual begins to accept the inevitability of death, they realize that life is limited and can turn toward areas they truly value. In addiction treatment as well, it is observed that many individuals make the decision to recover following life-threatening experiences. This situation demonstrates that death awareness can strengthen the motivation for change for some individuals.

When evaluated from the perspective of social work, experiences of death and finiteness should not be addressed merely within the scope of crisis intervention. In practices conducted with individuals with substance use disorders, fear of death, hopelessness, suicide risk, experiences of loss, and questioning regarding the meaning of life must be evaluated holistically. Beside this, recognizing the individual's strengths, developing hope for the future, restructuring sources of meaning in their life, and strengthening social support systems are of importance. The existential approach's handling of death not merely as an anxiety to be avoided, but as a fundamental reality that renders the value of life visible, provides an important theoretical framework in social work practices that can contribute not only to reducing the individual's risks, but also to restoring meaning to their life (IFSW, 2014; Payne, 2021).

4.5. Redirecting Towards an Authentic Life

One of the primary goals of the existential approach is to support the individual in sustaining their life in an authentic manner, guided by their own values and conscious choices. Authenticity refers to the individual's ability to make choices by taking responsibility for their own life, rather than acting in line with societal expectations or avoidance behaviors. Therefore, from the perspective of the existential approach, psychological well-being is associated not merely with the disappearance of symptoms, but with the individual's ability to establish a more genuine relationship with themselves, other people, and life itself (Yalom, 1980; van Deurzen, 2012).

When the recovery process of individuals with substance use disorders is evaluated within this framework, it becomes clear that treatment cannot be reduced solely to the termination of substance use. Throughout the addiction process, the individual's daily life is largely shaped around substance use; interpersonal relationships, professional roles, family life, interests, and goals for the future gradually narrow. Consequently, the termination of substance use can create a significant void in the individual's life. If this void cannot be filled with new sources of meaning, relationships, and life goals, the sustainability of recovery also becomes difficult. This situation demonstrates that addiction treatment must encompass not only quitting the substance, but also building a new life (Unterrainer, 2023).

The recovery process also involves an identity transformation in which the individual redefines themselves. Throughout the addiction process, many individuals may begin to perceive themselves through stigmatizing identity definitions such as "addict," "failure," "dangerous," or "outcast." Over time, these definitions cease to be merely labels imposed by the environment and become a part of self-perception. In the recovery process, however, the individual does not merely become someone who terminates substance use; they become an active subject who reinterprets their life story, discovers their strengths, and constructs a new identity narrative regarding their future. From the perspective of the existential approach, authentic living gains meaning within this transformation. Authenticity is not the denial of past experiences; it is the individual's ability to accept these experiences as part of their life story and build a new life in line with their own values without allowing them to be the sole determinant of their future.

From the perspective of the existential approach, recovery requires the individual to reconnect with the fundamental existential realities of their life. Being able to face loneliness, rediscovering the meaning of life, establishing a balance between freedom and responsibility, and sustaining life more consciously by accepting the inevitability of death are among the crucial components of this process. For this reason, recovery should be evaluated not as a linear process, but as a dynamic and multidimensional transformation process through which the individual restructures their life. In this process, the individual does not merely move away from addiction; they redefine themselves, their relationships, and their future.

In the literature, it is emphasized that one of the most important indicators of recovery is the individual's re-participation in social life. Re-establishing trust-based relationships, strengthening family bonds, participating in education and working life, assuming productive roles, and expanding social support networks not only increase the individual's functionality, but also contribute to their feeling valued and a part of life. In this respect, recovery is not merely refraining from substance use; it is the ability to re-develop a sense of belonging, generate hope, and take place as an active subject within life (Bischof et al., 2025; Bortolon et al., 2025).

In the existential social work perspective, the social worker is not a person who makes decisions on behalf of the individual or directs their life. On the contrary, the social worker is a facilitator who accompanies the individual in re-assigning meaning to their life story, recognizing their strengths, developing their decision-making capacity, and forming realistic goals for the future. The professional relationship established during this process creates a safe space where the individual is accepted without judgment, their experiences are sought to be understood, and their taking responsibility for their own life is supported. Such a relationship can also contribute to reducing the feelings of alienation and loneliness the individual has experienced for a long time (Payne, 2021).

Nevertheless, it would be insufficient to think that an authentic life is possible solely through individual effort. Stigmatization, poverty, unemployment, housing problems, social exclusion, and difficulties in accessing healthcare services faced by individuals with substance use disorders are among the major structural obstacles to recovery (UNODC, 2023). Therefore, for the individual to realize their own potential, not only individual change but also the social environment and societal conditions must become supportive. The social work profession's principles of human rights, social justice, and empowerment provide an important framework complementing the existential approach at this point. The individual's ability to rebuild their life depends not only on increasing their internal awareness, but also on accessing opportunities for education, employment, housing, healthcare, and social participation (Temiz, 2024).

In conclusion, the existential approach does not treat substance use disorder merely as a biological, psychiatric, or behavioral problem. This approach evaluates addiction together with core existential experiences in the individual's life such as loss of meaning, loneliness, freedom, responsibility, death, and belonging. Moving beyond a narrow intervention understanding aimed solely at eliminating substance use, this point of view offers social work practices a holistic perspective that supports the individual in restoring meaning to their life, strengthening their participation in social life, and building a more authentic life in line with their own values. Therefore, the existential approach forms an important theoretical foundation in social work practices conducted with individuals with substance use disorders, addressing both individual change and the transformation of the social environment together (IFSW, 2014; Payne, 2021).

Conclusion and Recommendations

Substance use disorder, beyond being a complex public health problem encompassing biological, psychological, and social dimensions, is a multifaceted lived experience that affects the way an individual assigns meaning to their life, their interpersonal relationships, and the bond they build with life. For this reason, evaluating addiction solely through substance use behavior or clinical symptoms remains insufficient in understanding the psychosocial and existential difficulties experienced by the individual. The existential approach addressed in this section offers the opportunity for a more holistic evaluation by handling addiction within the context of fundamental existential experiences such as loneliness, belonging, the search for meaning, freedom, responsibility, death awareness, and the pursuit of an authentic life.

The existential perspective demonstrates that the psychosocial problems experienced by individuals with substance use disorders are not merely the consequences of addiction; rather, they are often closely related to core life experiences that play an effective role in the development and maintenance of addiction. Experiences such as childhood traumas, social exclusion, stigmatization, poverty, family conflicts, loss of meaning, and lack of belonging can be effective in driving the individual toward substance use, as well as deepening further in the advancing stages of addiction. Thus, a mutually reinforcing, cyclical relationship emerges between addiction and psychosocial problems. This situation reveals that interventions must focus not only on terminating substance use, but also on the psychosocial and existential processes that feed the addiction.

The social work profession, through its perspective that evaluates the person within their environment, its empowerment approach, and its human rights-based practice principles, offers significant opportunities for transferring the outlook provided by the existential approach into practice. In social work practices conducted with individuals with substance use disorders, it is of importance to carry out assessments aimed at understanding the individual's life story, subjective experiences, and the meanings they attribute to their life. Alongside this, strengthening family relationships, developing social support systems, combating stigmatization, increasing social participation, and supporting the individual's access to education, employment, and housing opportunities must be addressed as integral components of the recovery process.

It is observed that studies addressing the existential approach in the field of social work within the context of substance use disorders remain limited. In future research, there is a need for qualitative, quantitative, and mixed-method studies evaluating the impact of existential social work interventions on addiction treatment. In particular, examining the relationships between the individual's search for meaning, sense of belonging, hope, life purpose, and level of authenticity and their recovery process will provide significant contributions to social work practices in the field of addiction. Furthermore, studies to be conducted with different age groups, women, youth, homeless individuals, individuals discharged from correctional institutions, and groups with comorbidity will contribute to a more comprehensive understanding of the existential dimensions of addiction.

In conclusion, an effective social work intervention in the field of substance use disorders should not aim solely at reducing or terminating substance use. At the same time, it must support the individual in being able to regenerate meaning, develop belonging, foster hope, strengthen social relationships, and build a more authentic life by assuming responsibility for their own life. Accordingly, focusing merely on risk reduction or symptom control in social work practices is not sufficient. Developing rights-based, empowering, and relationship-oriented interventions that accompany the individual in restoring meaning to their life, rediscovering their strengths, strengthening their social bonds, and building a sustainable life in line with their own values is of paramount importance. The existential approach offers a crucial theoretical framework for social work practices conducted in the field of substance use disorders through a perspective that does not explain the individual's difficulties merely through pathology, but centers on the human potential to change, gain strength, and rebuild one's life.

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