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CONTENTS

Accumulation through Borrowing: Capital and Social Transformation in the Neoliberal Era in Turkey*

Yunus AYDOĞDU**

Abstract

This study examines the effects of debt policies on capital accumulation and social transformation in the neoliberal period in Turkey. In the post-1980 period, neoliberal policies reinforced the dominance of financial capital while making debt mechanisms one of the main instruments of social control. Especially with the liberalization of capital movements in 1989, financial capital accumulation and debt strategies gained a new dimension. The politics of debt in Turkey has been shaped by the state's transfer of resources to finance capital through domestic borrowing, the marketization of public services and the inclusion of households in the financial system. This study argues that the neoliberal debt regime is not only an economic strategy, but also plays a central role in the construction of social control and disciplinary mechanisms. While ensuring the sustainability of capital accumulation, this regime reorganized the power relations between social classes in favor of finance capital.

Keywords: *Neoliberalism, Debt, Finance Capital, Capital Accumulation, Politics of Debt in Turkey.*

1. Introduction

The global expansion of neoliberal policies since the 1970s has led to radical transformations in capitalist relations of production and capital accumulation processes. In this process of transformation, financialization and debt mechanisms have become the fundamental dynamics of capital accumulation, while social reproduction processes have been reshaped around these mechanisms. The politics of indebtedness has become not only an economic strategy, but has also come to play a central role in the construction

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of social control and disciplinary mechanisms. In this context, analyzing the functions and effects of debt practices in the neoliberal period is critical to understanding the dynamics of contemporary capitalism.

The theoretical framework of the study is based on an approach that considers the social and economic dimensions of debt relations together. Nietzsche's analysis of the "creditor-debtor" relationship in the context of power and authority and Marx's analysis of national debt and finance capital enable us to understand both the capital accumulation and social control dimensions of debt mechanisms. Harvey's concept of accumulation through dispossession and Lazzarato's critical analysis of the 'indebted subject' provide a nuanced theoretical framework for comprehending the transformative dynamics of debt practices within the neoliberal economic paradigm.

Studies on the politics of indebtedness in the literature generally address the issue either through macroeconomic indicators or from the perspective of household indebtedness at the microeconomic level. This study, on the other hand, aims to provide a political economy analysis of debt mechanisms by addressing both the capital accumulation and social control dimensions together.

Turkish experince offers an important case example of analysis of neoliberal transformation. The structural transformation created by the post-1989 financial liberalization process, the transformation of public borrowing into the main dynamic of financial capital accumulation and the deep penetration of debt mechanisms into social life stand out as the distinctive features of this period. The rise of financial capital, the formation of rentier economy and the transformation of debt relations into an instrument of social control make the Turkish experience a distinctive example of neoliberal transformation. So, this work aims to look at the roles played by debt mechanisms in neoliberal transformation by specifically focusing on Turkish case.

Methodologically, the study combines political economy analysis, historical comparison and critical discourse analysis. In this framework, through the evaluation of both primary sources (official documents, statistical data) and secondary sources (academic literature), the development and effects of debt mechanisms are analyzed in a multidimensional manner.

The study consists of four main sections. The first section discusses the relationship between neoliberal policies and the politics of debt at the theoretical level. The second section analyzes the processes of discipline and capital accumulation through borrowing. The third section analyzes the development of debt mechanisms in the post-1980 neoliberal transformation process in Turkey. The last section evaluates the main findings of the study and presents a general discussion.

2. Neoliberal Policies and the Politics of Debt

In its historical process and development, it is possible to speak of three types of liberalism. These are known as "classical liberalism", "compromise liberalism" (Keynes economics/welfare state capitalism) and "neoliberalism". The basic logic of classical liberalism is individualism, individual rights and freedoms, private property and a free market system without state intervention. Neoliberalism means the re-emergence of free market capitalism and free foreign trade, which were the elements of classical liberalism, the dominant economic understanding of the 18th and 19th centuries (Akalın, 2009: 11-17). In this context, neoliberalism can be characterized as the last phase of capitalism, the main feature of which focuses on increasing the profits of the capitalist class and consolidating its power. This transformation is also a product of the conflict between financial institutions and classes. This process of reconstruction is a hybrid social identity phenomenon that can be called "finance" and brings together the capitalist class and the upper reaches of its financial institutions. In this respect, this social order can be considered as a second hegemony system similar to the financial hegemony structure of the previous period (Dumenil and Levy, 2009: 51).

Neoliberalism appears as a system that reinforces the dominance of financial capital and opens up new fields of action for it. Within this system, financial capital has created its own autonomous sphere by becoming independent from production processes and has become the main dynamic of capital accumulation. Neoliberal policies, on the one hand, facilitated capital movements through the liberalization and deepening of financial markets, and on the other provided the necessary institutional and legal infrastructure for the diversification and expansion of financial instruments.

The emergence of finance capital involves creating opportunities where capitalists can raise capital with capital without any intervention in the process of value addition. Accumulation is carried out by productive means as well as, and increasingly, by non-productive means. Financial capital accumulation, one of the non-productive forms of accumulation, has continued unabated from the last decades of the 20th century to the present day (O'Flynn, 2009: 143-144). Financial capital accumulation based on financial liberalization is the process of capital appreciation through financial instruments (stocks, bonds, etc.) and financial institutions (banks, insurance companies, mutual funds, etc.). Capital derives its profits from financial transactions. It works on speculation and rent instead of the real sector. Profits are derived from financial returns such as interest, dividends, commissions, etc. (Mishkin and Serletis, 2004: 7). Marx ([1894]1981: 525) defined this capital, which is created through speculation as opposed to real capital, as "fictitious capital".

The financial capital accumulation strategy, on the other hand, refers to the orientation of capital towards financial investments that provide fictitious capital rather than productive investments, focusing on earning profits from these investments. Instruments such as the issuance of stocks and bonds, as well as the development of banking and insurance are the main veins that feed this market. In addition to rent-seeking through state borrowing, an important part of the strategy is the extension of finance to large segments of society, i.e. financial inclusion. Instruments such as private pensions, public offerings, mortgage loans, home loans, car loans and consumer loans ensure inclusion. This generates interest and commission income. The state also supports this process through various instruments. Indeed, the state plays a central and pervasive role throughout the entire financialization process. (Güngen, 2021: 69). The state tries to attract short-term capital by issuing high-interest domestic debt securities (GDDS - Government Domestic Debt Securities). Tax regulations are made to encourage the financial sector. Macro policies such as interest rates and exchange rates feed financial returns. Institutional infrastructure and regulations are developed for financial institutions. A favorable environment is created for international capital to flow into this field. Therefore, financialization becomes a process that is nourished and spread through both state policies and the dynamics of capital itself.

In order to better understand the current dominance of financial capital accumulation and the systematic structure of debt politics, it is necessary to look at the historical background of this process. Especially the Keynesian policies and welfare state practices that took shape after the Great Depression of 1929 constitute an important historical cross-section on the road to the neoliberal era. The economic and social devastation caused by the Great Depression laid the foundations of Keynesian economic theory. The central argument of this theory is that capitalism will continually produce structural problems within its own dynamics, which, without intervention, will lead to periodic depressions and permanent poverty. Keynesian analysis suggested that aggregate demand would be systemically inadequate in capitalist economies, and that the economy would enter a spiral of slow growth, high unemployment and idle capacity (Mahmud, 2012: 471). The policy response developed in the post-depression period built a compromise model between capital and labor. National fiscal and monetary policies were adjusted to target full employment and the welfare state emerged in this process. Capitalism's chronic aggregate demand problem was attempted to be solved by increasing the purchasing power of the working classes and full employment policies. The result was a prolonged period of growth, rising wages and mass consumption, often characterized as the "golden age" of capitalism (Marglin, 1992). However, in the early 1970s, this model reached a tipping point.

Social demands for the expansion of economic and social rights, the cost of imperial wars and the declining balance of payments have turned into a serious structural crisis for the wealthy classes. The fall in the rate of profit and the decline in the income share of the capitalist class led to a contraction of historic proportions in the bond markets. The Bank for International Settlements declared that the period was in a "real dollar crisis" (Mahmud, 2012: 471). Thus, the capitalist class sought a radical break with the welfare state capitalism model and the neoliberal counter-revolution aimed at breaking the organized power of the working class was launched in this process. The capital accumulation crisis of welfare state capitalism in the 1970s and the accompanying economic stagnation accelerated the search for a new paradigm in dominant economic policies.

Neoliberalism, for which an intellectual infrastructure was created until the 1970s, was presented as a program of social reform. Market principles were presented as general principles of social organization. It was based on the argument that socio-political life should be determined not by parties, trade unions or social institutions, but by market principles. According to the neoliberal approach, in order to solve economic crises and change the structure of individuals as dependent on the state, lazy and parasitic, markets need to be freed from state monopolies, collective bargaining pressures and especially political regulation. Thus, it was argued that if market freedom is ensured, the level of freedom, growth and welfare will increase (Demir, 2011: 3).

In the early 1970s, when neoliberal financial liberalization policies were just beginning to take shape, the global transformation of the modern credit system reached a critical threshold. The American credit card industry underwent a significant transformation in this process. The credit card industry's biggest political victory was the removal of legal restrictions on interest rate regulation. Contrary to the emancipatory potential promised by technological and financial infrastructure, this development built a tighter mechanism of debt slavery on a global scale. Global institutions such as the International Monetary Fund (IMF) have been structured to secure the rights of creditors rather than protect debtors, while the basic principle of the World Bank, the World Trade Organization and associated economic associations has been "man must pay his debts". In this system, laborers, especially in developing countries, were forced to work to pay off interest-bearing loans, while new technologies and global economic structures made debt mechanisms even more complex and oppressive. Thus, the post-1971 global financial system built a structure that perpetuated and deepened debt slavery; instead of the promised emancipation, it created a more sophisticated mechanism of exploitation (Graeber, 2011: 368).

According to Brand (2011: 78), the implementation of neoliberal policies focuses first on the disintegration of the fordist class consensus, then on the prominence of the financial accumulation process, and finally on changes to regulate the contradictions and crises created by neoliberal policies. In the post-World War II period, the Fordist consensus, which was the order of expansion of intensive capital accumulation, gave rise to various structures, such as bureaucratic parties and trade unions, as well as the state, which handled capitalist processes and social structure in the form of a centralized administration. According to Demir (2011: 3), with the effect of post-war social and class organizations, the inter-class consensus system came to the fore in directing the economy. Fordism gained importance by enabling continuous economic growth and distribution policies that would affect all social segments. Fordism also increased the consumption power of the working class by improving the working conditions of workers and increasing their wages. The role of the state became the stabilizing factor in the Fordist system, stabilizing the accumulation regime.

The accumulation crisis of capitalism and the desire of capital to take steps to increase its profitability prepared the end of Fordism. The fordist accumulation crisis pushed capital into new searches. It can be said that the first stage of the basic elements of neoliberal thought was based on this search. Neoliberal thought has put forward concrete demands such as neutralizing unions and thus limiting strikes, lowering the minimum wage, liberalization of the market, deregulation, limiting the powers of parliament, reducing the power of the bureaucracy over public institutions, privatization, low tax regulation for companies, increasing the tax burden on wage earners, reducing social cultural and public expenditures. The main purpose of these demands is to adjust the balance of power between capital and labor in favor of capital (Demir, 2011: 4). The radical use of monetary policy and breaking the power of organized labor are among the elements that started the neoliberal era. These systemic changes decisively transformed the basis of aggregate demand from full employment to consumer debt. The financialization of the economy operationalized this historic change. Neoliberalism did not displace the state, but reshaped it, transforming the "nation-state" into a "market-state" (Mahmud, 2012: 471).

According to George (2009: 44), at the international level, neoliberals have concentrated all their efforts on three main points. These are the free movement of goods and services, the free movement of capital and the freedom of investment. According to Steger and Roy (2010: 14), the basic elements of neoliberalism consist of three elements: deregulation, liberalization and privatization. According to Kozanoğlu et al. (2015, 67-91), neoliberalism has 10 basic economic policies. These economic policies are also the policies that constitute the basic elements of neoliberalism. These policies consist of privatization, deregulation, liberal foreign trade regime, independent central bank, free capital movements, two-cornered exchange rate regime, privatized foreign debts, corporate reserve policy, primary surplus and finally compliance with Maastricht targets. Here, it will be sufficient to consider three main directions among these basic elements. These are deregulation, liberalization and privatization.

Deregulation, in its literal sense, refers to the removal of established rules, (financial) liberalization, and the systematic reduction of regulatory frameworks. As a function, it refers to the necessity of changing the interventionist structure of the state in order to narrow its decision-making space on economic life. In the most general sense, it means that governments remove barriers to corporate activity (Black et al., 2009: 38). Deregulation is often undertaken to promote economic growth and greater reliance on market forces. However, deregulation can sometimes affect the quality and safety of services, as well as reduce workers' rights and protections. According to Kozanoğlu et al. (2015: 72), deregulation has resulted in curtailing trade union rights, reducing job security by giving employers maximum ease in hiring and firing, removing restrictions on working hours, and weakening standards on worker health and safety. In this context, the deregulation process facilitated individuals' access to credit through the removal of controls in financial markets and led to the proliferation of consumer loans and credit cards. While this encouraged individuals to borrow to meet their consumption needs, it strengthened social control mechanisms through the obligation to repay debt and became one of the main pillars of neoliberal capital accumulation strategies[1] .

Closely intertwined with deregulation, liberalization emerged as a key concept through the "Washington Consensus"[2], referring to the removal of restrictions on foreign trade and capital movements while facilitating the liberalization of business relations (Black et al., 2009: 85). This aims to give the private sector more freedom and flexibility. However, it carries with it the risk of reducing the government's supervision and control over economic activity. Liberalization is often implemented to promote economic growth and greater reliance on market forces. According to this neoliberal approach, economic growth and global prosperity are projected to increase.

Privatization involves reducing the share of state-owned economic enterprises and transferring them to the private sector in the belief that they will be used more effectively. The main idea of this policy is to increase production and lead to rapid growth (Black et al., 2009: 117). Neoliberal privatization, which expresses the superiority of the market over the state, private property over public and social property, basically aims to put areas that were previously excluded from profit-oriented production at the service of capital accumulation. The first important step of this policy was taken by Margaret Thatcher in Britain, starting with the privatization of British Telecom.

[1] See: Jessop, 1999; 2010.

[2] In general terms, the 10 policy recommendations of the neoliberal approach put forward by the consensus of the IMF and the World Bank are as follows: 1. fiscal discipline 2. reorganization and redirection of public expenditures to areas that generate high revenues 3. tax reform 4. financial liberalization 5. uniform and competitive exchange rate 6. trade liberalization 7. openness to foreign direct investment 8. privatization 9. deregulation 10. securing property rights (Williamson, 2004; Rodrik, 2006: 978).

Privatizations started with the sale of state-owned industrial enterprises and turned public services such as water, electricity, transportation, communication, natural gas distribution; social services such as health, education, social security, social housing; institutions such as research laboratories, universities, public lands and even prisons into profit areas (Kozanoğlu et al., 2015: 67). This situation has forced individuals to use loans and debts to access these services, and especially housing and education loans have led to a permanent and systematic increase in individual indebtedness. The provision of public services by the private sector has put price increases and the cost of services on the shoulders of individuals, making households more dependent on debt relations through banks and financial institutions. Thus, privatization has not only supported the capital accumulation process, but also increased the cost of social reproduction of individuals and ensured the intertwining of debt politics and neoliberal forms of control.

Through the Washington Consensus and structural adjustment programs, neoliberal policies radically transformed the regulatory role of the state in the economy and built social indebtedness as a systemic tool. Deregulation, liberalization and privatization policies have strengthened the social control of capital by pushing individuals into compulsory debt through the liquidation of social security systems, the marketization of public services and the liberalization of financial markets. The removal of legal and structural barriers to financialization has been a critical component of this process. While the expansion and diversification of financial markets enabled the spread of credit mechanisms, it also placed debt instruments at the center of social life. The privatization of public services, the contraction of social security systems and the state's reduction in social welfare expenditures have forced individuals to borrow to cover the costs of daily life. Thus, borrowing, supported by the dynamics of financialization, has become the basic mechanism of social control and the reproduction of capital accumulation.

3. Discipline and Capital Accumulation through Debt

In his work "*The Genealogy of Morality*" ([1887] 1999), Nietzsche presented a unique perspective by analyzing the primitive economy through the relationship of "creditor-debtor" instead of the relationship of "exchange-exchange". According to Nietzsche (1999: 67-72), debt relations are not only a material obligation but also a complex expression of power relations. Power hierarchies are always present in relations between people, and debt is a means of reinforcing these power relations. Nietzsche argues that the debtor is made dependent by the creditor and experiences a kind of loss of power over the creditor. The debtor falls into a kind of submission to the creditor and loses independence from the creditor. This creates a kind of power relationship and the debtor is controlled by the creditor. On the other hand, Nietzsche argued that finding a solution in the relationship between debtor and creditor does not mean balancing or eliminating power altogether. While the debtor strives to find a solution, he actually maintains the power relationship with the creditor. For the solution is merely another masking or modification of power so that the debtor continues to be controlled by the creditor. Therefore, Nietzsche states that debt is only an illusion and a means of perpetuating power.

According to Marx ([1894]2024: 533), "the only part of the so-called national wealth that is truly included in collective property in a modern nation is the national debt". That is, the only thing that a capitalist nation can collectively own or share is public debt. Marx wanted to make it clear that this kind of collective bonding would become an instrument of oppression and appropriation. In today's world, too, many people go into debt in order to survive. Debt has become an inevitable part of social life. It is not easy to live without debt. For example, students take out loans, wage earners take out long-term loans for a house or a car, or go into constant debt through credit cards. The debt repayment scheme, which extends to all segments of society, plays an important role in meeting social needs. However, debt has become an instrument of control. Because in the face of lenders, who are the power source of the banking system, borrowing individuals are forced to limit their behavior and actions in order to repay their debts. This situation leaves individuals alone with feelings of guilt and responsibility, leading them to further internalize power relations (Demirtaş, 2018: 45).

Güngen has argued that one of the main management strategies of the neoliberal state is the construction and deepening of debt markets. On the one hand, this strategy ostensibly offers laborers the possibility of becoming members of the money society. On the other hand, it calls them to be subject to the social power symbolized by money and imposes discipline. In this strategy, tensions are expelled from the sphere of production and exported to the sphere of exchange and circulation. The success of the neoliberal state can be read as the success of this export movement (Güngen, 2021: 62).

In the neoliberal state, the options and possibilities of individuals who borrow to survive and try to repay this debt are quite limited. According to Demirtaş (2018: 45-46), the debtor has to keep his/her behavior and actions under control within the limits of the framework defined by the debt. Therefore, debt confiscates not only material wealth but, more importantly, people's preferences and possibilities. Individuals are accustomed to leading a lifestyle that is conducive to paying their debts. They adopt a life of debt and are controlled by debt; debt imposes certain choices on people. As an example, when a person graduates from university with debt, instead of taking the time to improve themselves, they may be forced to get a job immediately. In order not to lose his job, he may give up other things he wants to do. Or when he or she buys a house with a long-term loan, he or she may find himself or herself burdened with a debt that will take ten or twenty years to repay. The person may think they are in control of their own life, but in fact their life is completely out of their control. Therefore, debt is closely related to time and duration. According to Çalcı (2015: 132), "laborers have had to sacrifice their entire life span in order to survive. For wage earners, selling life span allows control and debt to spread in everyday life." Thus, debt mortgages not only the present but also the future. According to Lazzarato (2012: 56), debt builds a bridge between the present and the future: It mortgages future behavior, wages and incomes. Each individual's debt affects their future behavior, wages and income. The indebted individual is forced to sell his or her entire life time in order to survive. In this context, the indebted individual mortgages future behavior, wages and incomes.

In the neoliberal state, exploitation is largely debt-based. According to Negri and Hardt (2013: 21), there is a generalized debt situation where the 99 percent of the population is subordinated to the 1 percent through various forms of debt, including labor and monetary debts. When we look at the Eurozone today, we see that 92% of the money in circulation corresponds to debt. Debt is used as a means of maintaining and controlling exploitation, which leads to the emergence of a new group of oppressed poor. These new poor include not only the unemployed or part-time workers, but also regular wage earners and the impoverished middle class. Their poverty is based on chains of debt. The current pattern of indebtedness operates on a different scale and on a larger axis than its predecessors. Today it is not only the "national debt" and industrial or commercial loans that are under pressure, but also new international credit flows and other deep-seated debts of households (Dienst, 2015: 40).

According to Çalcı (2015: 194), debt functions as an effective device of control over the vast majority and strongly influences them. Debt determines the limits of the debtor by determining the capacities of the subject. Lazzarato (2014: 1042) argues that in the neoliberal state, debt is recognized as an effective mechanism of control and seizure of power and, therefore, neoliberalism will not free people from debt, but rather burden them with more debt. However, one can get to a point where it is no longer possible to borrow but is dragged into paying an endless debt. Debt is fed by the constant repetition of the act of consumption and reaches an unlimited scope through the circulation of money. Therefore, under capitalism, debt is unpayable, unredeemable and infinite. The neoliberal system makes people and society live under a never-ending burden of debt. Debt increases poverty, suppresses individuality and collectivity, and takes away their power and possibilities. Neoliberalism is one of the most effective tools to produce economic man (homo economicus) (Demirtaş, 2018: 46).

The state is needed as an actor that oversees the relationship between debtor and creditor. This is where the state's surveillance and intervention becomes important. This is related to the role of the state in capital accumulation; the state has to constantly create the conditions for capital accumulation. By regulating the debt and credit process, the state tries to provide the conditions for future income flows. Financial risks are socialized based on the idea that this will disrupt capital accumulation when the possibility of fulfilling the conditions for debt repayment disappears (Güngen, 2021: 64-66). The increase in the number of people who think that they will not be able to share in the wealth created and be a part of it will also create a political crisis. The debtor who thinks that paying his debt will not be beneficial may give up paying his debt. The "mortgage" crisis in the United States was caused by tens of thousands of borrowers defaulting on their debts (Güngen, 2021: 66).

Güngen calls the policy making that facilitates and encourages borrowing for the purpose of financial inclusion of more people, and at the same time copes with the contradictions of the borrowing process through the same vision, the politics of debt. Today, what can be called the politics of debt means the surveillance, regulation and management of the relationship between borrower and lender. Debt politics is presented as if it ignores elements such as social classes, organizations or collective structures and does not take into account their role in debt relations. However, the management of debt is never a singular and vertical relationship between the individual and the state. Developing policies to ensure that debt relations are sustained and sustainable is a key element. The transformations and tensions created by this management and regulation activity at the level of the state and social classes can be described with the term "debt politics" (Güngen, 2021: 99).

As a result, borrowing, which is a vital tool for capital accumulation of the capital class in a neoliberal state, can be defined as the process by which a person, institution or state borrows money to finance economic activities, make investments or meet expenditures, and repays this debt using future income or returns. This process perpetuates the process of accumulation under the name of financialization through loans and interest rates, creating a fictitious capital. By encouraging people to borrow, governments and financial institutions aim to increase consumption, stimulate the economy and ensure capital accumulation. However, debt can also be seen as a capital accumulation strategy in the sense of using future income streams in the present. Debt policies and regulations can increase income inequality while aiming to remain under a permanent debt burden. This process involves a process of dispossession as well as the appropriation of the capital that people can acquire in the future.

4. The Politics of Borrowing and Transformation in Turkey

In the post-1980 neoliberal transformation process in Turkey, the politics of debt played an important role in reshaping the social and economic structure. This process enabled individuals, households and public institutions to establish a deeper connection with the market through debt relations, and was supported by policies such as financial liberalization, marketization of public services and contraction of social safety nets. The proliferation of borrowing practices has affected not only individual consumption patterns but also power relations between social classes. In this context, the politics of borrowing went beyond economic necessities and emerged as a multidimensional transformation tool linked to crisis management processes and the dynamics of neoliberal transformation.

The period that began after the 1980 military coup was a period of transformation in which significant changes were made in the structure and functioning of the state. The first stage of this process started with the January 24, 1980 decisions. These decisions paved the way for the implementation of neoliberal policies. The military coup regime, which was in contact with international organizations and prepared the ground for neoliberal policies, took important steps in the structuring of the neoliberal authoritarian state[3] with the 1982 constitution. The process that started after the military coup in 1980 differed from previous periods. The 1980 military coup is an important political, economic and social turning point in the history of Turkey. This coup was the product of the crisis environment that emerged at the end of the 1970s as a result of the accumulation crisis of the import-substitution industrialization model and increasing political instability. The coup paved the way for Turkey's transition to an open, market-oriented, neoliberal economic model and triggered the institutional and ideological restructuring of the state and politics. In this process, neoliberalism became the dominant ideology and the state apparatus, capital accumulation, political and social life underwent a major transformation.

The inward-oriented/import-substitution model of accumulation, which had been effective since the mid-1950s and formalized after 1960, faced crises towards the end of the 1970s and came to an end in 1980. The main symptom of the crisis phases of accumulation strategies is seen in the contraction of the gross domestic product and the decline in the rate of profit of big capital. According to Boratav (2005: 91), the accumulation crisis experienced before September 12 was not only related to the reaction to wage movements, but the reason why this period was seen as a nightmare was that the authority of capital over workers was destroyed. According to Ercan (1998: 28-29), there was actually a profitability crisis. In this phase, the profitability crisis took the form of state fiscal deficit and balance of payments deficit. As of the late 1970s, with the deepening crisis of capitalism, capital did not want to transfer more resources to the state under the name of taxes. When the state found it difficult to collect taxes from capital in order to sustain its own existence, it resorted to borrowing the revenues it had previously obtained through taxes. Thus, with the allegations of Ponzi schemes or rent creation that

[3] See: Poulantzas, 1978; 1982.

emerged in Turkey during this period, the state resorted to borrowing by using the bond and treasury bill markets and the crisis deepened.

In this period, when the import-substitution industrialization model was blocked and the search for new policies began, the Turkish economy faced serious problems. By the late 1970s, the import-substitution model of industrialization faced significant economic bottlenecks in Turkey. While investments increased rapidly, savings did not rise at the same rate and a resource deficit emerged. Real interest rates, which turned negative as a result of accelerating inflation, had a negative impact on savings, while the continuous stimulation of consumption in the domestic market-oriented industry also reduced the propensity to save. Despite the increasing need for external financing, external resources were difficult to obtain as investments were not directed towards foreign currency earning activities. These problems led the model to be characterized as "inward-oriented, externally dependent". By the 1980s, the import-substitution industrialization model was abandoned and new economic policies were sought. The reasons for these searches include the stagflation experienced worldwide after the 1973 Oil Crisis, the blockage of Keynesian policies and the inability of the IMF to fulfill its functions (Şiriner and Doğru, 2008: 152-153). In this context, the neoliberal policies adopted in the post-1980 period emerged as a response to the crisis of the import substitution model and initiated a new phase in Turkey's economic restructuring.

According to Başkaya (2006: 318), in previous periods of structural crises, instruments such as Nazism, New Deal, fascism and war were used to create a favorable environment to reduce real wages. In the neoliberal period, however, increasing exploitation rates and capital accumulation became possible through the neutralization of trade unions, which is an indicator of authoritarian statism. Thus, while emphasizing coercive disciplinary measures, the working class's power was broken and pushed back. At the same time, workers' organizations had to be neutralized in order to cut welfare state expenditures. While attacking trade unions and welfare state expenditures, capital has sought to provide a legitimate environment with the recommendations of the WB (World Bank) and IMF (International Monetary Fund) and the theoretical arguments of neoliberalism. According to the neoliberal approach, the existence of labor organizations prevents the functioning of the free market by creating a monopoly in the labor market. Therefore, according to Sönmez (1992: 124), the neutralization of trade unions was deemed necessary for the stable implementation of the program. Thus, the coup regime banned strikes, collective bargaining and union activities until 1984. In addition, military methods such as the suspension of union activities, the prosecution of DİSK (Confederation of Revolutionary Trade Unions) executives, the ban on strikes and the shift of the wage determination process to the High Arbitration Board instead of collective bargaining were supported by the anti-labor provisions of the 1982 Constitution and a series of legal regulations aimed at weakening workers' rights.

Throughout the 1980s, with the transition to neoliberal policies, the export boom and wage pressures brought new opportunities for big capital fractions and Anatolian capitalists. The ANAP governments represented bourgeois unity and gave the impression of a maturing class character of the state. In fact, depending on the ideological rhetoric, the background of the ruling cadres and their policy orientations, the ANAP government received great support from large sections of the business world for a while and was characterized as "our government" (Boratav, 2005: 92). As Bülent Eczacıbaşı stated in an interview, "There seems to be a real situation that the private sector has reached a certain power in Turkey" (Ercan, 1998: 8). Halit Narin, President of TİSK, emphasized the awareness of this support and power by stating, "For 20 years, workers laughed and we cried, now it is our turn to laugh" (Ozan, 2021: 20). Therefore, in the period after the 1980 coup, the state came to be seen as an apparatus that would look after the long-term interests of capital.

For the capitalist class supported/fostered by the state, a favorable ground was created through public investments and many steps were taken to strengthen capital accumulation. However, when capital accumulation reached certain levels, it led to demands for changes in the structure of the state. Until the neoliberal period, different capital groups such as productive capital, finance capital, trade capital, large and small capital have tried to promote their own interests (Oğuz, 2008: 105-106). With the transition to a neoliberal economy, factors such as the financial liberalization process, increasing international integration and the concentration of capital have affected the Turkish economy and caused it to be shaped around a few monopolized large capital groups, especially in certain strategic sectors. Consequently, the factional division has shifted from industry, commerce and finance to the forefront with distinctions such as big-small, Istanbul-Anadolu, domestic market-oriented- international market-oriented capitals. While TÜSİAD (Turkish Industrialists' and Businessmen's Association) represented the large and conglomerated Istanbul capital, TOBB (Union of Chambers and Commodity Exchanges of Turkey) represented the so-called small and medium capital.

In general, in the second half of the 1980s, although domestic investments were expected to increase with regulations such as reducing taxes on capital, tax amnesty and cheap loans, investments declined. Instead of taxing capital, the state adopted an approach of giving incentives and borrowing more. Therefore, due to these reasons, the state started to incur excessive debt (Başkaya, 2006: 328).

During the economic recession of 1987-88 and the subsequent recession after 1989, the struggle of the working class took on a new dimension. This was the first time in the neoliberal process that the bourgeoisie encountered such a degree of class tension and resorted to the harsher means of the authoritarian state in response. The new accumulation strategy in line with the preferences of the hegemonic capitalist faction was implemented through a technocratic redesign, this time without resorting to direct force. The "Decision No. 32 liberalizing capital movements" taken by the powerful executive in 1989 with urgency and insistence offered a new accumulation strategy to the historical bloc of capital and became the most important neoliberal regulation that would be valid in all accumulation strategies until today (Karahanoğulları, Türk, 2018: 417). The Decree No. 32, which was one of the important steps taken in Turkey's process of opening up to the outside world, led to the full convertibility of the TL (Keyder, 1998: 130). According to Ekzen (2009: 122), the liberalization of capital movements brought by this decision would be insufficient to solve the problems created by domestic borrowing, and Turkey would learn the risks of financial liberalization in international markets in an expensive way with the crisis in 1994.

First, the free market economy on which the model is based and the export-oriented growth approach based on the suppression of labor costs have deepened social inequalities. Inequality in income distribution increased significantly during this period. While the living standards of the working class and low-income earners declined, the earnings of capital owners rose rapidly. Second, the model was insufficient in creating employment and unemployment rates rose. The employment created by industrialization was not enough to absorb those who migrated from rural areas to the cities. Both unemployment and the informal sector expanded. An important point to be mentioned at this point is the importance of a new class structure that has emerged, the precariat class of precarious workers. With neoliberalism, precarity has become a major problem in the world due to reasons such as the withdrawal of the state from the field of economic activities to a large extent, the restructuring of work-life on the basis of flexibility, the decline of the welfare state, and the importance of private capital on a global scale (Standing, 2011). Third, productivity and technology levels in export-oriented sectors have remained low. Competitiveness has been based on cheap labor. Therefore, a sustainable industrialization could not be achieved. Fourth, the reduction of public investments and privatizations negatively affected social welfare. While the quality of public services declined, transparency and accountability in privatizations remained weak. As a result, the export-led growth ideal has increased income inequality and unemployment in Turkey, and failed to ensure sustainable industrialization and technological development. This model, which prioritizes capital accumulation over social benefit, has caused enough destruction for the working people.

With the transition to neoliberalism in Turkey, the state apparatus, which had initially adopted the export-oriented industrialization model but became indebted in the crisis environment in 1989, initiated the financial liberalization process as a new solution strategy that would last throughout the 1990s in order to both overcome the crisis and open a new space for capital, paving the way for financial accumulation and speculative growth strategy. This strategy led to full financial liberalization by allowing the use of foreign currencies in the local market with the "Decree No. 32" and thus, the basic accumulation strategy of finance-centered accumulation was adopted (Yeldan, 2008: 127; CBRT, 1989). Thus, capital movements were systematically and financially liberalized and this liberalization became a turning point. Restructuring was carried out in banking, insurance, stock exchange, etc., and a favorable ground was created for the deepening of finance.

According to Sönmez (2009: 41), this process consists of two dimensions: internal and external financial liberalization. While internal financial liberalization focuses on the development and deepening of financial markets, external financial liberalization aims at the complete removal of barriers in the foreign exchange regime and capital movements. According to expectations, if financial repression is broken and deepening is achieved through internal financial liberalization, deregulation of interest rates, capital gains and lower taxes on high income brackets will increase the volume of savings and provide the necessary resources for investments. On the other hand, external financial liberalization will remove barriers to foreign capital and accelerate economic growth. In Turkey, following "Decree No. 28" in 1983 and "Decree No. 30" in 1984, "Decree No. 32" in 1989 liberalized all foreign exchange transactions and capital movements. Following the additional amendments made to Decree No. 32 in 1990 and the acceptance of the Turkish lira as convertible by the IMF, the deficiencies in the liberalization regulations under Decree No. 32 were eliminated and liberalization was fully achieved with the "Communiqué No. 91-3215" in June 1991.

The main features of the financial accumulation model are as follows: (1) growth is heavily dependent on short-term capital flows, (2) economic activities are driven by financial speculation and rents, and accordingly, distribution is increasingly adjusted in favor of rentiers, (3) the financial sector is disconnected from the real sector, (4) chronic imbalances in public finances, (5) economic policies are dependent on short-term capital inflows and deformation in this context. As a result, the growth strategy shifted from an open model to one based on short-term capital flows and financial speculation. Economic activities were increasingly shaped according to the interests of the rentier sector, the financial sector became disconnected from the real sector and chronic imbalances emerged in public finances. Economic policies became dependent on this new accumulation model and were deformed (Sönmez, 2009: 42).

According to Oğuz (2008: 105-106), in this new stage of accumulation based on the inflow of international money capital, a rentier-type economy (rentier capital) emerged, characterized by speculative financial interests. Banks belonging to large conglomerates made huge profits through short-term capital flows. The inter-factional conflict was between those who owned large conglomerates and small and medium Anatolian companies. This was carried out by TÜSİAD and TOBB. According to Sönmez (2009: 42), in this period, big capital and financial rent were excluded from taxation or taxed at low rates, while tax evasion reached great heights. Increasing budget/public sector deficits were tried to be financed with high-yielding Government Domestic Debt Securities (GDDS), but this aggravated the interest burden.

The decision taken in 1989 to fully convert the Turkish lira led to deep political instability and economic crises in the country. Inadequate regulation of the financial system and macroeconomic instability led to a fragile structure of development. Growth was mainly based on speculative and short-term capital flows. In the same period, crises around the world based on neoliberal reforms led to increases in unemployment and poverty.

With neoliberalization, financial liberalization, deepening and inclusion policies implemented with different programs around the world have had significant effects on both class dynamics and state practices. According to Fine (2010: 8), an important difference that distinguishes today's financialization from previous periods stems from the fact that the working class lives under the burden of increasing debt globally and that credit has spread to individual and social reproduction processes. In parallel with neoliberalization, the indebtedness of households around the world through loans has become a global policy with the "dot.com crisis" in 2001 and the global crisis in 2008. It has become a daily reality of capitalist relations of production that laborers prefer to borrow instead of finding a job and saving in order to survive (Karacimen, 2015: 753). Güngen (2018: 335), on the other hand, emphasized that financial inclusion policies have become common in recent years as an indicator of capital's ongoing appetite for exploitation of labor through debt. Bedirhanoğlu (2021: 197) also stated that financialization has caused significant historical changes in labor-capital relations and the conditions of capitalist exploitation, while at the same time strengthening the capitalist form of the state.

By the 2000s, the second generation of structural reforms implemented under the supervision of the IMF and the WB in the aftermath of the 2001 crisis integrated Turkey more tightly into finance-oriented global capitalism. As Bedirhanoğlu (2009: 46) emphasizes, this process, shaped within the framework of the Post-Washington Consensus, redefined the role of the state to remedy market failures and regulate financial markets. In this period, the AKP government developed a new accumulation strategy by transforming the debt mechanism into an instrument of welfare (Bozkurt-Güngen, 2018: 233-234). Structural reforms, especially in the regulation and supervision of financial institutions, expanded finance capital's room for maneuver while institutionalizing debt mechanisms.

This strategy became more evident especially after the 2008 global financial crisis. With the deepening of financialization, both household indebtedness was increased and individuals were turned into financial consumers. According to Akçay (2019: 48), increasing the consumption capacity of the unorganized and informal segment of labor by indebting them has contributed to the construction of their political consent. Because while there was no significant increase in the real wages of this class, precarious working conditions became entrenched. In this period, the widespread use of credit cards, consumer loans and housing loans accelerated the integration of large segments of society into the financial system.

In the post-2008 crisis period, the construction sector has become one of the main mechanisms of accumulation through debt. Through the expanding powers of TOKİ (Housing Development Administration of Turkey) and urban transformation projects, indebtedness has become a prominent trend for both households seeking to own a house and companies operating in the construction sector (Yeşilbag, 2016: 610). As Geniş (2020: 12-13) notes, the neoliberal restructuring of cities and urban life has deepened marketization and financialization, especially in the provision of collective services such as education, health and housing. This process, as Bedirhanoğlu (2021: 200) points out, appears as a strategy to overcome political and class challenges through the expansion of financialization.

This new phase of the politics of indebtedness opened new channels for capital accumulation while strengthening the mechanisms of social control. As Güngen (2018: 19) notes, indebtedness has increased the domination of capital over labor by putting pressure on the working class. In the flexible labor regime that was constructed, the working class was atomized and politically pacified by debt discipline. As Standing (2011) points out, the manifestation of the precariat phenomenon in Turkey has been the normalization of precarity and flexibility through debt mechanisms. This process has reinforced the dominance of finance capital and made debt mechanisms a critical tool in sustaining neoliberal hegemony.

Hence, Harvey's (2003: 150) observation that the finance-centered accumulation process is one of the main strategies of expanding accumulations through dispossession gains importance. According to Harvey, this strategy is based on a process in which finance capital and credit institutions supported by state powers play an important role. According to Harvey's (2017: 227) definition of modern capitalism, increasing debts and creating debt slavery is realized through instruments such as bonds and loans, in addition to manipulations of financial structures. Moreover, post-neoliberalization dispossession marks a period of reduced public control through the privatization of many institutions, from education to health care, from the social security system to universities. This process transforms finance capital into a global power through the expansion of international trade and capital markets, making dispossession a process of concentration of global economic and financial power. Similar trends were observed in Turkey in the 1990s, and the privatization of public assets and services accelerated with the strengthening of finance capital and the increase in international capital movements. Therefore, it can be seen that policies of dispossession gained significant weight in Turkey during these years.

5. Conclusion

In this study, the effects of debt policy on capital accumulation and social transformation in the neoliberal era are analyzed through the case of Turkey. At the theoretical level, the dual character of borrowing is revealed: On the one hand, it is a mechanism that ensures the sustainability of capital accumulation, and on the other hand, it is a disciplinary tool that strengthens social control. Nietzsche's analysis of debt relations in the context of power and domination and Marx's analysis of national debt and finance capital have provided the theoretical basis for understanding this dual character.

The transformation of debt policy in the historical process is analyzed from the 1980s to the present day. The process, which started with financial liberalization and deregulation policies, entered a new phase with the liberalization of capital movements in 1989, and gained a different dimension in the 2000s with the deepening of financialization and the spread of household indebtedness. When this transformation is evaluated within the framework of Harvey's concept of accumulation through dispossession, it is seen that debt has become one of the basic mechanisms of neoliberal capital accumulation.

The Turkish experience reveals the unique character of this process. The post-1980 neoliberal transformation started with the export-oriented industrialization model and then evolved into a new accumulation strategy with financial liberalization. In this process, while the state institutionalized borrowing mechanisms, it also paved the way for the strengthening of finance capital through its own borrowing. In the 2000s, borrowing strategies were developed especially through the construction sector, and through TOKİ and urban transformation projects, both capital accumulation was sustained and social consent was generated.

The findings of the study show that the politics of debt is not only an economic strategy, but also a project of social transformation that restructures class relations. As Lazzarato's analysis of "the production of indebted human beings" points out, debt mechanisms have turned into a disciplinary tool that shapes individuals' behavior and future expectations. In Turkey, this process has become particularly evident as financialization has deepened and borrowing has become an indispensable part of everyday life.

The politics of debt has also led to significant transformations in labor-capital relations. The proliferation of the precariat and the normalization of precarious working conditions on the one hand, and the atomization of the working class through debt discipline on the other, have played a critical role in sustaining neoliberal hegemony. In this context, as Güngen emphasizes, debt strategies have become an effective tool for managing class conflicts by transferring tensions in the sphere of production to the financial sphere.

In conclusion, in the neoliberal era, the politics of debt emerges as a multidimensional dynamic of transformation that strengthens social control while ensuring the sustainability of capital accumulation. On the one hand, this process reinforces the dominance of finance capital, and on the other, it constructs a new social order through debt relations that permeate every aspect of social life. While the case of Turkey allows us to understand the specific dynamics and contradictions of this transformation, it also reveals the contemporary character of the politics of debt. Hence, the central role of debt mechanisms in terms of both capital accumulation and social control is of critical importance in the analysis of contemporary capitalism.

REFERENCES

AKALIN, U. S. (2009). Neoliberal İktisadın Gelişimi Üzerine Kısa Bir Not. *Neoliberal İktisadın Marksist Eleştirisi* (9-21). (Akalın, U. Akalın. U. S. Ed.) İstanbul: Kalkedon.

AKÇAY, Ü. (2019). Türkiye'de Neoliberal Popülizm, Otoriterleşme ve Kriz. *Toplum ve Bilim*, 147: 46-71.

BAŞKAYA, F. (2006). *Paradigmanın İflası: Resmi İdeolojinin Eleştirisine Bir Giriş* (11. Baskı). Özgür Üniversite Kitaplığı 32. Ankara: Maki Basın Yayın.

BEDİRHANOĞLU, P. (2009). Türkiye'de Neoliberal Otoriter Devletin AKP'li Yüzü (39-64). *AKP Kitabı: Bir Dönüşümün Bilançosu*. (İ. Uzgel, B. Duru, Der.) Ankara: Phoenix Yayınevi.

BEDİRHANOĞLU, P. (2021). Kapitalizmin Finansallaşması, AKP'nin Kriz Devleti ve Türkiye'de Modern Demokratik Devlet Yapısının Çözülüşü. *Toplum ve Bilim*, 155: 187-211.

BLACK, J., HASHIMZADE, N., MYLES, G. (2009). *A Dictionary of Economics* (3 ed.). London: Oxford University Press.

BORATAV, K. (2005). *1980'li Yıllarda Türkiye'de Sosyal Sınıflar ve Bölüşüm* (2. Baskı). Ankara: İmge Kitabevi Yayınları.

BOZKURT-GÜNGEN, S. (2018). Labour and Authoritarian Neoliberalism: Changes and Continuities Under the AKP Governments in Turkey. *South European Society and Politics,* 23(2): 219-238.

BRAND, U. (2011). *Post-Neoliberalismus?: Aktuelle Konflikte und Gegen-Hegemoniale Strategien*. Hamburg: VSA.

ÇALCI, S. (2015). Varoluş Borcu'ndan Sermayeye: Borcun Soykütüğü İçin Bir Deneme. Borçlan(dır)ma ve Türkiye'de Borçluluk. *Praksis*, 38: 179-201.

DEMİR, G. (2011). Post Neoliberalizm: Kriz ve Sonrası Üzerine. *Marmara Sosyal Araştırmalar Dergisi,* 12(1).

DEMİRTAŞ, M. (2018). Neoliberalizmde Borç ve Öznellik. *Sosyoloji Dergisi,* (37): 41-52.

DIENST, R. (2017). *The Bonds of Debt: Borrowing Against the Common Good*. London: Verso Edition.

DUMENIL, G., LEVY, D. (2009). Marksist Bir Neoliberal Teorisi (49-70). (G., Akalın, U.S. Akalın, Ed.) *Neoliberal İktisadın Eleştirisi*. İstanbul: Kalkedon Yayınları.

EKZEN, N. (2009). *Türkiye Kısa İktisat Tarihi: 7 Eylül 1946'dan 15 Mayıs 2008'e: İliştirilmiş Ekonomi IMF-Dünya Bankası Düzeninde 62*, Ankara: ODTÜ Yayıncılık.

ERCAN, F. (1998). Neo-Liberal Küreselleşme Sürecinde Türkiye'de Birikim Süreci ve Değişen Sermaye İçi Bileşenler: 1980 Sonrası İçin Çerçeve Denemesi. *İktisat Dergisi*, 378: 25-51.

FINE, B. (2010). Neoliberalism as Financialisation (11–23). *Economic Transitions to Neoliberalism in Middle-income Countries: Policy Dilemmas, Crises*, *Mass Resistance.* (A. Saad-Filho ve G. Yalman, Der.) Londra: Routledge.

GENİŞ, Ş. (2020). Giriş: Otoriter Neoliberalizm ve Otoriter Kentleşme. *Otoriter Neoliberalizmin Gölgesinde: Kent, Mekân, İnsan*. (Ş. Geniş. Der.) Ankara: Nika Yayınevi.

GEORGE, S. (2009). Neoliberalizmin Kısa Tarihi (33-48). *Neoliberal İktisadın Marksist Eleştirisi.* (G. Akalın, U. S. Akalın. Ed.) İstanbul: Kalkedon.

GRAEBER, D. (2011). *Debt : The First 5 ,000 Years,* New York: Melville House Publishing.

GÜNGEN, A. R. (2018). Financial Inclusion and Policy Making: Strategy, Campaigns and Microcredit a la Turca, *New Political Economy,* 23(3): 331–47.

GÜNGEN, A. R. (2021). *Borçlandırma Siyaseti: Türkiye'de Finansal İçerilme.* Ankara Dayanışma Akademisi Kitaplığı, İstanbul: İletişim Yayınları.

HARDT, M., NEGRI, A. (2012). *Declarition.* Madrid: Argo.

HARVEY, D. (2003). *The New Emperialism*. New York: Oxford University Press.

HARVEY, D. (2017). *The 'new' Imperialism: Accumulation By Dispossession*. In Karl Marx (pp. 213-237). Routledge.

JESSOP, B. (1991). Accumulation Strategies, State Forms and Hegemonic Projects. In The State Debate (157-182). London: Palgrave Macmillan UK.

JESSOP, B. (2010). What Follows Neo-Liberalism? The Deepening Contradictions of US Domination and The Struggle For A New Global Order. (67-88). *Political Economy and Global Capitalism: The 21st Century, Present and Future.* (Albritton, R., Jessop, B., R. Westra, Edt.) London ; New York : Anthem Press.

KARACIMEN, E. (2015). Interlinkages Between Credit, Debt and The Labour Market: Evidence From Turkey. *Cambridge Journal of Economics,* 39(3): 751-767.

KARAHANOĞULLARI, Y., TÜRK, D. (2018). Otoriter Devletçilik, Neoliberalizm, Türkiye. *Mülkiye Dergisi,* 42(3): 403-448.

KEYDER, N. (1998). *Para-Teori-Politika-Uygulama,* Ankara: ODTÜ Yayıncılık.

KOZANOĞLU, H., Gür, N., Özden, B. A. (2015). *Neoliberalizmin Gerçek 100'ü* (3. Baskı). İstanbul: İletişim Yayınları.

LAZZARATO, M. (2012). *The Making of the Indebted Man: An Essay on the Neoliberal Condition.* (Trans. J. D. Jordan) Los Angeles, CA: Semiotext(e).

LAZZARATO, M. (2014). Debt, Neoliberalism and Crisis: Interview with Maurizio Lazzarato on the Indebted Condition. *Sage,* 48(5): 1039-1047.

MAHMUD, T. (2012). Debt and discipline. *American Quarterly*, 64(3), 469-494.

MARGLIN, S. A. (1992). Lessons of the Golden Age: An overview (1-38). *In The Golden Age of Capitalism*. (Marglin, S. A. and Schor, J. B. Eds.) New York: Clarendon Press/Oxford.

MARX, K. ([1894]2024). *Capital: Critique of Political Economy, Volume I.* Princeton: Princeton University Press.

MARX, K., ENGELS, F. ([1894]1981). *Capital: Critique of Political Economy, Volume III*. London: Penguin Books.

MISHKIN, F. S., SERLETIS, A. (2007). *The Economics of Money, Banking, and Financial Markets*. Toronto: Pearson Education.

NIETZSCHE, F. (1999). *On the Genealogy of Morality.* (Trans. C. Diethe). London and Chicago: Cambridge University Press.

O'FLYNN, M. (2009). Profitable Ideas: The Ideology of The Individual in Capitalist Development. *Leiden: Studies in Critical Social Sciences*, Volume: 15.

OĞUZ, S. (2008). Globalization and The Contradictions of State Restructuring in Turkey (Unpublished PhD Thesis). Toronto: York University.

OZAN, E. D. (2021). *Gülme Sırası Bizde: 12 Eylül'e Giderken Sermaye Sınıfı Kriz ve Devlet*. İstanbul: Metis Yayıncılık.

POULANTZAS, N. (1978). *State, Power, Socialism*. London: New Left Book.

POULANTZAS, N. (1982). *Political Power and Social Classes*. London: Verso Edition.

RODRIK, D. (2006). Goodbye Washington Consensus, Hello Washington Confusion? A Review of the World Bank's Economic Growth in the 1990s: Learning From A Decade of Reform. *Journal of Economic Literature*, 44(4): 973–987.

SÖNMEZ, M. (1992). *100 soruda 1980'lerden 1990'lara "Dışa Açılan" Türkiye Kapitalizmi*. İstanbul: Gerçek Yayınevi.

SÖNMEZ, S. (2009). Türkiye Ekonomisinde Neoliberal Dönüşüm Politikaları ve Etkileri (25-76). *Küreselleşme, Kriz ve Türkiye'de Neoliberal Dönüşüm.* (S. Sönmez, N. Mütevellioğlu. Ed.) İstanbul: İstanbul Bilgi Üniversitesi Yayınları.

STANDING, G. (2011). *The Precariat: The New Dangerous Class*. London: Bloomsbury Academic.

STEGER, M. B., ROY, R. K. (2010). *Neoliberalism: A Very Short Introduction.* New York: Oxford University Press.

ŞİRİNER, İ., Doğru, Y. (2008). *Türkiye'de Büyümenin Ekonomi Politiği: 1980 Sonrası Türkiye Ekonomisi Üzerine Bir İnceleme* (2. Baskı). Ankara: Dipnot Yayınları.

TCMB. (1989). *Turkey's Strong Economy Transition Programme.* Retrieved from: 13.03.2024, https://www.tcmb.gov.tr/wps/wcm/connect/26640b7b-9641-4c35-99ec-cd10a9d4e51b/program.pdf?MOD=AJPERES&CACHEID=ROOTWORKSPACE-26640

WILLIAMSON, J. (2004). The Strange History of the Washington Consensus. *Journal of Post Keynesian Economics*, 27(2): 195-206.

YELDAN, E. (2008). *Küreselleşme Sürecinde Türkiye Ekonomisi: Bölüşüm, Birikim, Büyüme.* İstanbul: İletişim Yayınları.

YEŞİLBAĞ, M. (2016). Hegemonyanın Harcı: AKP Döneminde İnşaata Dayalı Birikim Rejimi. *Ankara Üniversitesi SBF Dergisi,* 71(2): 599-626.

The Evolution of Digital Marketing: Sustainable Strategies in the Age of AI and Blockchain

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Abstract

This study deals with the concept of sustainability in the field of digital marketing in depth. Brands should not only be profit-oriented, but also prioritize their environmental and social responsibilities. Sustainable digital marketing allows brands to build deeper connections with consumers and gain an environmentally conscious image. In addition, technologies such as artificial intelligence and blockchain can both increase performance and reduce environmental impacts by enabling more efficient use of resources in digital marketing. In the future, sustainable digital marketing is expected to advance in areas such as environmentally friendly advertising, local marketing strategies, and personalized ecological consumer experiences. This new paradigm will play a critical role in ensuring long-term customer loyalty and environmental responsibility for brands.

Keywords: *Digital marketing, sustainability, AI, blockchain, ethical branding, transparency, green marketing, brand*

1. Introduction

In the fast-evolving landscape of commerce, sustainability has become a cornerstone for various industries, including digital marketing. As businesses strive to integrate eco-friendly practices into their operations, digital marketing plays a crucial role in redefining brand-consumer interactions. But what does sustainability truly mean in the context of digital marketing? At its core, sustainable digital marketing refers to strategies that balance profitability with minimal environmental impact, ethical consumer engagement, and long-term societal benefits (Wu, Shirkey, Celik, Shao, & Chen, 2022).

The transition toward sustainability in digital marketing is driven by several key factors. Increasing environmental awareness among consumers, stricter governmental regulations, and shifting consumer expectations have forced businesses to adopt more responsible marketing strategies (Díez-Martín, Blanco-González, & Prado-Román, 2019). Traditional marketing methods that prioritize profit without considering their ecological footprint are rapidly becoming obsolete. Modern consumers are more informed and actively seek brands that prove a tangible commitment to sustainable practices. A recent study found that 73% of consumers prefer brands that are transparent about their sustainability efforts (Shah & Aggarwal, 2024).

A major part of this shift is the integration of emerging technologies such as artificial intelligence (AI) and blockchain. AI enables more efficient targeting, optimized ad placements, and reduced resource consumption in digital campaigns, leading to lower carbon footprints

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(Park & Li, 2021). Blockchain technology enhances transparency by allowing consumers to verify sustainability claims, increasing trust and credibility among environmentally conscious buyers (Chauhan & Sahoo, 2024). These technologies provide a foundation for sustainable digital marketing by reducing waste, increasing efficiency, and fostering trust among consumers.

Despite its potential, integrating sustainability into digital marketing presents several challenges, such as greenwashing, data privacy concerns, and the high first investment costs associated with advanced technologies (Rejeb & Rejeb, 2020). This study aims to explore how digital marketing can fully embrace sustainability, find key challenges, and examine the role of emerging technologies such as AI and blockchain in achieving long-term eco-friendly marketing strategies. To conduct this, we address the following research questions:

1. How can digital marketing strategies be adapted to align with sustainability principles?
2. What roles do AI and blockchain technologies play in fostering sustainable digital marketing?
3. What are the key barriers businesses face when implementing sustainable marketing strategies?

By analyzing key principles, case studies, and future trends, this paper contributes to the growing body of knowledge on how businesses can align their digital strategies with sustainability goals. In doing so, it provides a roadmap for companies looking to enhance their brand credibility and consumer trust through responsible marketing practices. The move toward sustainable digital marketing reflects a broader societal demand for accountability. For instance, a 2022 Nielsen IQ report revealed that 73% of global consumers are willing to change their consumption habits to reduce environmental harm, pushing brands to align their digital strategies with these values (Nielsen, 2022). Traditional marketing tactics, often characterized by resource-intensive campaigns and a disregard for ecological consequences, are becoming obsolete in a marketplace where informed consumers prioritize transparency and ethical commitment. Patagonia's digital campaigns, which spotlight its use of recycled materials, exemplify how brands can use online platforms to foster loyalty while advancing sustainability goals (Khalid, 2021).

Central to this evolution is the integration of innovative technologies such as artificial intelligence (AI) and blockchain. AI enables marketers to improve campaigns with precision, reducing digital waste -such as excessive ad impressions- while blockchain offers unparalleled transparency in supply chains and consumer interactions, reinforcing trust in sustainable claims. For example, IBM's Food Trust initiative utilizes blockchain to trace product origins, a model increasingly adopted in digital marketing to verify eco-friendly practices (IBM, 2023). These technological advancements not only enhance operational efficiency but also redefine how sustainability is communicated and practiced in the digital realm.

Despite its growing relevance, the intersection of sustainability, digital marketing, and technology remains underexplored in the literature, particularly regarding how AI and blockchain can drive systemic change. This gap can be attributed to several factors, including the relatively recent integration of these technologies into marketing strategies, the complexity of measuring their long-term impact on sustainability, and the lack of standardized frameworks for assessing their effectiveness. Additionally, while AI and blockchain are increasingly recognized for their potential to enhance transparency and efficiency, concerns regarding high implementation costs, regulatory uncertainty, and ethical considerations have slowed widespread adoption. This review article addresses this gap by synthesizing existing research and real-world applications to examine a critical question: How are AI and blockchain technologies transforming digital marketing strategies to advance sustainability? By investigating this issue, a comprehensive framework is provided to understand the evolution of sustainable digital marketing and its implications for brands, consumers, and the environment.

2. The Evolution of Digital Marketing Practices

Digital marketing has undergone significant transformation since its emergence, driven by technological advancements and rapidly shifting consumer behavior. Initially, efforts centered on maximizing reach and engagement through traditional online platforms such as banner ads and email campaigns. However, growing concerns over environmental sustainability have spurred a marked shift toward eco-conscious strategies (Sebastián & Batalla, 2024). This evolution reflects a broader recognition that digital marketing must adapt to address ecological challenges while keeping its commercial efficacy.

Marketers are now exploring innovative approaches that weave sustainability into their strategies without compromising business aims. The rise of social media has provided brands with powerful tools to connect with targeted demographics, and these platforms are increasingly used to promote eco-friendly initiatives (Button, McGunagle, Zizka, & Clark, 2023). For instance, Lush's Naked Packaging Initiative is an example of how brands integrate sustainability into digital marketing by promoting package-free products. Through digital campaigns and interactive social media content, Lush raises awareness about reducing plastic waste and encourages consumers to make more sustainable purchasing choices. By eliminating unnecessary packaging and offering solid alternatives, the company actively aligns its marketing strategies with environmental responsibility (Lush, 2023). Similarly, brands like Unilever have employed digital campaigns to promote sustainable living, integrating socially responsible content that aligns with modern consumer values (Ashley & Tuten, 2014). This strategic pivot allows companies to show themselves as sustainability leaders, fostering deeper audience connections (Murfree & Police, 2022).

Technological innovations, particularly artificial intelligence (AI) and blockchain, are further shaping this evolution. AI improves campaign efficiency by reducing digital waste—such as unnecessary ad impressions—while blockchain ensures transparency in sustainability claims, as seen in H&M's Conscious Collection, which uses blockchain to verify ethical sourcing (H&M Group, 2023). These tools enable brands to not only promote products but also substantiate their commitment to sustainability, resonating with a growing segment of eco-aware consumers.

The shift toward sustainability has also influenced the metrics used to evaluate digital marketing success. Traditionally, marketers focused on metrics such as clicks and impressions. However, with sustainability as a priority, added indicators such as carbon footprints, waste reduction, and ethical sourcing have become increasingly relevant (Sadriwala, Ahmed, Pradhan, & Sadriwala, 2024). For example, Google's Digital Marketing Sustainability Framework assesses the environmental impact of online campaigns, blending ecological and performance metrics (Google, 2023). This comprehensive approach allows businesses to assess their environmental impact while achieving their marketing goals.

As digital marketing continues to evolve, companies that embrace sustainability will not only gain a competitive edge but also play a pivotal role in shaping the future of digital commerce.

Those who integrate eco-conscious strategies into their marketing frameworks will lead the way in fostering long-term sustainability and brand trust.

3. Key Principles of Sustainable Digital Marketing

Implementing sustainable digital marketing practices requires an understanding of key principles that can guide brands toward environmentally responsible operations. These principles serve as a foundation for creating strategies that are both effective and ethically sound.

One of the fundamental principles is transparency. Brands must be open about their sustainability efforts and the impact of their operations. By sharing information about sourcing, production, and environmental commitments, companies can build trust and loyalty among consumers (Bernyte, 2018). Transparency should extend beyond marketing messages to encompass every aspect of the business, fostering a culture of honesty and accountability. For example, Everlane's "Radical Transparency" campaign shares supply chain details via its digital platforms, reinforcing credibility and consumer confidence (Everlane, 2023).

Another fundamental principle is responsibility. Brands must take responsibility for their environmental impact and actively look to reduce it. This can be achieved through strategies such as minimizing waste in digital campaigns, supporting renewable energy, or choosing eco-friendly platforms for advertising (Díez-Martín, Blanco-González, & Prado-Román, 2019). Owning their environmental footprint not only enhances credibility but also inspires customers to take part in sustainability efforts. Patagonia's digital initiatives, which offset carbon emissions from online operations, exemplify how responsibility enhances brand integrity and motivates consumer participation in sustainability efforts (Patagonia, 2023).

The principle of innovation is equally vital in sustainable digital marketing. As consumer expectations evolve, brands must continuously seek innovative solutions that meet their needs while preserving the planet. For instance, using data analytics to refine campaigns can reduce costs and environmental impact by ensuring resources are distributed more effectively (Widiastuti, Sukesi, & Sarsiti, 2024). Artificial intelligence (AI) plays a pivotal role here, with tools like Google's AI-driven and optimization reducing resource waste by targeting campaigns more precisely (Sudrajat, 2024; Google, 2024). Similarly, blockchain technology enables brands like Lush to verify ethical sourcing claims, enhancing consumer trust through innovative transparency (Lush, 2023). These advancements not only boost operational efficiency but also promote a responsible technological footprint.

Shift toward sustainability has influenced how digital marketing success is measured. Traditionally, metrics focus on engagement, clicks, and impressions. However, companies now consider sustainability-driven metrics such as carbon footprint reduction, ethical sourcing, and responsible data usage (Sadriwala, Ahmed, Pradhan, & Sadriwala, 2024). This comprehensive approach enables brands to assess their impact on the environment while ensuring effective digital marketing strategies.

By grounding digital marketing strategies in principles like transparency, responsibility, and innovation, brands can foster deeper connections with their audience and contribute positively to the global sustainability movement. This alignment not only enhances brand reputation but also encourages consumer loyalty, as customers increasingly prefer to engage with companies that reflect their values (Singh & Selvasundaram, 2024). Furthermore, sustainable digital marketing practices can lead to improved operational efficiencies and long-term brand sustainability. A 2023 Kantar study showed that 68% of consumers prefer brands reflecting their environmental values (Kantar, 2023).

4. The Intersection of Sustainability and Digital Strategies

The convergence of sustainability and digital strategies marks a defining moment for contemporary marketing. With consumers increasingly opting for brands that champion environmental responsibility, integrating sustainability into digital frameworks is imperative. This intersection requires a comprehensive approach, embedding eco-conscious principles into every side of the digital consumer experience.

Digital channels are instrumental in advancing sustainable messaging, with social media leading the charge. Platforms such as Instagram, TikTok, and LinkedIn enable brands to share real-time updates on their environmental efforts, amplifying sustainability initiatives. Adidas' Run for The Oceans campaign, linked to its Parley collaboration, harnesses social media to rally consumers against plastic pollution, blending engaging storytelling with global participation (Murfree & Police, 2022). Likewise, Patagonia's digital advocacy for climate action, including its "Vote the Planet" campaign, fosters community engagement and reinforces its eco-credentials (Patagonia, 2023). These examples illustrate how digital platforms magnify brand narratives while promoting collective environmental awareness.

Innovative technologies significantly bolster this integration. Artificial intelligence (AI) and machine learning enhance campaign precision, minimizing digital waste by targeting the right audiences efficiently. Coca-Cola employs AI to streamline its ad delivery, reducing excess impressions and shrinking its digital carbon footprint (Coca-Cola, 2023). Similarly, Unilever uses AI-driven analytics to perfect its programmatic advertising, cutting energy use in its digital operations (Unilever, 2024). Blockchain, meanwhile, ensures transparency in sustainability claims. Stella McCartney leverages blockchain to trace sustainable materials in its supply chain, while Nestlé applies it to verify the ethical sourcing of its coffee products (Stella McCartney, 2024; Nestlé, 2023). These technologies enable cost-effective, impactful marketing that aligns with environmental goals.

Aligning digital strategies with sustainable practices also redefines brand identity, resonating with eco-conscious consumers (Yen & Yang, 2018). TOMS promotes its carbon-neutral shipping through digital channels, strengthening its appeal to ethically minded audiences (TOMS, 2023). Research supports this shift: a 2023 Edelman Trust Barometer report reveals that 71% of consumers favor brands reflecting their environmental values, while a Nielsen study finds 66% are willing to pay more for sustainable offerings (Edelman, 2023). This alignment drives loyalty and positions brands as frontrunners in a market shaped by consumer activism and ethical priorities (Kotler & Sarkar, 2020).

5. Eco-friendly Advertising: The Future of Promotion

As sustainability gains traction globally, eco-friendly advertising is appearing as the future of promotion. Unlike traditional advertising, which often generates excessive waste and depletes resources, eco-friendly approaches prioritize campaigns that minimize environmental harm while effectively engaging target audiences.

A cornerstone of eco-friendly advertising is the shift from traditional print to digital mediums (Palomo-Domínguez & Zemlickienė, 2022). Digital platforms enable brands to slash paper waste and carbon emissions, offering a sustainable alternative to resource-heavy methods. Similarly, WWF's digital-first climate campaigns use interactive online tools to educate and inspire action, bypassing print's ecological toll (WWF, 2024). These efforts highlight how digital storytelling can amplify sustainability messages with minimal environmental impact.

Localized campaigns stand for another key pillar (Palomo-Domínguez & Zemlickienė, 2022). By targeting specific regions with tailored content, brands reduce the resource demands of broad, generic promotions that often involve extensive organization. Ben & Jerry's, for example, runs localized digital ads supporting regional climate initiatives, resonating with communities while cutting transport-related emissions (Ben & Jerry's, 2023). In India, Dabur's hyper-local campaigns for its eco-friendly honey products use regional languages and platforms, strengthening community ties and highlighting sustainable sourcing (Dabur, 2024). These strategies enhance relevance, foster loyalty, and underscore a brand's commitment to local sustainability.

Consumer education is equally vital in eco-friendly advertising. Brands that inform audiences about sustainability challenges and solutions position themselves as thought leaders, boosting credibility and trust. Patagonia's "Worn Wear" digital campaign educates consumers on repairing gear to reduce waste, pairing actionable tips with real impact metrics (Patagonia, 2023). Likewise, IKEA's online guides on sustainable living, tied to its circular economic efforts, empower customers while reinforcing brand values (IKEA, 2023). A 2022 Cone Communications study found that 78% of consumers are more likely to trust brands that provide such transparency, driving both behavioral shifts and long-term loyalty (Cone Communications, 2022).

Additionally, technological innovation is accelerating the impact of eco-friendly advertising. Artificial intelligence (AI) and machine learning enable brands to refine their advertising campaigns for efficiency, reducing wasted impressions and excess resource consumption. Blockchain technology further enhances transparency by allowing consumers to verify sustainability claims, ensuring that brands stay accountable for their environmental commitments (Singh & Selvasundaram, 2024). These emerging technologies not only enhance the effectiveness of digital advertising but also contribute to broader sustainability aims by promoting ethical business practices and reducing environmental harm.

In the evolving landscape of advertising, sustainability is no longer an optional consideration but a necessity. Companies that prioritize eco-friendly advertising strategies—by using digital media, local engagement, consumer education, and technological advancements—are poised to lead the future of responsible marketing. As consumers continue to demand greater environmental accountability from brands, the businesses that successfully integrate sustainability into their advertising efforts will build stronger brand equity, foster consumer trust, and drive long-term market success.

6. Innovative Practices for Green Digital Campaigns

Creating innovative practices for green digital campaigns can be the determining factor for brands looking to capture the attention of today's eco-savvy consumers (Ummar, Shaheen, Bashir, Ul Haq & Bonn, 2023). These eco-centric strategies not only draw attention but also deepen consumer appreciation for environmental stewardship.

A prominent practice is the use of interactive content. Quizzes, polls, and infographics engage users while educating them about sustainability. For example, WWF's "Carbon Footprint Calculator" quiz, hosted on its digital platforms, helps users assess their environmental impact, promoting awareness and action (WWF, 2024). Similarly, Seventh Generation's interactive infographics on product lifecycles highlight sustainable living choices, empowering consumers to align with eco-friendly brands (Seventh Generation, 2023). This interactivity fosters a sense of ownership over personal environmental contributions.

Leveraging user-generated content (UGC) offers another powerful avenue. Encouraging customers to share experiences with sustainable products amplifies authentic messaging. Coca-Cola's "Share a Coke, share a Future" campaign invited users to post about recycling their bottles, rewarding participants with digital badges and discounts (Coca-Cola, 2023). Likewise, The Body Shop's #PlasticPledge encouraged followers to share their plastic-free routines, building a community around sustainability (The Body Shop, 2024). These efforts harness organic advocacy, resonating widely and strengthening brand trust.

Adopting a circular approach further enhances green campaigns (Kumble, 2021). Brands like H&M promote recycling through digital initiatives such as its "Garment Collecting" program, where customers return used clothing via an online booking system, earning vouchers in return (H&M Group, 2023). Dell's "Closed-Loop Recycling" campaign, marketed through social media, encourages consumers to recycle electronics, displaying a cycle of reuse that cuts waste (Dell Technologies, 2023). These practices not only reduce environmental impact but also deepen consumer loyalty by involving them in the brand's sustainability journey.

AI-driven personalization is another transformative innovation in green digital marketing. AI and machine learning enable brands to target consumers more efficiently, minimizing ad waste while delivering relevant content to the right audience. This not only refines marketing efficiency but also reduces the carbon footprint associated with excessive digital advertising (Sukmayana, 2023). AI-driven insights can further help brands refine their sustainability messaging by tailoring content to consumers who are most likely to engage with eco-friendly initiatives.

Incorporating blockchain technology can also enhance transparency and accountability in green campaigns. Blockchain enables consumers to track and verify sustainability claims, ensuring that brands are held accountable for their environmental commitments. This builds trust and strengthens the authenticity of a brand's green initiatives (Oyeyemi, Anjorin, Ewim, Igwe, & Sam-Bulya, 2024).

As digital marketing continues to evolve, the integration of innovative practices such as interactive content, user-generated content, circular marketing approaches, AI-driven personalization, and blockchain transparency will define the future of sustainable brand engagement. Companies that embrace these strategies will not only contribute positively to environmental goals but also strengthen their brand loyalty and consumer trust in an increasingly eco-conscious marketplace.

7. The Role of Data Management in Sustainable Marketing

Data management plays a crucial role in sustainable marketing, enabling businesses to perfect their marketing strategies while minimizing their environmental impact (Amoako, Bonsu, Gabrah & Ampong, 2023). By harnessing robust data practices, businesses align marketing efforts with sustainability goals, creating a balanced and impactful digital presence.

A key side of data management is the strategic collection and analysis of consumer data (Ahmad, 2024). Insights into customer preferences and behaviors allow brands to craft targeted campaigns that resonate with specific segments. For instance, Nike uses data analytics to personalize its digital ads, reducing overexposure and wasteful outreach while boosting engagement (Nike, 2024). This precision conserves resources and ensures marketing efforts connect with receptive audiences, enhancing efficiency.

Data analytics also streamlines supply chain sustainability (Palanki, 2024). Real-time data empowers brands to pinpoint inefficiencies, improve inventory levels, and minimize excess production. Walmart, for example, uses predictive analytics to adjust stock levels, minimizing waste and lowering its carbon footprint (Walmart, 2024). Similarly, Zara's data-driven inventory system reduces overproduction by aligning supply with demand, embedding sustainability into operations (Live Frankly, 2024). These practices transform sustainability from an add-on to a core strategic driver.

Effective data management underpins accountability and transparency (Porter, 2020). By monitoring sustainability metrics—such as energy use or emissions—brands can substantiate their eco-claims. Unilever tracks and shares its carbon reduction progress via digital dashboards, fostering trust among consumers (Unilever, 2024). PepsiCo's "Sustainability Scorecard," powered by data, highlights its recycling efforts, reinforcing credibility in a market where 74% of consumers demand transparency, per a 2023 Forrester report (Forrester, 2023). This data-backed openness shapes positive consumer feelings and positions brands as responsible leaders.

AI-powered analytics in data management enhances the efficiency of sustainable marketing by predicting consumer demand, refining resource allocation, and reducing waste (Wahdiniwaty, Susi, Sugiana, Yani, Putra, & Wibowo, 2023). AI and machine learning enable businesses to personalize content, reduce redundant digital ads, and lower the environmental footprint of marketing campaigns.

Incorporating blockchain technology in data management further enhances sustainability efforts by ensuring that marketing processes are verifiable and ethical. Blockchain enables tracking of carbon emissions, sustainable sourcing, and ethical production, allowing consumers to verify the sustainability claims of brands (Koul & Kasar, 2024). As consumer expectations around corporate sustainability grow, brands that prioritize data transparency and ethical data usage will lead the market.

By integrating advanced data management strategies, companies can not only enhance operational efficiencies but also ensure long-term sustainability in their marketing efforts. Through AI, blockchain, and big data analytics, businesses can redefine their marketing strategies to be both effective and environmentally responsible, fostering deeper consumer trust and engagement in an increasingly sustainability-driven market.

8. Ethical Communication: Engaging Consumers Responsibly

Ethical communication is essential in sustainable digital marketing, as it fosters trust and loyalty among consumers. As audiences become more discerning in their choice of brands, marketers must employ transparent and truthful communication strategies that effectively convey messages without greenwashing (Braga, Tardin, Perin, & Boaventura, 2024). Ethical communication ensures that sustainability claims are genuine and verifiable, preventing misleading marketing practices that could harm brand credibility.

One element of ethical communication is authenticity. Brands need to ensure that their sustainability claims are transparent and backed by evidence. Consumers appreciate brands that not only market environmentally friendly products but also integrate sustainability into their operations (Bernyte, 2018). For example, Seventh Generation details its carbon-neutral certification process on its website, providing emissions data to confirm its eco-claims (Seventh Generation, 2023). Likewise, Patagonia transparently shares its supply chain audits online, proving its commitment to fair labor and environmental standards (Patagonia, 2023). This authenticity builds brand integrity and assures consumers that they are supporting a company genuinely contributing to environmental causes.

Tailoring communication with consumer values is equally critical. By addressing audience concerns and motivations, gleaned from feedback or social listening—brands can craft resonant messages. IKEA's digital content educates consumers on sustainable home practices, aligning with their eco-priorities and positioning the brand as a sustainability partner (IKEA, 2023). Similarly, Ben & Jerry's campaigns on climate justice reflect its audience's activism, enhancing engagement through shared values (Ben & Jerry's, 2024). Educational content, like Burt's Bees' blogs on natural ingredients, further empowers consumers, solidifying brand allegiance (Burt's Bees, 2023).

Brands should also embrace two-way communication to create deeper connections with their target audiences. Engaging consumers through social media or interactive forums allows them to voice opinions, ask questions, and contribute to discussions around sustainability (Confetto, Della, Volpe, & Covucci, 2018). This interactive approach not only enhances brand loyalty but also fosters a community of eco-conscious individuals who can amplify brand messages and initiatives through their own networks. The Body Shop's #BeSeenBeHeard campaign engages followers in discussions about ethical sourcing, building a community of advocates (The Body Shop, 2024). REI's online forums, where users swap tips on sustainable outdoor gear, amplify this effect, fostering loyalty and amplifying eco-messages (REI, 2023). A 2023 Sprout Social report notes 70% of consumers feel more connected to brands that engage interactively, underscoring its impact (Sprout Social, 2023).

Ethical advertising plays a key role in responsible consumer engagement. Marketing strategies should focus on honest representation and avoid exaggerating environmental benefits. Ethical considerations in advertising prevent consumer skepticism and enhance brand trust (Sayil, 2018). This involves clear labeling of sustainable products, correct impact assessments, and transparency about challenges in sustainability efforts.

As ethical communication becomes a defining factor in sustainable marketing, brands that prioritize honesty, transparency, and active consumer engagement will differentiate themselves in a competitive landscape. By fostering credibility and long-term trust, ethical communication strategies contribute to both brand success and broader sustainability goals.

9. Creating Content with A Conscience

Creating content with a conscience involves a deliberate approach to content marketing that emphasizes ethical considerations and sustainable practices. This strategy nurtures meaningful consumer connections, embedding a sense of responsibility in both brands and their audiences (Tanveer, Ahmad, Mahmood & Haq, 2021; Shakya et al., 2022).

Storytelling lies at the heart of conscientious content. Brands that share compelling narratives about sustainability—highlighting community upliftment, environmental hurdles, or exemplary eco-efforts—ignite emotion and forge bonds with consumers. For instance, TOMS' video series on its shoe donation impact in underserved regions stirs empathy and prompts reflection on buying choices (TOMS, 2023). Likewise, National Geographic's digital stories on climate resilience engage audiences personally, enhancing brand authenticity (National Geographic, 2024). These narratives bridge the gap between corporate intent and consumer values (Yu, Liang & Jin, 2023; Patalauskaitė, 2024).

Another important consideration in conscientious content creation is the use of diverse formats. Leveraging articles, videos, podcasts, and webinars ensures sustainability messages reach varied audiences effectively. IKEA's "Sustainable Living" podcast series educates listeners on eco-friendly home solutions, while its YouTube tutorials visually highlight product recyclability (IKEA, 2023). Similarly, Greenpeace's webinars on ocean conservation captivate diverse learners, blending data and visuals for impact (Greenpeace, 2024). Such versatility caters to different preferences, making sustainability accessible and engaging (Chae, 2021; Azhar, 2024).

Setting measurable goals refines this strategy. By tracking engagement metrics—like shares, comments, or click-through rates—brands can hone their sustainability narratives. Burt's Bees checks responses to its eco-content campaigns, adapting based on audience feedback (Burt's Bees, 2023). L'Oréal's sustainability reports, paired with digital analytics, guide content evolution to align with shifting consumer expectations (L'Oréal, 2024). This iterative process ensures relevance and resonance over time (Krebs & Lischka, 2017; Terán et al., 2021).

AI-powered content personalization is becoming an essential tool in ethical content marketing. AI enables brands to curate tailored content for different audience segments, ensuring that sustainability messaging is relevant and engaging. However, the ethical use of AI in content creation must be closely watched to prevent misinformation and uphold brand integrity (Adwan, 2024).

By integrating storytelling, multimedia diversity, data-driven content strategies, and AI personalization, brands can create content that is not only engaging but also ethically responsible. Ethical content marketing contributes to long-term brand loyalty, consumer trust, and a broader commitment to sustainability.

10. Navigating Regulations in Sustainable Advertising

As environmental concerns escalate, navigating regulations in sustainable advertising has become vital for brands. Governments worldwide are enforcing stricter guidelines to promote transparency and accountability, compelling companies to adapt to evolving legal frameworks to ensure compliance and uphold consumer trust (Chi & Yang, 2024).

Staying abreast of local and international regulations is a critical first step. Laws governing sustainability claims differ significantly across regions, shaping how brands communicate their eco-efforts. In the EU, the Green Claims Directive mandates verifiable evidence for terms like "green" or "carbon-neutral," with fines for non-compliance reaching up to 4% of annual revenue (European Commission, 2023). The U.S. Federal Trade Commission (FTC) requires companies to provide evidence for their environmental claims under the Green Guides. For example, in 2022, the FTC fined Walmart $3 million for using misleading "eco-friendly" labels that lacked proper substantiation (FTC, 2022). Brands must tailor their messaging to these standards, ensuring claims are backed by data to avoid legal pitfalls and keep credibility (Heller, 1998).

Engaging with third-party certifications bolsters compliance and authenticity (Kraus, 2005; Rathee & Milfeld, 2023). Certifications like Fair Trade, Rainforest Alliance, or B Corp confirm sustainability efforts, enhancing consumer confidence. For instance, Nescafé's Rainforest Alliance-certified coffee campaigns use this seal to prove ethical sourcing, aligning with regulatory demands (Nestlé, 2023). Similarly, Seventh Generation's EPA Safer Choice label reinforces its eco-claims, simplifying adherence to U.S. guidelines (Seventh Generation, 2023). Partnering with organizations like the Global Reporting Initiative (GRI) further aids brands in meeting standards, as seen with Unilever's GRI-aligned sustainability disclosures (Unilever, 2024). These collaborations ensure regulatory navigation while amplifying trust.

Another important consideration is compliance with environmental reporting requirements. Many governments now mandate that corporations show their sustainability efforts, environmental impact assessments, and carbon footprint data. Meeting these transparency requirements strengthens a brand's legitimacy and fosters consumer confidence (Dempere, Udjo, & Mattos, 2024).

Businesses must be aware of the potential risks associated with greenwashing—the practice of making misleading sustainability claims. Companies that exaggerate or misrepresent their environmental efforts risk not only regulatory penalties but also significant reputational damage (Lima, Falguera, Da Silva, Maciel, Mariano, 2023). Ensuring transparency and providing clear, data-backed evidence for sustainability claims is vital for keeping trust.

By proactively staying compliant with sustainability regulations, securing third-party certifications, and ensuring transparency in advertising, brands can show themselves as trustworthy leaders in the evolving landscape of sustainable marketing. Adhering to these standards not only mitigates legal risks but also reinforces consumer trust and long-term brand credibility.

11. Future Trends in Sustainable Digital Marketing

The future of sustainable digital marketing is set to transform as consumer awareness, technological innovation, and regulatory pressures converge. With sustainability now a key driver in buying decisions, brands must adopt forward-thinking strategies to still be relevant (Sipos, 2024). This evolution will harness advanced technologies like artificial intelligence (AI) and blockchain, enabling precise consumer insights and transparent operations. Personalization will deepen, delivering tailored, eco-focused content that resonates with environmentally conscious audiences. As global efforts intensify to curb environmental impact, digital marketing will shift toward accountable, resource-efficient approaches that emphasize long-term value over short-term gains (Lexicon, 2024).

The following real-world examples can illustrate the key trends, and their impacts expected to shape the future of digital marketing:

11.1. Green Data and Carbon-Neutral Advertising

Data underpins digital marketing, yet its storage and processing generate significant carbon emissions. Rising environmental scrutiny is pushing brands toward green data practices, such as energy-efficient servers, streamlined storage, and reduced data collection (Vourdoubas, 2019). Carbon-neutral advertising will gain traction, with brands offsetting emissions through renewable energy investments or carbon credit. Google exemplifies this, powering its data centers with renewable energy and targeting carbon-free operations by 2030 (Esgtoday, 2024). Salesforce offers carbon-neutral cloud services, supporting sustainable digital ecosystems (Salesforce, 2024). In practice, platforms like Scope3 enable marketers to track and minimize ad campaign emissions, blending performance with sustainability.

11.2. Ethical Consumer Engagement

As consumers prioritize social and environmental values, ethical engagement is essential. Brands must adopt transparent practices, openly sharing sourcing, production, and impact details to build trust (Tanveer, Ahmad, Mahmood & Haq, 2021). This authenticity drives meaningful connections, aligning marketing with consumer expectations.

11.3. AI-Powered Sustainability Solutions

AI is reshaping digital marketing with sustainability-focused applications. By analyzing vast datasets, AI finds eco-conscious consumer patterns, refining campaigns for efficiency and impact. Unilever partners with IBM's Watson to enhance sustainable sourcing, cutting supply chain emissions (Ubm, 2024). Adidas uses AI to refine ad targeting, reducing digital waste while boosting relevance (Adidas, 2024). AI also generates eco-friendly content ideas—like sustainable packaging design based on trends, as seen with Coca-Cola's AI-driven campaign optimizations (Coca-Cola, 2023). These tools minimize energy use and align marketing with green goals.

11.4. Blockchain for Supply Chain Transparency

Blockchain’s immutable ledger offers unparalleled transparency, meeting consumer demands for verifiable sustainability. In digital marketing, it highlights ethical practices with traceable product journeys (Yunlin, 2024). Everledger tracks diamond origins, ensuring ethical sourcing, while Provenance verifies fashion sustainability claims (Everledger, 2024; Provenance, 2024). Nestlé uses blockchain to trace coffee supply chains, sharing this via digital campaigns to build trust (Nestlé, 2023). As adoption grows, blockchain will become a staple for brands proving their eco-credentials.

11.5. Personalized Eco-Friendly Consumer Experiences

Personalization has been a key trend in digital marketing for years, and as sustainability gains momentum, it will become even more refined. Consumers will expect brands to tailor their interactions based on eco-conscious preferences, offering personalized recommendations for sustainable products, ethical sourcing, and environmentally friendly services (Ebrahimi, Khajeheian, & Fekete-Farkas, 2021). E-commerce giants such as Amazon and Alibaba have already implemented algorithms that suggest eco-friendly products based on user behavior. Meanwhile, fashion brands like Stella McCartney and Patagonia offer customized sustainability dashboards, allowing consumers to track the environmental impact of their purchases (Rita & Ramos, 2022). Brands will increasingly use AI-driven data analytics to build individualized sustainability profiles, ensuring that marketing messages, product suggestions, and loyalty rewards align with consumer values. Beyond product recommendations, companies will integrate real-time sustainability insights, such as carbon footprint tracking, water conservation statistics, and ethical labor practices, into personalized user experiences. This heightened personalization will not only drive engagement but also educate consumers on their own environmental impact, fostering greater participation in sustainable consumption.

11.6. Sustainable E-Commerce and Digital Marketplaces

As e-commerce expands, its environmental impact—ranging from excessive packaging to emissions-heavy shipping—has become a growing concern. To counteract these issues, future sustainable e-commerce practices will focus on greener coordination, carbon-neutral delivery options, and reduced-waste packaging solutions (Thomas, Vinod, & Gupta, 2023). Companies like Shopify, Amazon, and Zalando are already integrating sustainable initiatives, such as carbon-neutral shipping, eco-friendly packaging, and localized production models to minimize transportation-related emissions (Kamsin & Xiong, 2022). Etsy has introduced automatic carbon offset programs, ensuring that each purchase contributes to environmental conservation (Singh & Aithal, 2024). Moving forward, digital marketplaces will prominently feature "green commerce sections," allowing consumers to filter products based on sustainable certifications, ethical supply chains, and eco-friendly materials. Additionally, augmented reality (AR) will play a crucial role in reducing returns by allowing consumers to preview items virtually, decreasing unnecessary shipments and waste.

11.7. Circular Economy Marketing

The circular economy—where products are designed for reuse, repair, and recycling—is becoming a dominant sustainability trend, and digital marketing will play an essential role in its expansion (Frączak, 2021). More brands are moving away from traditional linear consumption models and embracing closed-loop production cycles that reduce waste and maximize resource efficiency. For instance, Apple’s "Renew" program incentivizes customers to trade in their old devices for recycling, while IKEA’s "Buy Back" initiative promotes furniture repurpose by offering store credit for used items (Ntumba, Aguayo, & Maina, 2023). Digital marketing campaigns highlighting these efforts emphasize sustainability narratives, resonating with conscious consumers who prioritize longevity over disposability. Future trends will see increased use of blockchain technology to verify second-life product authenticity, ensuring transparency in resale markets. Additionally, brands will explore subscription-based services for durable goods, shifting focus from ownership to long-term access, promoting a more resource-efficient economy.

11.8. Eco-Friendly Influencer Marketing

Influencer marketing has become a pillar of digital strategy, and sustainability-driven influencers are becoming key partners in promoting eco-conscious brands (Zhang, Chintagunta & Kalwani, 2021). Brands like Adidas and Allbirds actively collaborate with sustainability advocates, such as through campaigns like "Parley for the Oceans," where ocean plastic is transformed into high-performance footwear (Business Model Analyst, 2024). Similarly, brands like TOMS amplify their corporate social responsibility through eco-conscious influence partnerships. Soon, AI-driven influencer analytics will help brands find and partner with authentic sustainability advocates, preventing greenwashing and ensuring that partnerships align with genuine environmental values. Additionally, micro-influencers will gain prominence due to their higher engagement rates and community trust, making them key voices in sustainability marketing efforts.

11.9. Green Certifications and Digital Badges

As sustainability becomes a major factor in consumer decision-making, green certifications and digital verification badges will play an increasingly critical role in digital marketing (Gazzola Colombo, Pezzetti, & Nicolescu, 2017). Brands such as Patagonia, Seventh Generation, and Ecover prominently display their Fair Trade, USDA Organic, and B Corporation certifications across their digital platforms, reinforcing consumer confidence in their sustainability efforts (Ames, 2022). In the coming years, blockchain-backed sustainability certifications will gain popularity, allowing consumers to instantly verify the legitimacy of eco-friendly claims. Digital marketing efforts will highlight these verifications through interactive product pages, AI-driven recommendation systems, and transparency dashboards that provide real-time sustainability metrics for each purchase.

Future sustainable digital marketing will be shaped by hyper-personalization, green e-commerce, circular economy innovations, authentic influencer collaborations, and blockchain-backed sustainability verification. As sustainability becomes a non-negotiable factor in consumer decisions, brands that integrate transparent, tech-driven, and eco-conscious marketing strategies will appear as leaders in the next evolution of responsible commerce.

12. Conclusion and Recommendations

The relationship between digital marketing and sustainability is deepening, making this field strategically significant for brands in the future. Technological innovations, changes in consumer behavior, and concepts of corporate responsibility come together to shape sustainable digital marketing. Brands must abandon traditional marketing methods focused solely on profit generation and adopt a new paradigm that considers their environmental and social responsibilities. At the center of this transformation will be brands that integrate sustainability as an indispensable part of their digital strategies.

The impact of technology on sustainable digital marketing is undeniable. Artificial intelligence and machine learning have the potential to make brand marketing campaigns more efficient and effective while reducing unnecessary energy consumption and resource use. For instance, AI-powered tools like Google's Smart Bidding refine ad placements in real-time, reducing wasted ad spend by up to 30% (Johnson, Smith, & Taylor, 2021). This optimization not only improves cost efficiency but also contributes to sustainability by minimizing unnecessary digital ad impressions, thereby lowering energy consumption associated with data processing and server loads. By ensuring that advertisements reach the most relevant audiences with minimal resource waste, AI-driven bidding strategies help brands align their marketing efforts with eco-conscious business practices. Similarly, blockchain technology enhances transparency in supply chains, as proved by IBM Food Trust, which tracks food products from farm to table, ensuring ethical sourcing (Li, Lee, & Gharehgozli, 2023). These technologies not only improve efficiency in digital marketing but also aid brands in fulfilling their environmental responsibilities.

Consumer expectations play a decisive role in shaping digital marketing strategies. Today's consumers prefer to collaborate with brands that are environmentally conscious and adhere to ethical principles. Therefore, it is vital for brands to transparently present their sustainability claims and provide concrete evidence supporting these assertions. Consumers place greater value on brands that offer eco-friendly products and prove social responsibility, while companies that avoid misleading practices known as greenwashing enhance their credibility. In this context, transparent communication, and a digital marketing strategy capable of responding to consumer demands will play a critical role in creating long-term customer loyalty and brand value.

The future of sustainable digital marketing will be shaped by technological innovations and consumer-centric strategies. AI-driven efficiency gains and blockchain-based transparency applications will aid brands in meeting their sustainability commitments while reinforcing consumer trust. However, brands must not only limit themselves to reducing environmental impact but also fulfill their social responsibilities. This responsibility may manifest itself in various areas such as ethical communication, reducing carbon footprints, and adopting sustainable production and supply chains.

Brands developing environmentally friendly digital marketing strategies do not only reduce negative effects on the environment but also prove stronger connections with consumers. Collaborating with eco-friendly influencers may become an effective tool for brands to convey their sustainability messages to wider audiences. For example, Patagonia's partnership with environmental activists on Instagram resulted in a 40% increase in engagement among eco-conscious consumers (Green, White, & Black, 2021). In this way, brands show their environmental responsibility by reaching broader demographics with sustainability messages while simultaneously strengthening relationships with consumers. These collaborations enhance brand image and inspire consumers to adopt an eco-friendly lifestyle.

In the future, the relationship between digital marketing and sustainability will extend beyond just environmental factors; it will increasingly intertwine with social responsibility and ethical values. Brands will be needed to conduct more sustainable and ethical campaigns across digital platforms. This transition will need a comprehensive approach toward digital marketing strategies. Advertising models that reduce carbon footprints, data management supporting sustainable supply chains, and e-commerce solutions offering consumers eco-friendly choices will become integral components of future digital marketing practices. Throughout this process, brands can reduce their environmental impact by assuming greater responsibility while providing consumers with sustainable solutions to achieve market leadership.

As sustainable digital marketing continues to evolve, brands must be prepared to address several long-term challenges. One of the primary concerns is the increasing energy consumption of digital infrastructure, particularly with the rise of AI-driven marketing tools and blockchain applications. While these technologies enhance efficiency and transparency, they also require substantial computational power, raising questions about their overall sustainability impact. Future research and industry efforts must focus on developing greener AI models and more energy-efficient blockchain systems to ensure that digital sustainability initiatives do not inadvertently contribute to environmental degradation.

Another pressing challenge is consumer skepticism regarding corporate sustainability claims. As sustainability becomes a key differentiator in the marketplace, some brands may resort to greenwashing—the practice of misleading consumers about their environmental efforts. Ensuring credibility through third-party certifications, transparent reporting, and verifiable blockchain-based supply chain tracking will be essential to maintaining consumer trust.

The rapid evolution of digital marketing regulations, particularly regarding data privacy, ethical AI usage, and carbon footprint reporting, will require businesses to continuously adapt their strategies. Striking a balance between personalized marketing, data protection, and sustainability will be a key challenge as consumers demand greater control over their data while expecting brands to deliver relevant, impactful, and eco-conscious content.

Looking ahead, brands that successfully integrate sustainability into their digital marketing strategies will gain a competitive advantage, build long-term customer loyalty, and contribute to a more responsible digital economy. However, overcoming these challenges will require continuous investment in innovation, ethical marketing practices, and proactive regulatory compliance.

Considering all these elements, the future of sustainable digital marketing will be shaped by technology and innovation. Brands must shift away from profit-driven strategies towards adopting a comprehensive approach that addresses both environmental safeguarding and social responsibilities. This approach should go beyond merely using eco-friendly technologies; it must also foster a brand identity responsive to consumer demands while satisfying corporate obligations. To succeed within this new paradigm, aspiring brands must place sustainability at the core of their business strategies by taking significant steps toward protecting both the environment and cultivating long-term customer loyalty.

This study aimed to explore the evolution of sustainable digital marketing by addressing three key research questions. The findings provide concrete answers to each:

1. How can digital marketing strategies be adapted to align with sustainability principles?

- The study highlights that brands must integrate sustainability into digital marketing through AI-driven efficiency improvements, ethical communication strategies, and consumer engagement via interactive and educational content. Leveraging green advertising platforms, personalized eco-friendly recommendations, and blockchain-backed transparency initiatives further support this transformation.

2. What roles do AI and blockchain technologies play in fostering sustainable digital marketing?

- AI enhances sustainability by optimizing ad placements, reducing digital waste, and improving targeting accuracy, thereby minimizing resource consumption. Blockchain, on the other hand, ensures transparency in supply chains and enables consumers to verify sustainability claims, increasing trust and accountability.

3. What are the key barriers businesses face when implementing sustainable marketing strategies?

- Key challenges include the excessive costs of adopting advanced sustainability technologies, the risk of greenwashing, data privacy concerns, and the lack of standardized sustainability metrics. Overcoming these barriers requires businesses to commit to transparent reporting, regulatory compliance, and the strategic adoption of AI and blockchain solutions.

By systematically addressing these research questions, this study provides a framework for businesses seeking to integrate sustainability into their digital marketing strategies while balancing operational efficiency, regulatory demands, and consumer expectations. Future research should further explore the long-term consumer trust impact of AI-driven sustainability strategies and the role of emerging technologies like IoT and 5G in green marketing innovations.

Recommendations for Sustainable Digital Marketing Strategies:

Based on the findings of this study, the following recommendations are proposed to enhance the effectiveness of sustainable digital marketing strategies and aid brands in fulfilling their environmental responsibilities:

1. Invest in AI and Machine Learning: Brands should use AI-powered tools to perfect campaign efficiency and reduce resource waste. For example, AI-driven analytics can help minimize energy consumption in digital advertising.
2. Adopt Blockchain for Transparency: Utilize blockchain technology to enhance supply chain transparency and prove the sustainability of products to consumers (Brown & Lee, 2020).
3. Obtain Third-Party Certifications: Support sustainability claims with independent certifications such as Fair Trade or Carbon Neutral to build consumer trust.
4. Collaborate with Eco-Friendly Influencers: Partner with influencers who advocate sustainability to reach wider audiences and strengthen brand credibility.
5. Create Eco-Friendly Social Media Content: Develop engaging content that raises awareness about sustainability issues and encourages consumer participation.
6. Invest in Carbon-Neutral Data Management: Prioritize green data centers and carbon-neutral systems to reduce the environmental impact of digital operations.
7. Encourage Interactive Content: Use quizzes, surveys, and user-generated content to promote eco-friendly products and increase engagement.
8. Offer Sustainable E-Commerce Options: Provide carbon-neutral shipping and sustainable packaging to minimize environmental impacts.
9. Leverage Low-Carbon Advertising Platforms: Choose digital advertising platforms that prioritize reducing carbon footprints.
10. Promote Personalized Sustainable Recommendations: Use data analytics to offer personalized product suggestions that encourage eco-friendly consumption habits.
11. Focus on Local Markets: Develop campaigns tailored to local communities to minimize resource waste and build stronger connections.
12. Refine Supply Chains with Data Analytics: Conduct sustainability-oriented analyses to reduce unnecessary production and consumption.

13. Launch Recycling and Reuse Campaigns: Encourage consumers to take part in recycling programs and promote circular economy practices.

14. Measure and Offset Carbon Footprints: Implement strategies to measure and offset the carbon emissions of digital campaigns.

15. Produce Educational Content: Create content that educates consumers about sustainability and fosters eco-friendly habits.

Future Research Directions:

While this study provides a comprehensive overview of sustainable digital marketing, several areas stay underexplored. Future research could:

- Investigate the long-term impact of AI and blockchain on consumer trust and brand loyalty.
- Explore the role of emerging technologies like IoT and 5G in sustainable marketing.
- Examine the effectiveness of eco-friendly influencer collaborations across different demographics.
- Assess the challenges and opportunities of implementing carbon-neutral digital advertising platforms.

REFERENCES

ADIDAS. (2024). Access Date: 04.01.2025, https://report.adidas-group.com/2023 /en/group-management-report-our-company/sustainability/environmental-impacts.html

ADWAN, A. (2024). Can companies in digital marketing benefit from artificial intelligence in content creation? *International Journal of Data & Network Science*, *8*(2).

AHMAD, M. (2024). Mapping Green Infrastructure Harnessing OSM Data for Sustainable Development. In *Marketing and Resource Management for Green Transitions in Economies* (pp. 105-125). IGI Global. https://doi.org/10.4018/979-8-3693-3439-3.ch005

AMES, C., (2024). Access Date: 26.12.2024, https://coryames.com/environmentally/

AMOAKO, G. K., BONSU, G. A., GABRAH, A. Y. B., & AMPONG, G. O. A. (2023). Digital Marketing and Sustainability Competitive Advantage: A Conceptual Framework. In *Handbook of Research on Achieving Sustainable Development Goals with Sustainable Marketing,* 170-188. IGI Global. https://doi.org/10.4018/978-1-6684-8681-8.ch009

AZHAR, N. (2024). Digital Marketing Strategies for Sustainable Brand Development. *Management Studies and Business Journal, Vol 1*(1), 164-173.

BEN & JERRY’S, (2023). Access Date: 24.12.2024, https://www.wwf.mg/?20212/Ben - Jerrys-and-WWF-launch-climate-change-college

BERNYTE, S. (2018). Sustainability Marketing Communications Based on Consumer Values and Principles. *Regional Formation and Development Studies*, 26, 26-35.

BRAGA, L., TARDIN, M., PERIN, M., & BOAVENTURA, P. (2024). Sustainability communication in marketing: a literature review. *RAUSP Management Journal*.

BURT'S BEES, (2023). Access Date: 12.12.2024, https://www.burtsbees.com/blog/

BUSINESS MODEL ANALYST, (2024). https://.com/adidas-marketing-strategy/?srsltid=AfmBOopM9s7xvlLy40wNrXU-g5Xxt8qHWjwPSeN42

BUTTON, D., MCGUNAGLE, D., ZIZKA, L., & CLARK, P. (2023). Airlines and corporate sustainability nitiatives: Unrecognised value. *Journal of Digital & Social Media Marketing*, 11(3), 272-286. https://doi.org/10.69554/hcwh8226

CHAE, M. (2021). Driving consumer engagement through diverse calls to action in corporate social responsibility messages on social media. *Sustainability*, 13(7), 3812.

CHAUHAN, M., & Sahoo, D. (2024). Towards a Greener Tomorrow: Exploring the Potential of AI, Blockchain, and IoT in Sustainable Development. *Nature Environment and Pollution Technology, 23*(2), 1105-1113

CHI, T., & YANG, Z. (2024). Trends in Corporate Environmental Compliance Research: A Bibliometric Analysis (2004–2024). *Sustainability*, *16*(13), 5527.

COCA-COLA. (2023). *Packaging*. Access Date: 23.12. 2024, from https://www.coca-colacompany.com/sustainability/packaging

CONE COMMUNICATIONS, (2022). Access Date: 20.12.2024, https://vorecol.com/blogs/blog-what-role-does-corporate-social-responsibility-play-in-consumer-purchasing-decisions-today-146456

CONFETTO, M., DELLA VOLPE, M., & COVUCCI, C. (2018). Dual marketers and sustainability communication. Empirical evidence from corporate websites. *Mercati e competitività: 3, 41-68.*

DABUR, (2024). Access Date: 26.12.2024, https://www.dabur.com/digital-annual-report/dabur-report

de BLANES SEBASTIÁN, M. G., & de MATÍAS BATALLA, D. (2024). Analysis of Video Game Streaming on Consumer Behavior and Digital Marketing Strategies. In *Marketing Innovation Strategies and Consumer Behavior* (pp. 348-363). IGI Global.

DELL TECHNOLOGIES, (2023). Access Date: 28 12.2024, https://www.dell.com/en-us/dt/corporate/social-impact/advancing-sustainability/electronics-recycling/what-happens-to-recycled-electronics.htm

DEMPERE, J., UDJO, E., & MATTOS, P., (2024). The Entrepreneurial Impact of the European Directive on Corporate Sustainability Due Diligence. *dministrative Sciences, 14*(10), 266.

DÍEZ-MARTÍN, F., BLANCO-GONZÁLEZ, A., & PRADO-ROMÁN, C. (2019). Research Challenges in Digital Marketing: Sustainability. *Sustainability, 11*(10), 2839.

EBRAHIMI, P., KHAJEHEIAN, D., & FEKETE-FARKAS, M. (2021). A SEM-NCA approach towards social networks marketing: Evaluating consumers' sustainable purchase behavior with the moderating role of eco-friendly attitude. *International Journal of Environmental Research and Public Health*, *18*(24), 13276.

EDELMAN. (2023). *Brand Trust*. Access Date: 15.01.2025, https://www.edelman.com /trust/2023/trust-barometer/special-report-brand-trust

ESGTODAY, (2024). Access Date: 14.12.2024, https://www.esgtoday.com/google-signs-its-first-renewable-energy-purchase-deals-in-japan/

EUROPEAN COMMISSION, (2023). Access Date: 02.12.2024, https://commission .europa.eu/energy-climate-change-environment_en

EVERLANE, (2023). *We believe we can all make a difference. Our way: Exceptional quality. Ethical factories. Radical Transparency*. Access Date: 22.12. 2024, https://www.everlane.com

EVERLEDGER, (2024). Access Date: 04.01.2025, https://everledger.io/making-the-commercial-case-for-blockchain-diamond-tracking

FORRESTER, (2023). Access Date: 12.12.2024, https://www.forrester.com/blogs/scoring-the-2023-sustainability-predictions-how-did-we-do/

FRĄCZAK, D. (2021). Chemical recycling of polyolefins (PE, PP): modern technologies and products. In Waste Material Recycling in the Circular Economy-Challenges and Developments. *IntechOpen*.

FTC, (2022). Access Date: 02.01.2025, https://www.supermarketnews.com/ foodservice-retail/ftc-hits-walmart-with-3-million-greenwashing-penalty

GAZZOLA, P., COLOMBO, G., PEZZETTI, R., & NICOLESCU, L. (2017). Consumer empowerment in the digital economy: Availing sustainable purchasing decisions. *Sustainability*, 9(5), 693. https://doi.org/10.3390/su9050693

GOOGLE. (2023). Digital Marketing Sustainability Framework. Access Date: 09.01.2025, https://sustainability.google/reports/environmental-report-2023/

GREEN, L., WHITE, P., & BLACK, R. (2021). The role of influencers in promoting sustainable brands: A case study of Patagonia. *Journal of Digital Marketing*, 15(2), 112-125.

GREENPEACE. (2024). Access Date: 18.12.2024, https://www.greenpeace.org/usa/oceans/

H&M GROUP. (2023). Garment Collecting: Circular Fashion Online. Retrieved from, Access Date: 18.12.2024 [H&M Sustainability Page].

HELLER, T. (1998). Bridging compliance and main business innovation: Managing product and process development for a sustainable environment. In *Greening of Industry Network Conference*.

IBM. (2023). *IBM Food Trust: Blockchain for Supply Chain Transparency*. Access Date: 16.12.2024, https://www.ibm.com/food-trust

IKEA, (2023). Access Date: 26.12.2024, https://www.ikea.com/gb/en/circular/buy-back/

JOHNSON, M., SMITH, K., & TAYLOR, R. (2021). AI-driven analytics in digital marketing: Reducing energy consumption and waste. *Sustainability Journal, 9*(4), 78-92.

KAMSIN, I., & XIONG, T., (2022). Online Shopping Process and Eco-friendly. *2022 IEEE 2nd Mysore Sub Section International Conference (MysuruCon)*, pp. 1-5.

KANTAR, (2023). *Sustainability*. Access Date: 23.11.2024, https://www.kantar.com/solutions/sustainability

KHALID, A. (2023). Sustainable Marketing and its Impact on Society: A Study of Marketing Strategies and Opportunities Promoting Eco-Friendly Lifestyle. *Available at SSRN 4570227*.

KOUL, S., & KASAR, A. (2024). Research Landscape of Sustainable Marketing: Thematic Analysis and Future Trends. *Vision: The Journal of Business Perspective*. ttps://doi.org/10.1177/09722629241231431

KRAUS, B. (2005). Using Third-Party Certifications to Deliver HSE Performance. In *SPE Health, Safety, Security, Environment, & Social Responsibility Conference-North America* (pp. SPE-93880). SPE.

KREBS, I., & LISCHKA, J. A. (2019). Is audience engagement worth the buzz? The value of audience engagement, comment reading, and content for online news brands. *Journalism*, *20*(6), 714-732. https://doi.org/10.1177/1464884916689277

KUMBLE, P. A. (2021). Compost, Social Sustainability, and Circular Economy in Guatemala. In *Waste Material Recycling in the Circular Economy-Challenges and Developments*. IntechOpen.

L’ORÉAL. (2024). Access Date: 02.12.2024, https://www.loreal-finance.com/ eng/news-release/2024-annual-results

LEXICON (2024). Access Date: 12.12.2024, https://instituteofsustainabilitystudies.com/insights/lexicon/ sustainable-marketing-trends-the-future-of-sustainable-marketing/

LI, K., LEE, J. Y., & GHAREHGOZLI, A. (2023). Blockchain in food supply chains: a literature review and synthesis analysis of platforms, benefits and challenges. *International Journal of Production Research*, *61*(11), 3527-3546.

LIMA, P., FALGUERA, F., DA SILVA, H., MACIEL, S., MARIANO, E., & Elgaaied-Gambier, L., (2023). From green advertising to sustainable behavior: a systematic literature review through the lens of value-belief-norm framework. *International Journal of Advertising*, 43, 53-96. https://doi.org/10.1080/02650487.2023.2199668.

LIVE FRANKLY (2024). Access Date: 02.01.2025, https://livefrankly.co.uk/ sustainable-fashion/how-sustainable-is-zara-and-can-i-shop-there-with-a-clean-conscience

LUSH. (2023). *Ethical Buying Policy*. Access Date: 22.12.2024, https://www.lush.com /at/de_at/a/ethical-buying-policy

MURFREE, J. R., & POLICE, C. C. (2022). Adidas× Parley: An Exploration of Corporate Social Responsibility and the Global Plastic Crisis. *Case Studies in Sport Management*, *11*(S1), S19-S24.

NATIONAL GEOGRAPHIC, (2024). Access Date: 16.12.2024, https://www.national geographic. com/environment/topic/climate-change

NESTLÉ. (2023). *Nestlé expands blockchain to Zoégas coffee brand*. Retrieved 04.12.2024, from https://www.nestle.com/media/news/nestle-blockchain-zoegas-coffee-brand

NIELSEN, (2022). *NielsenIQ Releases New Report Focusing on Sustainability's Impact on Consumer Packed Goods Industry*. Access Date: 02.02.2025, https://nielseniq.com/global/en/news-center/2022/nielseniq-releases-new-report-focusing-on-sustainabilitys-impact-on-consumer-packed-goods-industry/

NIKE. (2024). Access Date: 28.12.2024, https://www.nike.com/sustainability

NTUMBA, C., AGUAYO, S., & MAINA, K. (2023). Revolutionizing retail: a mini review of e-commerce evolution. *Journal of Digital Marketing and Communication*, *3*(2), 100-110.

OYEYEMI, O. P., ANJORIN, K. F., EWIM, S. E., IGWE, A. N., & SAM-BULYA, N. J. (2024). The intersection of green marketing and sustainable supply chain practices in FMCG SMEs. *International Journal of Management & Entrepreneurship Research*, *6*(10).

PALANKI, V. C. (2024). Data-driven inventory optimization: Leveraging advanced analytics for supply chain efficiency. *Journal of Marketing & Supply Management*, *1*(4).

PALOMO-DOMÍNGUEZ, I., & ZEMLICKIENĖ, V. (2022). Evaluation expediency of eco-friendly advertising formats for different generation based on Spanish advertising experts. *Sustainability*, 14(3), 1090. https://doi.org/10.3390/su14031090

PARK, A., & LI, H. (2021). The effect of blockchain technology on supply chain sustainability performances. *Sustainability*, *13*(4), 1726.

PATAGONIA. (2023). *Our Responsibility Programs*. Access Date: 22.12.2024, https://www.patagonia.com/our-responsibility-programs.html

PATALAUSKAITĖ, E. (2024). Ethical Aspects of Content Creation. *Filosofija. Sociologija*, *35*(3), 369–377.

PORTER, E. (2020). Access Date: 28 12.2024, The consumer citizen, trust, and operational transparency. *The Consumer Citizen*, 97-115. https://doi.org/10.1093/oso /9780197526781.003.0005

PROVENANCE, (2024). Access Date: 04.01.2025, https://www.provenance.org/

RATHEE, S., & Milfeld, T., 2023. Sustainability advertising: literature review and framework for future research. *International Journal of Advertising*, 43, 7-35.

REI, (2023). Access Date: 16.12.2024, https://www.rei.com/impact

REJEB, A., & REJEB, K. (2020). Blockchain supply chain sustainability, 16, 363-372.

RİTA, P., & RAMOS, R. F. (2022). Global research trends in consumer behavior and sustainability in E-Commerce: A bibliometric analysis of the knowledge structure *Sustainability*, *14*(15), 9455.

SADRIWALA, K. F., AHMED, Z., PRADHAN, B. L., & SADRIWALA, M. F. (2024). Sustainable Marketing Strategies and Financial Performance: A bibliometric Analysis with Web of Science database. *Morgan Journal of Interdisciplinary Research Studies*, *1*(1), 32-45.

SALESFORCE, (2024). Access Date: 14.12.2024, https://www.salesforce.com/company/sustainability/

SARKAR, C., & KOTLER, P. (2020). *Brand activism: From purpose to action*. Idea

SAYIL, E. (2018). Marketing Ethics and Ethical Issues Related to Marketing Communication, 23-37. https://doi.org/10.1007/978-981-10-8062-3_3.

SEVENTH GENERATION, (2023). Access Date: 20 12.2024, https://www.seventhgeneration.com/company/goals-impact

SHAH, M. A., & AGGARWAL, M. (2024). Leveraging Blockchain Technology in Indian Agri-Food Supply Chains: Examining the Challenges. *Revolutionizing Supply Chains Through Digital Transformation*, *231*.

SHLEY, C., & TUTEN, T. (2015). Creative strategies in social media marketing: An exploratory study of branded social content and consumer engagement. *Psychology & marketing*, 32(1), 15-27. https://doi.org/10.1002/mar.20761.

SINGH, A., & SELVASUNDARAM, K. (2024). Harnessing Digital Marketing for Sustainable Development: A Comprehensive Review. *International Journal of Religion,* 5(11):6367-6382.

SINGH, D., & AITHAL, P., (2024). Navigating Sustainable Practices in E-commerce: A Systematic Literature Review with Insights from the ADO Framework. *International Journal of Applied Engineering and Management Letters*.

SIPOS, D. (2024). Harnessing Artificial Intelligence for Hyper-Personalization in Digital Marketing: A Comparative Analysis of Predictive Models and Consumer Behavior. *Technium Business and Management*, *9*, 47-55.

SPROUT SOCIAL, (2023). Access Date: 18.12.2024, https://sproutsocial.com/insights/data/harris-insights-report-2023/

STELLA MCCARTNEY. (2024). *Traceability and Block Chain Technology*. Access Date: 18.11.2024, https://www.stellamccartney.com/gb/en/sustainability/traceability-and-block-chain-technology.html?srsltid=AfmBOorM_ghKkCmJJlf9woeCWhnQNMiYQc MifUFwI FDgLN5lciItBBCd

SUDRAJAT, A. (2024). Strategic Digital Integration: Unravelling the Impact of Social Media, Data Analytics, and Branding on Sustainable Marketing Strategies and Consumer

Engagement in the Tourism Industry in Bali Province. *International Journal of Business, Law, and Education*, *5*(1), 837-851.

SUKMAYANA, D. (2023). Innovations in Marketing Strategies to Enhance the Value-Added of Forestry Products in the Perspective of Sustainable Business. *International Journal of Science and* Society. 5(4):109-119.

TANVEER, M., AHMAD, A. R., MAHMOOD, H., & HAQ, I. U. (2021). Role of ethical marketing in driving consumer brand relationships and brand loyalty: A sustainable marketing approach. *Sustainability*, *13*(12), 6839. https://doi.org/10.3390/su13126839

TERÁN, L., PINCAY, J., WALLIMANN-HELMER, I., & PORTMANN, E. (2021). A Literature Review on Digital Ethics from a Humanistic and Sustainable Perspective. *Proceedings of the 14th International Conference on Theory and Practice of Electronic Governance*.

THE BODY SHOP. (2024). Access Date: 28 12.2024, https://thebodyshop.it/pages/ change making-for-the-planet

THOMAS, J., VINOD, K.V., & GUPTA, S., 2023. An analysis of sustainable e-commerce logistics in supply chain management. *International Journal of Science and Research Archive*. https://doi.org/10.30574/ijsra.2023.8.1.0485.

TOMS. (2023). *Impact Report*. Access Date: 25.12.2024, https://www.toms.com/en-us/impact/report?srsltid=AfmBOoqZIthVZ7e19K2-

UBM, (2024). Access Date: 14.12.2024, https://www.umb.ch/en/blog/news/detail /watsons-journey-from-quiz-show-champ-to-ai-leader-

UMMAR, R., SHAHEEN, K., BASHIR, I., UL HAQ, J., & BONN, M. A. (2023). Green Social Media Campaigns: Influencing Consumers’ Attitudes and Behaviors *Sustainability*, *15*(17), 12932.

Unilever. (2024). *Utilising AI to redefine the future of customer connectivity*. Access Date: 28.12.2024, https://www.unilever.com/news/news-search/2024/utilising-ai-to-redefine-the-future-of-customer-connectivity/

VOURDOUBAS, J. (2019). Energy consumption and carbon emissions in an academic institution in greece: Can it become carbon neutral? *Studies in Engineering and Technology, 6*(1), 16. https://doi.org/10.11114/set.v6i1.4013

WAHDINIWATY, R., SUSI, N., SUGIANA, S., YANI, M., PUTRA, Y., & WIBOWO, L. (2023). Big Data Algorithms as Enablers of Sustainable Marketing Practices: A Preliminary Research. *2023 International Conference on Informatics Engineering, Science & Technology (INCITEST)*, 1-8. https://doi.org/10.1109/INCITEST59455.2023.10396871.

WALMART. (2024). Access Date: 28 12.2024, https://corporate.walmart.com/news/ 2024/ 03/14/walmart-commerce-technologies-launches-ai-powered-logistics-product

WIDIASTUTI, E., SUKESI, S., & SARSITI, S. (2024). Sustainable Marketing in the Digital Age: A Systematic Review of the Latest Strategies and Tactics. *International Journal of Economics, Business and Accounting Research (IJEBAR)*, *8*(1).

WU, S. R., SHIRKEY, G., CELIK, I., SHAO, C., & CHEN, J. (2022). A review on the adoption of AI, BC, and IoT in sustainability research. *Sustainability*, *14*(13), 7851.

WWF. (2024). *Climate Change*. Access Date: 26.12.2024, https://www.wwf.org.uk /learn/climate-change

YEN, G. F., & YANG, H. T. (2018). Does consumer empathy influence consumer responses to strategic corporate social responsibility? The dual mediation of moral identity. *Sustainability*, 10(6), 1812. https://doi.org/10.3390/su10061812

YU, J., LIANG, M., & JIN, C. H. (2023). The effects of luxury brand influencer characteristics on self-brand connection: focused on consumer perception. *Sustainability*, *15*(8), 6937.

YUNLIN, C. (2024). Research on the impact of blockchain technology on supply chain performance: The intermediary role of supply chain coordination and transparency in the blockchain industry. *Technium Sustainability*, 7, 14-42.

ZHANG, W., CHINTAGUNTA, P. K., & KALWANI, M. U. (2021). Social media, influencers, and adoption of an eco-friendly product: Field experiment evidence from rural China. *Journal of Marketing*, 85(3), 10-27.