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POSITIVE AND NEGATIVE ASPECTS OF DIGITAL TRANSFORMATION FOR BUSINESSES: A QUALITATIVE RESEARCH

İŞLETMELER AÇISINDAN DİJİTAL DÖNÜŞÜMÜN OLUMLU VE OLUMSUZ YÖNLERİ: NİTEL BİR ARAŞTIRMA

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Abstract

Digital transformation has become a strategic necessity for businesses that seek to gain a competitive advantage, increase operational efficiency, and adapt to changing customer expectations. The objective of this study is to utilize a qualitative approach to examine the positive and negative causes and consequences of digital transformation in businesses. The present study employs a qualitative research method and a thematic content analysis design. The analyses were conducted using the Maxqda 20 software. The sample consists of 18 people, including business owners and employees. Furthermore, the analyses conducted within the scope of the interviews revealed 12 positive factors (working from anywhere, quality, profitability and cost reduction, customer satisfaction, competitive advantage, sustainability, technologies, automation and collaboration, productivity, innovative business model, agility, organizational culture change and improving communication quality, reducing conflicts) and 8 negative factors (no work-life balance, social issues and employment issues, data, security, technology issues, business model change, technostress/stress, resistance, technology addiction, adaptation issues). Consequently, the objective of achieving digital transformation has become imperative for businesses. In this context, the study offers a series of recommendations for enhancing the positive aspects of digital transformation for businesses and mitigating its negative aspects.

Keywords: Digital transformation, positive and negative aspects of digital transformation, qualitative study, socio-technical systems

JEL Classification: M10, M15, O33

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Öz

Dijital dönüşüm, işletmelerin rekabet avantajı elde etme, operasyonel verimliliği artırma ve değişen müşteri beklentilerine uyum sağlama çabalarında stratejik bir zorunluluk haline gelmiştir. Bu çalışmanın amacı, dijital dönüşümün işletmeler üzerindeki olumlu ve olumsuz nedenlerini ve sonuçlarını nitel bir yaklaşımla ortaya koymaktır. Bu çalışmada, nitel araştırma yöntemi ve tematik içerik analizi deseninden yararlanılmıştır. Analizler, Maxqda 20 programı aracılığıyla gerçekleştirilmiştir. Örneklem ise işletme sahipleri ya da çalışanlarından meydana gelen 18 kişiden oluşmaktadır. Ayrıca görüşmeler kapsamında gerçekleştirilen analizler sonucunda işletmeler açısından dijital dönüşümün 12 olumlu (her yerden çalışma, kalite, kârlılık ve maliyet azaltımı, müşteri memnuniyeti, rekabet avantajı, sürdürülebilirlik, teknolojiler, otomasyon ve iş birliği, verimlilik, yenilikçi iş modeli, çeviklik, örgüt kültürü değişimi ve iletişim kalitesinin artması, çatışmaların azaltılması) ve 8 olumsuz (iş-yaşam dengesizliği, sosyal sorunlar ve istihdam sorunu, veri, güvenlik, teknoloji sorunları, iş modeli değişikliği, teknostres/stres, direnç, teknoloji bağımlılığı, adaptasyon sorunu) kavram ön plana çıkmıştır. Sonuç olarak, dijital dönüşümü başarma hedefi işletmeler için zorunlu hale gelmiştir. Bu kapsamda çalışmada işletmeler için dijital dönüşümün olumlu yönlerinin artırılması ve olumsuz yönlerinin azaltılması için çeşitli öneriler getirilmiştir.

Anahtar Kelimeler: Dijital dönüşüm, dijital dönüşümün olumlu ve olumsuz çıktıları, nitel çalışma, sosyo-teknik sistemler

JEL Sınıflandırılması: M10, M15, O33

1. Introduction

Digital transformation (DT) has become an integral part of today's business world and organizations, profoundly impacting businesses and organizations across various sectors (Gkrimpizi et al., 2024). Digital transformation has become a critical factor driving organizational development and competitiveness in the modern business environment, due to its dynamic and rapidly evolving nature (Thomas, 2024). The significance of DT stems from the rapid proliferation of digital technologies that are increasingly permeating all facets of individuals' lives. A study conducted by the World Economic Forum (WEF) reveals that a substantial majority of companies, 87%, foresee considerable industry disruption because of digital transformation. However, only half of these companies have adequately prepared for it. This suggests that while some companies have recognized the implications of digital technologies, they are encountering challenges in adapting to these changes (World Economic Forum, 2023).

DT should not be viewed merely as the advancement of information and communication technologies. Instead, it is a much more comprehensive and holistic concept that encompasses internal and external processes, including technology, competition, customer behaviors, organizational resources and structure, growth strategies, as well as goals and objectives. The concept must be evaluated as an entirety, particularly in relation to organizational change and transformation, sociological, economic, and political events, the transformation of the economy, income inequality, climate events, and so on (Verhoef et al., 2021). In this context, ongoing competitive digital transformation practices have caused organizations to reshape (Leso et al., 2023). In this regard, digital transformation processes have facilitated the emergence of new industry actors, including Uber, Airbnb, Spotify, and Netflix (Fernández-Rovira et al., 2021; Malik et al., 2024). In essence, digital transformation involves

re-evaluating and restructuring businesses to transition from traditional models to innovative business frameworks (Malik et al., 2024).

The adoption of digital technologies facilitates the seamless integration of both internal and external resources within organizations, thereby enhancing resource-based capabilities. This integration is anticipated to drive innovation potential, positioning firms to leverage their assets more effectively in a competitive landscape (Xue et al., 2025). The emergence of digital transformation has led to a shift toward the use of advanced technologies in corporate practices (AlNuaimi et al., 2022). DT is defined as the process of rethinking and renewing corporate activities in the digital age. This multifaceted process encompasses the comprehensive digitization of all facets of a company's operations that are deemed suitable for digitization (Malewska et al., 2024). In this context, adopting, understanding, and implementing digital transformation is of critical importance. Accordingly, understanding the barriers to the process and identifying its positive and negative aspects are essential for businesses to successfully navigate their digital transformation processes. Nike, a preeminent brand in the athletic footwear industry, offers an additional illustration of this phenomenon. By leveraging advanced technology, the company has achieved two key objectives. First, it has facilitated accurate forecasting of future footwear projects. Second, it has modernized its internal operations (Xue et al., 2025).

The present study is predicated on the notion of socio-technical systems (STS) theory, which posits the integration of social elements (intra-organizational relationships, performance, etc.) and technical elements (technology, inventions, equipment) within a unified theoretical framework (Münch et al., 2022). According to this theoretical framework, the interplay between these two power elements is symbiotic, with each element serving to support and empower the other. In the context of organizational success, it is imperative to integrate digital components into the organizational structure and provide comprehensive explanations to employees (Thomas, 2024). In this study, we employed a qualitative method to examine the outcomes of digital transformation in the business sector.

In this study, the concept of digital transformation has been approached from various perspectives, examining its implications across different sectors and highlighting the barriers faced by businesses, as well as its positive and negative aspects. To this end, qualitative methods, including interview techniques and content analysis, have been utilized. A total of 18 experts in the field were interviewed, and analyses were conducted using the Maxqda 20 software.

2. Literature Review

DT plays a pivotal role in the manufacturing sector, as the transformation experienced in this sector is imperative for the economic development of all economies (Asadi et al., 2022). Bhanot et al. (2023) highlight the critical influence of digital transformation on the operational performance of manufacturing firms. This transformation encourages these firms to embrace advanced technological practices. The synergistic integration of human resources and machinery yields several benefits for

the manufacturing sector, including cost efficiency, enhanced operational intelligence, the adoption of cloud computing methodologies, and an increase in overall business volume (Yang et al., 2019).

In the context of the healthcare sector, digital transformation provides healthcare professionals and patients with different perspectives at various points (Belliger & Krieger, 2018). In a systematic literature review, the authors identified five key perspectives on the relationship between digital transformation and healthcare services: *"operational efficiency from the standpoint of healthcare providers; patient-centric approaches; organizational factors and managerial implications; workforce practices; and socio-economic dimensions"* (Kraus et al., 2021). Dal Mas et al. (2023), proposed a categorization of the steps of DT in the healthcare sector into three main areas: digital health services enabled by digital technologies, stakeholder engagement in healthcare through digital technologies, and the value impact of digital transformation for healthcare stakeholders. The researchers further demonstrated a connection between these areas, highlighting the contributions of various digital technologies to the delivery of digital services, operational efficiency, and value creation within the healthcare system. These technologies include smart health technologies, technologies for collecting and efficiently processing data into big data, Industry 4.0 tools and technologies, cognitive technologies, and pharmaceutical and disease-related technologies. The healthcare sector has been a primary domain where digital transformation has occurred over the years (Agarwal et al., 2010). On the other hand, digital technologies are also frequently utilized in the manufacturing industry. Particularly with the integration of artificial intelligence, various new business processes have emerged, leading to numerous outcomes in production, most notably improvements in efficiency (Wen et al., 2022).

Within the framework of digital businesses, it is essential for organizations to enhance the digital competencies of their workforce to maximize the value derived from technological investments. Employees equipped with the requisite digital skills are instrumental in facilitating the organization's digital transformation journey. Furthermore, organizational cultures in digitally advanced firms are often described as being more collaborative and innovation-driven when compared to those in traditional enterprises (Reis & Melão, 2023; Teichert, 2019).

When analyzing digital transformation in the context of small and medium-sized enterprises (SMEs), which constitute most business entities globally, a wide range of opportunities and challenges arise. Despite their critical role in innovative business practices and various other sectors, SMEs face substantial barriers in effectively adopting digital transformation and realizing measurable outcomes (Malewska et al., 2024; Morakanyane et al., 2017). Small and medium-sized enterprises (SMEs) prioritize digital transformation, particularly regarding their business processes, operations, and supply chains. In this regard, factors such as cost can present significant challenges (Borana et al., 2024; Elsa et al., 2025). Moreover, in SMEs that utilize and benefit from digital transformation, outcomes such as the optimization of profits, access to a much broader customer base, and savings in production factors can emerge (Schwaeke et al., 2024). Digital transformation processes will position SMEs in a more competitive state (Elsa et al., 2025).

Roblek et al. (2024), describe DT in their qualitative thematic study as the alteration of an organization's operational processes, structure, and essential skills to align with digital technologies and strategies. The process of digitizing operations is especially important for sustaining efficiency and flexibility within the organization. Considering this, managers stress the importance of adopting digital tools and techniques to improve operational effectiveness and boost organizational adaptability. Türkyılmaz (2024), study examines the evolution of digital transformation and its impact on business scenarios, highlighting both advantages and disadvantages. While the concept of digital transformation is acknowledged, there is a paucity of a methodology for the systematic digital transformation of business models. The study addresses the necessity of digital transformation, its impact on businesses, and the significance of strategy.

Liu et al. (2024) examined the impact of DT on firms' innovation performance in their study. It was found that digital transformation enhances innovation performance, absorptive capacity plays a mediating role in this process, and network embeddedness strengthens this relationship. The study emphasizes the importance of effective management of digital transformation and the associated policies. Kowalski et al. (2024), discovered a correlation between dynamic capabilities and digital transformation, indicating that cultivating a data-driven culture accelerates the digital transformation process.

The objective of the research is to address this lacuna in the extant literature by methodically aggregating the positive and negative outcomes of digital transformation for businesses and subsequently analyzing them using a semi-structured interview method. The concepts that emerge from this study provide a basis for businesses to evaluate and develop their digital transformation strategies and plans accordingly, thereby highlighting the study's originality.

2.1. Conceptual Framework of Digital Transformation

Digital transformation encompasses the holistic incorporation of digital technologies across all facets of an organization, leading to profound shifts in both operational processes and value delivery mechanisms. This transformation redefines how businesses function and engages with customers, driving new models of efficiency, interaction, and service provision. It has been influencing societies and a wide range of business sectors for some time (Verhoef et al., 2021). Digital transformation is set to impact businesses across all sectors, influencing the development of products, processes, and strategies. This underscores the critical importance of digital transformation for businesses and sectors worldwide (Cillo & Verona, 2022).

Digital transformation is defined as the integration of digital technologies to develop new products, processes, business models and services (Kowalski et al., 2024). DT is defined as "a process that aims to improve a business by mobilizing significant changes in its characteristics through combinations of information, computing, communication and connectivity technologies" (Vial, 2019). The definition of DT is a contentious issue, with many scholars offering diverse interpretations. However, a consensus can be reached by positing that DT is the process of leveraging information and

communication technologies (ICTs) to modify a business's operational models, products, services, and organizational culture and structures, with a view to attaining a competitive advantage through the benefits that ensue (Matt et al., 2015).

DT impacts many aspects of organizations, such as acquiring digital assets, defining digital growth strategies, changing the internal organizational structure, and defining appropriate metrics and goals (Verhoef et al., 2021). In this regard, companies must align all their processes with the digital transformation journey and recognize its significance. Moreover, the digital competencies of employees and the presence of a digital leader are critical factors that contribute to enhancing efficiency and profitability within organizations (Espina-Romero et al., 2025; Ordoñez De Pablos, 2023).

Table 1: Main Definitions of Digital Transformation

Author(s)	Definitions
(Piccinini et al., 2015)	"DT is defined as the leveraging of digital technologies to drive significant business improvements, such as the enhancement of the customer experience or the creation of new business models".
(Morakanyane et al., 2017)	"An iterative process that utilizes digital technologies and capabilities to transform business models, optimize operational processes, and enhance customer experiences, ultimately driving value creation".
(Vial, 2019)	"The DT initiative aims to drive organizational change by incorporating key elements such as information, communication, and connectivity Technologies".
(Warner & Wäger, 2019)	"The application of digital technology has been shown to support the growth of business opportunities, improve customer experience, optimize business processes, and drive innovation in business models".
(Kozarkiewicz, 2020)	"DT is a process in which digital technologies play a pivotal role in initiating and supporting disruptive changes in various sectors, as well as in society at large".
(Verhoef et al., 2021)	"DT involves the use of digital technologies by organizations to reassess their management, business, and commercial models, with data serving as a critical component in this process".
(Tangi et al., 2021)	"This process entails the implementation of organizational changes facilitated by digital technologies, which in turn transform the organizational structure and functioning, thereby resulting in a novel state encompassing process, culture, roles, relationships, and potentially all organizational dimensions".
(Zhu & Li, 2023)	"Digital technologies serve as the foundation of digital transformation, encompassing a range of processes aimed at restructuring a company's internal framework, culture, strategy, products, services, and business models".
(Heubeck, 2023)	"...the use of new digital technologies (such as social media, mobile, analytics, or embedded devices) to enable significant business improvements, such as enhancing customer experience, streamlining operations, or creating new business models".
(Reis & Melão, 2023)	"DT refers to the utilization of new digital technologies that drive significant business improvements and influence all aspects of customers' lives".
(Akman, 2024)	"DT is the process through which the changes and advancements in information and communication technologies, which have become more prominent with Industry 4.0, impact individuals, organizations, and societies-particularly businesses-both physically and psychologically, within the context of work, processes, and human factors".
(Chen & Zhang, 2024)	"DT can be defined as the integration of digital technologies, processes and strategies with the aim of reshaping organizations and their operations in response to a changing business environment".
(Malewska et al., 2024)	"DT is frequently defined as the process of leveraging new technologies to enhance business performance, primarily through the emergence of new business models and significant business improvements".

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Table 1 presents key definitions of digital transformation. These definitions generally revolve around concepts such as production, digital technologies, business improvements, and innovative business models. The continuous digital transformation is instrumental in reshaping organizational structures, fostering new dynamics in business operations and management (Leso et al., 2023). This situation is expected to highlight a significant impact of digital transformation on businesses.

In brief, digital transformation is the process of rethinking and redesigning traditional business models into innovative ones (Liu et al., 2024). It is evolving not only as an organizational concept but also as one that integrates technology and human factors (Gong & Ribiere, 2021). However, integrating digital technologies into business strategies represents a challenging effort, particularly for small and medium-sized enterprises (SMEs) that lack the necessary experience and human resources for adopting these technologies. Furthermore, there is a need to establish methods for modifying and adapting these technologies to meet the specific needs of the business (Awad & Martín-Rojas, 2024).

The emergence of digital transformation has led an increasing number of organizations to adopt advanced technological solutions (AlNuaimi et al., 2022). Among these, innovations such as artificial intelligence, big data, high-speed processing, and nano data are of particular significance due to their substantial impact on enhancing operational efficiency and business effectiveness (Brynjolfsson et al., 2021). Technologies such as artificial intelligence have the capacity to integrate into business ecosystems, thereby improving processes, delivering enhanced customer experience and promoting sustainable practices. Consequently, businesses can achieve their transformations through these advancements (Schwaeke et al., 2024). In summary, digital transformation can be defined as a combination of human, process and technological components that businesses must address (Akman, 2024; Bozkurt et al., 2021).

2.2. Barriers to Digital Transformation

Digital transformation is a concept that faces numerous challenges. Businesses frequently encounter challenges such as resistance to change, digital skills deficits, regulatory compliance issues, and intricacies in change management that can impede transformation endeavors (Borana et al., 2024; Dal Mas et al., 2023). In this context, several obstacles have been identified that hinder digital transformation processes. These obstacles are outlined in Table 2, with a particular focus on the challenges encountered from a business perspective. These obstacles are as follows; existence of competitors, high investment costs, lack of digital talent/experts, a constant sense of uncertainty and ambiguity caused by digital transformation processes, a constant sense of control and surveillance, uncertain digital transformation vision and goals, lack of digital leadership skills, an inflexible organizational culture, employee resistance to change and transformation. A review of the extant literature reveals that the barriers to digital transformation that can be experienced in an enterprise can be generally listed as the cost factor, lack of experts, ambiguity and lack of vision, and an inflexible organizational culture.

Table 2: Barriers to Digital Transformation

No.	Barriers	Source
1	Existence of Competitors	(Kowalski et al., 2024).
2	High Investment Costs	(Eller et al., 2020; Hai et al., 2021; Joseph Jerome et al., 2022; Judijanto et al., 2024; Raj et al., 2020; Vial, 2019; Xue et al., 2025).
3	Lack of Digital Talent/Experts	(Ajmera & Jain, 2019; Espina-Romero et al., 2025; Judijanto et al., 2024; Kapotas, 2023; Raj et al., 2020).
4	A Constant Sense of Uncertainty and Ambiguity Caused by Digital Transformation Processes	(Battistoni et al., 2023; Espina-Romero et al., 2025; Soto-Acosta, 2024).
5	A Constant Sense of Control and Surveillance	(Dragano & Lunau, 2020; Hanelt et al., 2021).
6	Uncertain Digital Transformation Vision and Goals	(Gupta, 2018; Kapotas, 2023).
7	Lack of Digital Leadership Skills	(Espina-Romero et al., 2025; Gupta, 2018; Joseph Jerome et al., 2022; Kapotas, 2023; Müller et al., 2024).
8	An Inflexible Organizational Culture	(Gupta, 2018; Joseph Jerome et al., 2022; Judijanto et al., 2024; Kapotas, 2023; Rakovic et al., 2024).
9	Employee Resistance to Change and Transformation	(AlNuaimi et al., 2022; Deral et al., 2024; Hanelt et al., 2021; Judijanto et al., 2024; Kapotas, 2023; Raj et al., 2020; Trenerry et al., 2021).

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2.3. Positive Aspects of Digital Transformation

Digital transformation, through the integration of advanced technologies and innovative practices, presents significant opportunities for organizations to enhance operational efficiency, refine decision-making processes, and cultivate sustainable growth within competitive and dynamic environments. The positive impacts of DT on businesses include the increased prominence of sustainability in the digital age, the establishment of a digital ecosystem, the growing importance of digital learning, and the emergence of agile business models (Maritz, 2020).

Organizations leverage digital technologies to improve efficiency and create innovative business models that enhance their performance. During digital transformation, businesses must integrate, adapt, and apply external resources, technologies, and expertise to boost their innovation capabilities (Liu et al., 2024). Firstly, the process of digital transformation has been shown to exert a positive influence on organizational performance. This is achieved through the empowerment of digital technology, which serves to enhance organizational management capabilities, process efficiency, financial performance, and innovative performance (Kowalski et al., 2024). Secondly, digital transformation positively impacts organizational performance by fostering the creation of data platforms and the assimilation of technology, which enhances networking effects, internal organization, and individual knowledge. Thirdly, digital transformation positively influences organizational performance by utilizing digital products to better address market changes and meet user requirements (Liu et al., 2024).

The term DT is defined as the implementation of digital technologies across an entire organization (Verhoef et al., 2021). An example of this can be seen in the use of inventory management systems

that can automatically measure total stock and initiate reorders when specific items fall below minimum levels (Morosan & Bowen, 2022) Such business model changes have the potential to enhance traditional business processes (Lee et al., 2024).

Subramaniam et al. (2021), highlighted the positive impacts of digital transformation in their study. These include the construction of a digital ecosystem, new business opportunities, remote/telehealth services, big data systems, and the utilization of technology. Furthermore, Subramaniam et al. (2021), categorized the positive aspects of digital transformation into four dimensions. The positive aspects of digital transformation identified in their study and existing in the literature are presented in Table 3.

Table 3: Positive Aspects of Digital Transformation

No.	Positive Aspects	Sub-Positive Aspects	Sources
1	Work from Anywhere	Work-Life Balance	(Chaudhuri et al., 2022; Choudhury et al., 2021; Roblek et al., 2024; Subramaniam et al., 2021)
2	Quality	Creating Standards	(Khan & Nandan, 2023; Subramaniam et al., 2021). (Borana et al., 2024; Kapotas, 2023)
3	Profitability and Cost Reduction		(Kapotas, 2023; Liu & Dang, 2024; Lu et al., 2020; Qi et al., 2021; Straková et al., 2022).
4	Customer Satisfaction		(Matarazzo et al., 2021)
5	Competitive Advantage		(Fang et al., 2024; Malewska et al., 2024; Meier et al., 2024; Ologeanu-Taddei et al., 2025; Omol, 2024)
6	Sustainability		(Ologeanu-Taddei et al., 2025; Subramaniam et al., 2021; Zuñiga-Collazos et al., 2025)
7	Technologies, Automation, and Collaboration	Facility of Access to Data	(Roblek et al., 2024; Subramaniam et al., 2021)
8	Productivity	Workload Reduction	(Gillani et al., 2024; Kapotas, 2023; Lee et al., 2024; Liu et al., 2024; Qi et al., 2021; Schwaeke et al., 2024; Silva et al., 2020)
9	Innovative Business Model	Increasing In-Organizational Innovation	(Awad & Martín-Rojas, 2024; Ghosh et al., 2022; Huy & Phuc, 2025; Malewska et al., 2024; Malik et al., 2024; Ologeanu-Taddei et al., 2025; Reis & Melão, 2023; Subramaniam et al., 2021).
		Innovation	(Liu et al., 2024; Malewska et al., 2024; Zuñiga-Collazos et al., 2025).
10	Agility	Value Orientation	(Çam & Eke, 2022; Kapotas, 2023; Ologeanu-Taddei et al., 2025; Reis & Melão, 2023; Roblek et al., 2024; Vial, 2019).
		Mobility	(Omol, 2024; Qiao & Ao, 2024; Saeedikiya et al., 2024).
11	Organizational Culture Change	Commitment	(Malewska et al., 2024; Qiao et al., 2024; Silva et al., 2020).
		Resilience	(Awad & Martín-Rojas, 2024; Roblek et al., 2024; Trenerry et al., 2021; Xu et al., 2024).
		Management Simplicity	(Piras et al., 2024; Thomas, 2024; Zhang & Chen, 2024).
12	Improving Communication Quality, Reducing Conflicts	Problem Solving	(Liu & Dang, 2024; Reis & Melão, 2023).

Source: Created by the author.

DT is defined as the process of leveraging digital technologies to optimize business processes, with the objective of enhancing efficiency, reducing costs, and accelerating decision-making processes. Furthermore, it has been demonstrated that digital transformation can improve customer experience, foster innovation, and provide competitive advantages to businesses. In the public sector, digital transformation has been shown to enhance the accessibility and effectiveness of services (Omol, 2024; Piras et al., 2024).

2.4. Negative Aspects of Digital Transformation

Technological developments emerging with Industry 4.0 are significant. The DT activities that emerge in this context are of particular concern to employees and companies. However, DT should not always be understood in a positive sense (Subramaniam et al., 2021). Although numerous businesses have initiated efforts toward digital transformation, many have not yet succeeded in effectively integrating digital technologies into their operations or achieving the expected outcomes. This indicates that the underlying mechanisms through which digital transformation influences business performance remain insufficiently understood at this stage of research (Liu et al., 2024).

DT is highly disruptive because it alters the way businesses operate and deliver goods and services to customers (Subramaniam et al., 2021). Consequently, it is impracticable to discuss the advantages or positive aspects of DT for every business. Consequently, it is imperative to elucidate the adverse implications of DT and devise countermeasures to address them. The challenges confronting businesses in their pursuit of digital transformation, such as mindset transformation, business-IT alignment, and the perspective of top management, must be acknowledged (Gillani et al., 2024). Despite the efforts of certain enterprises to engage in digital transformation, they frequently encounter difficulties in seamlessly integrating digital technology with their operational processes, thereby hindering the attainment of anticipated outcomes. This observation suggests that, at this juncture, the influence of digital transformation on business performance remains inadequate (Liu et al., 2024).

Subramaniam et al. (2021), identified several negative aspects of digital transformation in their study. These include challenges related to the digitalization of the tax system, the adoption of innovations in information and communication technologies, the integration of crisis management, the difficulties of digital business models, and the negatives associated with data. In contrast to conventional IT transformations that prioritize the establishment of digital infrastructures, digital transformation places significant emphasis on data analytics capabilities, defined as the capacity to systematically examine aggregated data to extract valuable business insights (Wu et al., 2024). In this regard, Subramaniam et al. (2021), presented the negative aspects of digital transformation under four primary categories. The negative aspects of digital transformation identified in this context are shown in Table 4.

Table 4: Negative Aspects of Digital Transformation

No.	Positive Aspects	Sub-Positive Aspects	Sources
1	No Work-life Balance	Addiction	(Aydınlı & Erkasap, 2023; Khan & Nandan, 2023; Subramaniam et al., 2021)
2	Social and Employment Issue	Disconnection from social life	(Lam & Harcourt, 2024; Nawaser et al., 2024) (Khachaturyan, 2021; Subramaniam et al., 2021).
		Unemployment/Unemployment anxiety	(Bertani et al., 2020; Khachaturyan, 2021; Schwaeke et al., 2024; Subramaniam et al., 2021).
3	Data, Security, Technology Issues		(Çam & Eke, 2022; Deral et al., 2024; Joseph Jerome et al., 2022; Raj et al., 2020; Schwaeke et al., 2024; Subramaniam et al., 2021; Vial, 2019; Wu et al., 2024).
4	Business Model Change		(Bouwman et al., 2019; Subramaniam et al., 2021).
5	Technostress/Stress		(Akman, 2023; Aydınlı & Erkasap, 2023; Çini et al., 2023; Dragano & Lunau, 2020).
6	Resistance		(AlNuaimi et al., 2022; Deral et al., 2024; Hanelt et al., 2021; Kapotas, 2023; Raj et al., 2020; Trenerry et al., 2021).
		Decline in Commitment	(Kim & Sohn, 2024)
		A Resistance to Innovation	(Omol, 2024)
7	Technology Addiction	A Constant Sense of Control and Surveillance	(Dragano & Lunau, 2020).
		Performance Anxiety	(Asadi et al., 2022; Zuñiga-Collazos et al., 2025)
8	Adaptation Issue	Inability of People to Develop Themselves	(Omol, 2024)
		Employee Incompatibility within the Company	(Chaudhuri et al., 2022; Lam & Harcourt, 2024)

Source: Created by the author.

Digital transformation is a multifaceted process that presents challenges (Soto-Acosta, 2024) and is not guaranteed to yield benefits in the short term or without a well-designed plan. For instance, it has been observed that government agencies, healthcare organizations, and companies have invested in digital technologies without comprehending the full impact on their performance, resulting in suboptimal outcomes (Albannai et al., 2024).

3. Methodology

The authors employed a data analysis methodology, utilizing thematic analysis as outlined by Braun & Clarke (2019) in their research. This study employed qualitative research methodologies and a thematic content analysis framework. To ensure the comprehensive capture of qualitative data, all observational notes and interview transcripts were meticulously transcribed verbatim and subsequently formatted as Microsoft Word documents. The documents were then uploaded to MAXQDA 20 software and analyses were performed. The analytical process adhered to a systematic six-step framework: familiarization with the data, generation of initial codes, development of potential themes, review and refinement of themes, definition and naming of themes, and the final

synthesis and reporting of findings (Huy & Phuc, 2025). The questions formed within the framework of the research based on the literature are as follows (Gillani et al., 2024; Subramaniam et al., 2021):

1. Can you briefly explain what digital transformation is?

2. Can you talk about the situations encountered in the digital transformation process?

3. What do you think are the *positive* aspects / *positive* outcomes of the digital transformation you have experienced in your business? Tell us briefly.

4. What do you think are the *negative* aspects / *negative* outcomes of the digital transformation you have experienced in your business? Mention briefly.

3.1. Population and Sample

In qualitative research, the emphasis lies not on the quantity of participants but rather on their expertise and the saturation of the study (Hennink & Kaiser, 2022). Within this framework, while various approaches exist, it is noted that a participant count of 6 to 12 is generally considered sufficient (Collins et al., 2006; Creswell & Creswell, 2023; Hennink & Kaiser, 2022). The population of this study comprises business managers/owners, senior executives, and senior digital transformation/ technology managers. The sample consists of businesses and manufacturers operating in various sectors in Turkey that are leaders in digital transformation. Within this scope, the interview technique was utilized, and interviews were conducted with a total of 18 individuals. Information regarding the sample is presented in Table 5.

Table 5: Demographic Information about the Participants

Participating	Gender	Age	Total Experience (Years)	Career
PB1	Male	49	25	CTO
PB2	Male	60	40	Digital Transformation Director
PB3	Female	55	28	Digital Leader
PB4	Male	39	20	General Manager
PB5	Male	48	26	Digitalization Coordinator
PB6	Male	57	35	Digital Transformation Manager
PB7	Female	29	10	Executive Committee Member
PB8	Male	35	15	Digital Transformation Director
PB9	Male	38	14	Change Manager
PB10	Male	54	36	Company Owner
PB11	Male	50	31	Technology Leader
PB12	Female	48	23	Company Owner
PB13	Male	38	20	Information Technology Officer
PB14	Male	32	9	Software Engineer
PB15	Female	37	16	General Manager
PB16	Male	48	25	CTO
PB17	Male	51	27	Company Owner
PB18	Female	44	24	Digital Transformation Manager

Note: PB: Participant Businesses.

According to Table 5, five of the participants were female and 13 were male. The average age is 45 years. The average years of experience are 23.5 years. Participants are generally managers and business owners/managers related to digital transformation.

3.2. Data Collection Technique and Interview Stages

In the research, the interview technique, one of the qualitative data collection methods, was preferred. Within the scope of the interview, semi-structured interview questions were first prepared and then posed to the relevant individuals. Semi-structured interviews are distinguished by their formal structure and reliance on a pre-determined interview guide. While interviewers are expected to follow the framework outlined in the guide, they are afforded the flexibility to seek additional information when necessary. In such cases, interviewers may extend the dialogue by building upon the pre-formulated questions, allowing for deeper exploration of relevant topics (Taherdoost, 2021). The interviews were conducted either in person or via online meeting platforms such as Zoom or Google Meet.

Within this scope, permissions were obtained to conduct interviews with relevant firms, specifically with business owners, managers, or individuals responsible for digital transformation. Subsequently, the designated individuals were contacted, and the questions were shared with them in advance. Following this stage, interviews were conducted with the relevant individuals. In total, 18 individuals were interviewed, amounting to 650 minutes (approximately 11 hours) of discussions. The records obtained from the interviews were first transcribed and then prepared for analysis. Following this stage, the analysis was conducted using the MAXQDA 20 software, and the relevant visuals were incorporated into the findings section.

3.3. Validity and Reliability

Qualitative validity can be defined as the researcher's assessment of the accuracy and truthfulness of the findings obtained through certain methods and processes. In essence, the emphasis is placed on the consistency of the study. To enhance the validity of qualitative study, researchers have proposed fundamental criteria, including credibility, transferability, reliability, and confirmability. In this study, particular emphasis was placed on these four criteria. On the other hand, Krippendorff, (2019) identified three types of reliability processes in qualitative studies: stability, reproducibility, and accuracy. This study adhered to these processes. In the first stage, after the initial coding, a certain period was allowed to pass, and then the coding was repeated, demonstrating that the codes remained unchanged, thereby ensuring the stability process. In the second stage, another expert, in addition to the original coder, conducted the same process, and the similarity rate was found to be 92%, fulfilling the reproducibility stage. Lastly, achieving accuracy requires the existence of a certain standard. However, due to the inherently subjective nature of responses in qualitative studies (Marshall, 1996), this stage is challenging to accomplish. Following all these stages, the analyzes were conducted, and the findings section was prepared.

4. Findings

4.1. Digital Transformation Definitions

DT is a critical concept in today's rapidly evolving technological landscape, impacting various sectors, including business, government, and society. Despite its widespread use, the term lacks a unified definition, leading to confusion and diverse interpretations across different contexts (Gong & Ribiere, 2021). In this regard, participants in a business sample were asked the question, "*What is digital transformation? Could you briefly describe it?*" based on the responses, the conceptual map related to the term is illustrated in Figure 1.
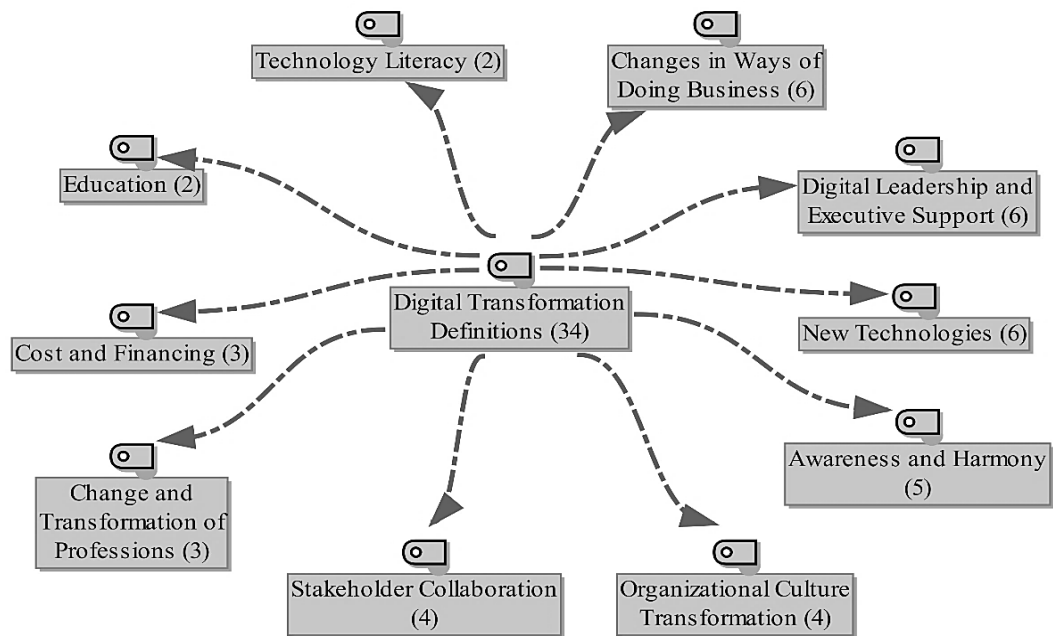
Figure 1: Digital Transformation Definitions

Within the scope of the study, participants were asked about the definition of digital transformation and the variables that emerged are given below from the least mentioned to the most mentioned: *Technology Literacy (2), Education (2), Cost and Financing (3), Change and Transformation of Professions (3), Stakeholder Collaboration (4), Organizational Culture Transformation (4), Awareness and Harmony (5), New Technologies (6), Digital Leadership and Executive Support (6), Changes in Ways of Doing Business (6).* The concepts that stand out especially in DT definitions are New Technologies, Digital Leadership and Executive Support and Changes in Ways of Doing Business. It is imperative to acknowledge the pivotal role that cultural and leadership transformations within

organizations play in the context of digital transformation processes (Akman, 2024; Kapotas, 2023). In general, the integration of digital technologies by businesses, government agencies and individuals and their ability to revolutionize systems, offerings, services and business frameworks is referred to as digital transformation.

The views of the participants within the scope of digital transformation definitions are as follows:

PB1: *"For instance, ministries such as the Ministry of Industry and Technology, as well as institutions, chambers, and similar entities, need to actively engage in the process of digital transformation. I believe that increased collaboration in this regard would be highly beneficial. There is a need for mentorship here. Since the private sector predominantly consists of SMEs, there is a significant demand for leadership."*

PB6: *"… when we refer to digital transformation, we consider it as the advancement of industrial or technological productions or processes conducted through traditional methods to a more advanced level using current technology."*

PB9: *"In fact, all these digital transformation efforts are closely tied to the digital vision of top management. Their digital vision reflects on us, enabling us to continuously innovate, keep up with the market, monitor emerging technologies, and understand where the world is heading."*

PB12: *"Digital transformation essentially refers to the complete automation of tasks that were previously performed manually."*

PB14: *"In the context of digital transformation, the term "digital transformation" is employed to denote the process of transitioning from manual, human-centered tasks to automated, digitally driven processes. The notion of transformation is of particular significance in this context. In contrast to the more passive nature of change, transformation necessitates a deliberate, active approach. In essence, individuals or entities that aspire to undergo a digital transformation possess the capacity to actualize it."*

4.2. Positive Aspects of Digital Transformation

Digital transformation has been demonstrated to engender a multitude of positive outcomes for individuals, businesses, societies, and countries. In this context, digital transformation processes have proven to be effective across a wide range of domains, from the individual level to business entities and even governmental policies (Akman, 2024). The objective of the study was to identify positive outcomes for businesses undergoing digital transformation. In this context, the variables that emerged because of the interviews are shown in Figure 2.
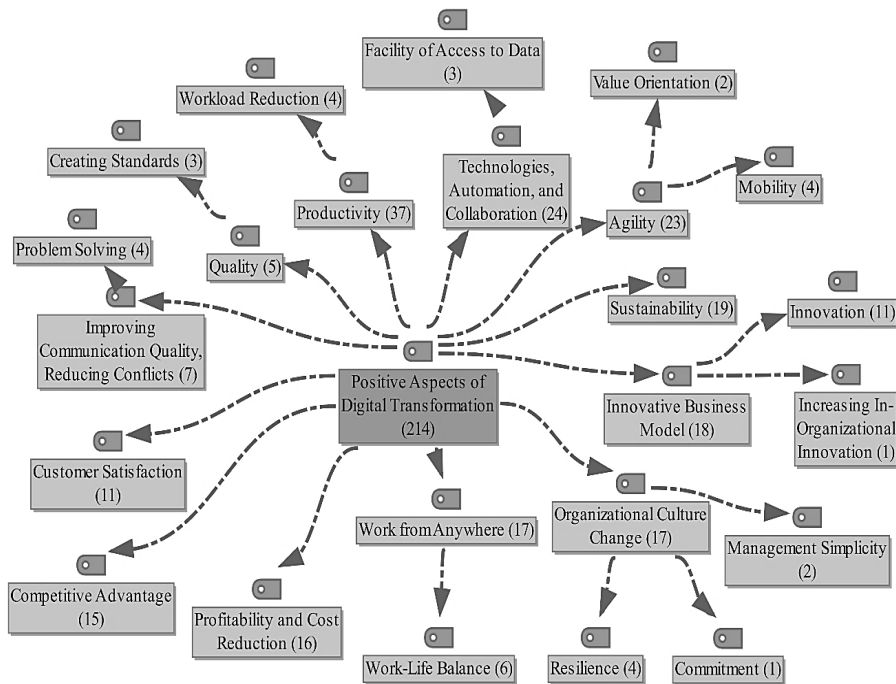
Figure 2: Positive Aspects of Digital Transformation

According to Figure 2, the positive aspects of digital transformation can be listed as follows for businesses: *Quality (5), Creating Standards (3), Improving Communication Quality, Reducing Conflicts (7), Problem Solving (4), Customer Satisfaction (11), Competitive Advantage (15), Profitability and Cost Reduction (16), Work from Anywhere (17), Work-Life Balance (6), Organizational Culture Change (17), Resilience (4), Commitment (1), Management Simplicity (2), Innovative Business Model (18), Increasing In-Organizational Innovation (1), Innovation (11), Sustainability (19), Agility (23), Mobility (4),Value Orientation (2), Technologies, Automation, and Collaboration (24), Facility of Access to Data (23), Productivity (37), Workload Reduction (4).* The prominent variables are productivity (37), technologies, automation, and collaboration (24), and facility of access to data (23). Digital transformation primarily focuses on these concepts. From the perspective of businesses, the least mentioned variables are quality (5), improving communication quality, reducing conflicts (7), and customer satisfaction (11).

The following statements were made by the participants within the scope of the study:

PB2: *"... the digitalization of all kinds of processes and of course, there have been developments that have increased work efficiency a lot".*

PB6: *"For example, when we switched to the production process we call mass production, the need for people started to minimize. This is the cost of all kinds of transformation in this business".*

PB8: *"One of the most important impacts of digital transformation is data collection. This is where we see the most impact. In data collection, you can see the factory online, that is, you can see where and what is being done".*

PB10: *"After undergoing digital transformation, our employees' work-life balance has significantly improved. They are no longer caught between the demands of family and work, and have found greater harmony in their lives."*

PB15: *"... innovative business models have increased tremendously. For example, now people can access and buy any product they want from their phones through mobile branches or online platforms. These business model changes are the product of a digital mind".*

PB17: *"As digitalization took place, communication channels and quality increased. This prevented conflicts both within the organization and with stakeholders. Everything (contracts etc.) is in the system. The past is also easily visible in the system. This has been incredibly useful for us".*

4.3. Negative Aspects of Digital Transformation

Digital transformation does not always produce positive outcomes for businesses (Feliciano-Cestero et al., 2023; E. X. Liu & Dang, 2024; Straková et al., 2022). In this context, the variables reflecting the negative aspects of digital transformation, as identified through the interview conducted, are presented in Figure 3.
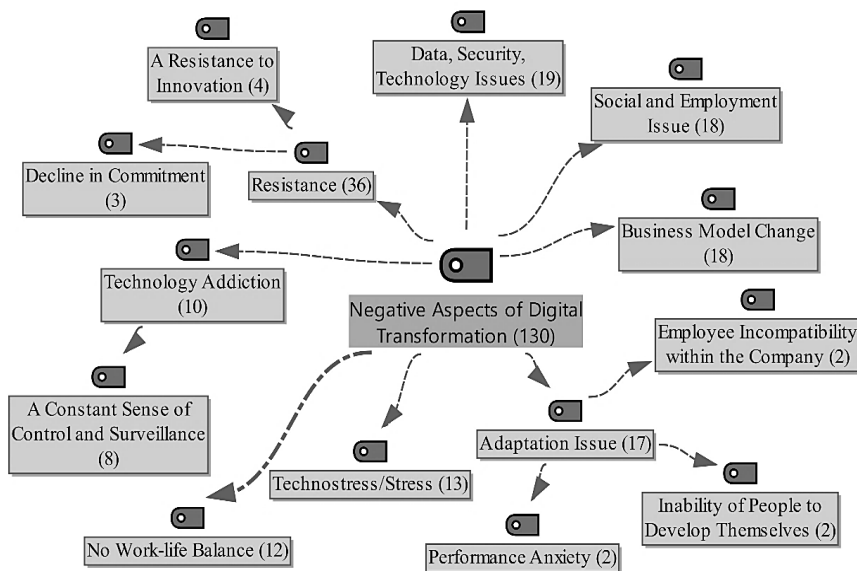

Figure 3: Negative Aspects of Digital Transformation

The following negative variables of digital transformation are presented in Figure 3: *Technology Addiction (10), A Constant Sense of Control and Surveillance (8), No Work-life Balance (12), Technostress/Stress (13), Adaptation Issue (17), Performance Anxiety (2), Inability of People to Develop Themselves (2), Employee Incompatibility within the Company (2), Business Model Change (18), Social and Employment Issue (18), Data, Security, Technology Issues (19), Resistance (36), Decline in Commitment (3), A Resistance to Innovation (4).* Particularly, Social and Employment Issues (18), Data, Security, and Technology Issues (19), and Resistance (36) are prominent. According to participants, the most negative aspect of digital transformation has been employees' resistance to change and transformation (AlNuaimi, et al., 2022). The least negative outcomes encompass technology addiction, a constant sense of control and surveillance, and an absence of work-life balance.

The following statements were made by participants within the scope of the study:

PB1: *"... on the other hand, some units showed a certain resistance and could not be integrated". "While digital transformation is being realized, on the other hand, it is necessary not to alienate people and workers. It is very difficult to have a top-down digital transformation process. Workers may react to this. Problems may arise. There may be resistance. Therefore, there should be a digital transformation process spread over a longer period."*

PB3: *"However, a perpetual and ubiquitous accessibility characteristic of digital transformation engenders detrimental ramifications on the domains of private and professional life."*

PB10: *"The internalization of concepts such as digital transformation is all about the culture of the individual, organization and society. Maybe an unmanned store may break sales records in the US, but in Eastern societies like ours, such stores may close after two days. So, culture in general plays an important role in transformations".*

PB13: *"On the other hand, since it's easy, we end up having meetings all the time. This has increased the workload. For example, we can experience stress because of technology. Constantly staring at a screen can be exhausting sometimes."*

PB16: *"I think the technological developments that we are going through right now, both as individuals and as a society, and maybe even me, are one of the things that cause my health to deteriorate and me to get sick frequently. Our anxiety level is increasing with technology. This brings along many physical ailments, especially mental ones".*

PB18: *"Employees' constant access to digital tools can blur the boundaries between work and private life. For example, the need to access e-mails and messages always blurs the line between "workaholism" and "technology addiction"".*

As demonstrated by the statements, digital transformation has been shown to engender a multitude of adverse outcomes. Specifically, challenges such as resistance, cyber-attacks, technostress, unemployment, anxiety, and adaptation difficulties have been identified as predominant issues.

These challenges are intricately intertwined with both employees and organizations (Gillani et al., 2024).

5. Conclusion and Discussion

Digital transformation (DT) has been shown to engender greater flexibility and productivity within companies. Furthermore, it has been demonstrated that such transformation can lead to the optimization of production processes, the establishment of value propositions for innovation ecosystems, and the ability to respond to market needs in a timely manner (Saeedikiya et al., 2024). In addition to these benefits, it is imperative to recognize the role of digital transformation processes in maintaining market competitiveness and ensuring a position at the forefront of technological innovation (Feliciano-Cestero et al., 2023). The implementation of digital transformation has been demonstrated to play a significant role in the identification of solutions to problems and the attainment of a competitive advantage (Rocha et al., 2023).

DT encompasses a broader scope than digitization, which solely involves converting information or processes into digital formats. Rather, DT represents profound organizational changes that facilitate the strategic integration of digital technologies, enabling competitive advantages and fostering innovation (Elsa et al., 2025; Espina-Romero et al., 2025; Lungu & Georgescu, 2024). In the contemporary business landscape, the integration of digital technologies has become paramount. Consequently, it is imperative to comprehend the concept of digital transformation and to meticulously examine its ramifications, both advantageous and disadvantageous, to formulate informed assessments and strategic decisions.

The integration of digital and physical domains, as emphasized in the concept of DT, is imperative for businesses seeking to effectively manage uncertainty (Luo et al., 2023). This integration represents a significant step for businesses in decision-making and sustainable production. The digital revolution within the healthcare sector presents a range of new business opportunities and fosters the development of innovative business models aimed at tackling various challenges. These challenges encompass aspects such as medical practice optimization, value creation in healthcare delivery, and the complexities associated with aging populations (Elton & O'Riordan, 2016). One of the topics discussed in the literature concerns the necessity for established companies to engage in digital transformation-related activities and invest in this area to foster innovation. Key areas of focus include the ways of conducting business, the spread of digital culture, and the enhancement of digital maturity (Kowalski et al., 2024). Notably, Espina-Romero et al. (2025), demonstrated that organizational culture facilitates the digital transformation process. This study also found results consistent with those of the research.

Subramaniam et al. (2021) have revealed the positive and negative outcomes of digital transformation in their studies. In this study, a qualitative study was conducted based on the outcomes of Subramaniam et al. (2021). Also in this research, a qualitative methodology was adopted as the primary approach. To achieve the study's objectives, in-depth interviews were conducted with

18 field experts possessing extensive professional experience. The study's objective was twofold: firstly, to explore the challenges associated with digital transformation, and secondly, to examine its conceptual definitions and positive and negative implications. In this context, the positive aspects of digital transformation include the following: *Work from Anywhere, Quality, Profitability and Cost Reduction, Customer Satisfaction, Competitive Advantage, Sustainability, Technologies, Automation and Collaboration, Efficiency, Innovative Business Model, Agility, Organizational Culture Change, Improved Communication Quality, and Reduced Conflicts*. Figure 4 demonstrates the advantageous impacts of digital transformation on business entities.
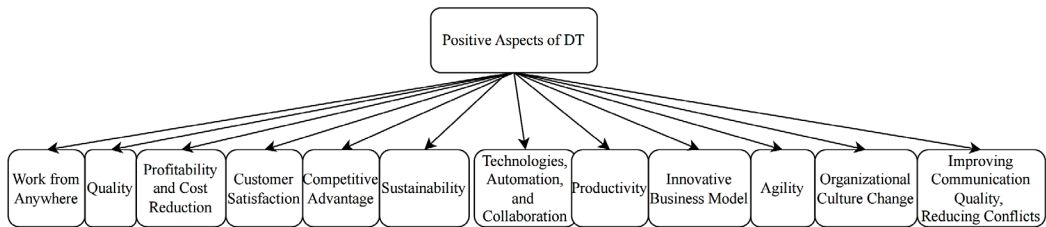

Figure 4: Summary of Positive Aspects of Digital Transformation

The 12 positive outcomes of digital transformation (see Figure 4) are points that businesses should consider. The outcomes described here are generally observed in companies undergoing digital transformation. This is a critical factor in ensuring the efficiency, profitability, and sustainability of the business. In the modern era, it is unlikely that long-term competitive advantage will rely solely on more efficient digital technologies (Kretschmer & Khashabi, 2020). Unlike digital transformation itself, the future competitive advantage of companies will be more dependent on an optimized organizational structure and the speed at which the organization adapts to future changes (Osorio-Gómez et al., 2024). Although digital transformation appears positive in many respects (Hai et al., 2021), it also presents several negative outcomes for businesses (Feliciano-Cestero et al., 2023; Subramaniam et al., 2021). In this context, businesses must rethink their strategies, policies, and decision-making processes and act accordingly. In today's dynamic business environment, digital transformation is not merely an option but a necessity for businesses to confront existential challenges and achieve success (Zhang et al., 2024). It is imperative for businesses to embrace and internalize digital transformation processes to enhance their efficiency and profitability. Within this scope, the following negative aspects of digital transformation have been identified: *Technology Addiction, Business Model Change, Data, Security, Technology Issues, Social and Employment Issues, No Work-Life Balance, Technostress/Stress, Adaptation Issues, Resistance*. The study identified several detrimental aspects of digital transformation for businesses, as illustrated in Figure 5.
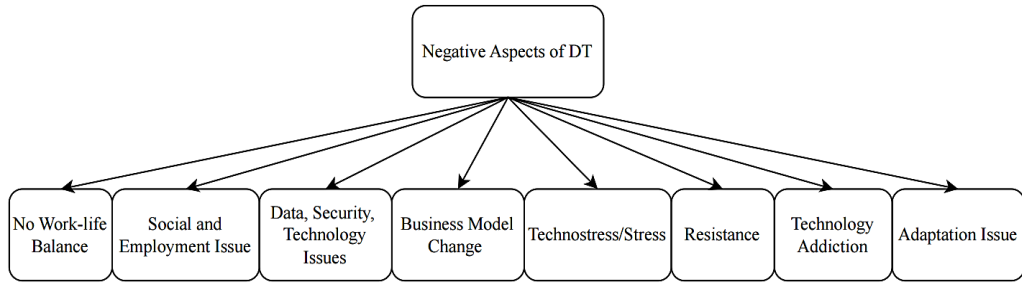
Figure 5: Summary of Negative Aspects of Digital Transformation

As illustrated in Figure 5, the digital transformation process under investigation has yielded eight distinct negative outcomes. Businesses that can address and overcome these outputs and minimize the eight outputs can achieve a competitive advantage and ensure the continuity of their operations. At this juncture, the provision of support and guidance from management is imperative (Elsa et al., 2025).

In conclusion, digital transformation exerts a dual impact on businesses, demonstrating both positive and negative outcomes. To leverage the advantages inherent in the adoption of digital technologies, companies must meticulously plan these transformations and provide comprehensive training and support to their employees and customers. Moreover, it is imperative for companies to prioritize digital security measures and implement protocols to safeguard their data. In this regard, businesses must undertake digital transformation processes with the utmost care, thereby augmenting the positive aspects and mitigating the negative consequences.

6. Limitations of the Study and Recommendations for Further Research

A limitation of this study is that it was conducted exclusively among business owners and employees. In this context, the sample could be diversified by selecting academics, public officials, or a different sample. Subsequent studies could develop more comprehensive policy recommendations for digital transformation. As a result, such more comprehensive and multifaceted research will contribute to the development of more robust and feasible policy recommendations for the digital transformation process. In this way, strategies tailored to the needs of different sectors and stakeholders can be formulated and the successful management of digital transformation will be supported.

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Resume

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