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Leveraging Business Model Innovation for Digital Transformation in Iraq

Sarkawt A. AHMED AL-DAWOODI[1], Ghaith AL-ABDALLAH[2] and Veronika VEČEŘOVÁ[3]

[1] Tomas Bata University in Zlín, Zlín, Czech Republic; al_dawoodi@utb.cz
[2] University of Kurdistan Hewler and the Catholic University in Erbil, Erbil; Iraq; Ghaith.abdallah@outlook.com
[3] Mendel University in Brno, Brno, Czech Republic; veronika.vecerova@mendelu.cz
* Corresponding author: al_dawoodi@utb.cz

Abstract: This study aims to explore the drivers, challenges, and outcomes of digital transformation (DT) in traditional Iraqi businesses by assessing their transition strategies and major performance implications. Conducted through qualitative research, it examines seven enterprises across diverse industries in Iraq via semi-structured interviews with their senior executives. The motivation for this study lies in the critical role DT plays in fostering economic recovery and growth in developing countries like Iraq, which is navigating the dual challenges of post-conflict reconstruction and rapid technological advancements. The findings identify key drivers of DT, including the need for competitiveness, operational efficiency, and enhanced customer engagement. However, the transformation is hindered by challenges such as limited access to advanced technology, cultural resistance, skills shortages, and inadequate regulatory frameworks. Despite these obstacles, DT has led to significant improvements in operational efficiency, customer experience, and market competitiveness. The study emphasizes the importance of business model innovation (BMI) in overcoming barriers to digital adoption and advancing organizational resilience. The research evaluates the influence of DT on operational efficiency, customer engagement, and market competitiveness within Iraq's evolving economic environment. Key factors such as digital readiness, infrastructure investment, and workforce upskilling are essential for successful digital adoption.

Keywords: e-commerce; traditional business; advanced technology; data security; cultural resistance; sustainability

JEL Classification: M21; O10; O40

1. Introduction

DT has emerged as a pivotal catalyst for business expansion and competitiveness worldwide, particularly in developing economies such as Iraq, Despite Iraq is in the process of recovering from long periods of conflict and instability, traditional businesses (TBs) have technological, infrastructural, and regulatory challenges, making digitalization a source of both opportunity and obstacles. The COVID-19 pandemic expedited the global transition to digital business models (Awad et al., 2020); yet Iraqi businesses still face challenges like outdated infrastructure, insufficient digital competencies, and cultural resistance to transformation (Shahoodh et al., 2020; Hussein et al., 2020).

The current literature on DT primarily focusses on developed economies, large enterprises, or certain sectors such banking or IT services. Nevertheless, there exists a considerable deficiency of focus regarding how TBs in Iraq, a developing country with unique cultural, economic, and technological conditions, navigating this process, what motivates their adoption of digital initiatives, and how does this transformation affect their financial success, operational efficiency, and consumer engagement? Comprehending these factors is crucial for formulating policies and strategies that facilitate digital adoption in developing countries, this study develops upon the recommendations of Salih et al. (2024), who underscore the necessity for cross-sectoral evaluations of DT in Iraq, extending beyond the banking sector to investigate SMEs across several industries. Shehadeh et al. (2023) argue for the widening of DT research into developing countries to comprehend the various challenges and opportunities that organizations encounter in these environments. Tian et al. (2023) reinforce this by advocating for research on the impact of DT strategies on operational improvements in developing countries, where digital ecosystems are still emerging. Despite the growing global interest in DT, there is an extensive absence of studies particularly investigating this phenomenon in Iraq.

This study aims to analyze the drivers, challenges, and outputs of DT in traditional Iraqi businesses. This qualitative analysis examines the impact of digitalization on business operations, market positioning, and customer interactions inside SMEs across several sectors. The research utilizes semi-structured interviews with top executives from seven businesses, providing insights on the determinants of digital adoption and the barriers that hinder successful transformation.

Three core questions guide this investigation: 1) What are the primary motives and drivers behind SMEs DT initiatives?; 2) What specific challenges and opportunities arose at the different stages of DT process?; 3) What is the impact of the DT on financial performance, operational efficiency, and customer experience? By addressing these questions, the results enhance the overarching discussion on digitization in developing economies and offer guidance for businesses and policymakers to navigate through this dynamic environment.

2. Theoretical Background

The business model serves as the fundamental framework for an organization's operations and strategic decisions (Bouncken, 2021). The framework explores the process by which the organization generates, distributes, and acquires value (Beulque et al., 2023; Salih et al., 2024) The business model, frequently referred to as an activity system, comprises a collection of interconnected activities that embrace not only the firm itself but also its partners, suppliers, and customers (Abdulkader et al., 2020). BMI involves the strategically planned process of modifying or redesigning the core components of a business model in order to provide new value for consumers, stakeholders, and the organization as a whole (Mao et al., 2023; Coffay & Bocken, 2023; Funke et al., 2023; van Eechoud & Ganzaroli, 2023). It entails reimagining how a company develops, distributes, and acquires value using new technology, market opportunities, or customer behavior shifts. BMI impacts the value proposition, customer interface, core strategy, strategic resources, and value networks of the firm's model (Bashir et al., 2020). Innovation in the business model is a crucial instrument for gaining a competitive advantage and achieving long-term success in the market (Aboumoghli et al., 2012; Coffay & Bocken, 2023). An increasing number of businesses must innovate their business models to align with the era of DT (Bashir et al., 2020). The driving forces behind this are not only competition, but also the transition from product-focused to service-focused corporate strategies, the growing customer expectations for customized experiences, and the rise of disruptive technology in traditional industries (Spieth et al., 2014).

2.1. Traditional Business Model

The traditional business model (TBM) primarily centers around the production and trade of tangible goods, with minimal attention given to customer experience or value-added services (Bashir et al., 2020). In broad concept TBMs primarily priorities economic performance, often neglecting customer satisfaction and sustainability over time (Evans et al., 2017; Bouncken et al., 2021). They frequently consider environmental and social effect as external factors rather than incorporating them into their core business strategy (Viswanadham, 2018). The TBM may lack the flexibility required to adjust to rapidly evolving market conditions or customer demands, and may encounter difficulties in competing with digitally native enterprises that are founded on novel business models and technology-oriented innovation (Ramdani et al., 2019). Furthermore, modern business models are distinguished by a transition towards a platform-centric approach, wherein the organization serves as a mediator linking purchasers and vendors or facilitating transactions across various entities (Bashir et al., 2020). Bouncken et al. (2021) Suggests transitioning to a more agile, inventive, and customer-focused firm structure that can adapt to evolving consumer and technological environment. The term "traditional business model" usually refers to firms that are less adaptable, less digital, less likely to expand, and less focused on progressive transformation than their digital counterparts, Today's dynamic world requires accurate weather forecasts (Zahoor et al., 2023). These business models may encounter challenges in adapting to the COVID-19 epidemic, as they heavily depend on in-person interactions and transactions, which have been significantly limited owing to social distancing efforts (Kronblad & Envall Pregmark, 2021).

2.2. Business Model Innovation

BMI is the act of creating and executing new business models that utilize digital technology and capabilities to generate value for consumers and gain a competitive edge in the digital age (Schallmo et al., 2017). BMI entails reevaluating and restructuring different aspects of a business model’s value proposition, creation, delivery, and capture, in order to effectively address the changing requirements and preferences of customers in a digitalized marketplace (Zahoor et al., 2023; Teoh et al., 2023).

BMI In today's digital landscape, organizations must prioritize innovation in order to maintain relevance and competitiveness (Rof et al., 2020). It enables businesses to connect with customers in new ways, expand into new markets and distribution channels, optimize operations, and access into additional sources of revenue (Teoh et al., 2023). Furthermore, It enables businesses to employ data and analytics to get insights into customer behavior, enhance decision-making, and customize customer experiences (Vaska et al., 2021; Trischler & Li-Ying, 2023). Such models require a mindset shift, an embrace of novel technologies, and the development of digital competences within the firm (Teoh et al., 2023). Businesses globally, including as Iraq, must undergo DT in order to adapt and succeed in the continuously changing digital environment (Trischler & Li-Ying, 2023). Digital technology enable businesses to customize products and services and extend their local and worldwide customer base. They also enable firms to connect with a wider audience domestically and globally. BMI is crucial to stay competitive in a tech-driven environment and capitalize on new growth and innovation opportunities (Vaska et al., 2021). Digital technology allow companies to customize products and services to better match customer requirements. This helps match offerings to client preferences (Teoh et al., 2023). Financial services, hospitality, automotive services, and healthcare are using disruptive technologies to address sustainability and implement a sharing economy approach (Vaska et al., 2021). BMI entails monitoring business landscape shifts (sensing) and using digital technologies and capabilities to capitalize on them (seizing). This may necessitate changing or creating new business models. Sensing and seizing must be utilized for digital business model creation (Parida et al., 2019). Sensing recognizes potential modifications and possibilities, whereas seizing is taking action to exploit them, such as adopting new technologies, establishing partnerships, and reorganizing business procedures. A company's sensing and seizing ability can considerably impact their BMI (Zahoor et al., 2023; Böttcher et al., 2022).

Remane et al. (2017) provide a new way to find, create, share, and evaluate digital business ideas. VISOR analyzes digital business models on Value, Interface, Service Platform, Organizing Model, and Revenue. The value proposition is why customers buy. Interface links clients to service system. Service Platform powers product and service delivery. The Organizing Model contains value-creating company structure and procedures. The Revenue Model concludes with how ecosystem players share revenue and costs (Viswanadham, 2018; Remane et al., 2017). BMI boosts revenue and market share. Its complexity and difficulty in imitating make it valuable. To improve performance and grow in technology, businesses should prioritize BMI and carefully choose the best digital technology for implementing it (Teoh et al., 2023). Implementing BMI Organizations must actively identify industry trends and innovations in technology to drive innovation. They must also foster experimentation and learning (Rachinger et al., 2019; Al-Abdallah & Ogunbowale, 2023).

2.3. Digital Transformation

DT involves systematically integrating digital technology and capabilities into every aspect of an organization to transform its operations and improve customer value (Verhoef et al., 2021). Digitalization and business models require innovation. Digital business models related to digitalization and innovation are in a dual relationship. Technology and organizational innovations are needed and encouraged by the digital business model

(Bouncken et al., 2021). Digital technologies enable product and service integration across functional, organizational, and geographical boundaries. This integration enables businesses improve and expand their product and service offerings to create new values (Vaska et al., 2021). Consequently, these technologies promote the transformation of various industries. Their disruptive power forces businesses to reconsider their business strategies and adapt to digital reality (Trischler & Li-Ying, 2023). Enterprises, customers, partners, and other stakeholders must collaborate on digital platforms to enable DT (Bouncken et al., 2021). DT encompasses modifications in business culture, processes, and attitude as well as technical advancement (Warner & Wäger, 2019). Furthermore, digital technologies provide three intrinsic properties that create possibilities in connected domains: digital artifact, digital infrastructure, and digital platform (Vaska et al., 2021). DT modifies business models by adding digital components, overhauling previous value creation and capture methods (Kronblad & Envall Pregmark, 2021). DT changes a company's business model by integrating digital technologies. This integration intends to transform processes, boost customer value, and adapt to the digital age. DT fundamentally alters how the organization runs and delivers value (Kronblad & Envall Pregmark, 2021). In retail sector, this process involves integrating physical stores with online sales platforms, using digital payment systems, and using data analytics to customize consumer experiences and improve inventory management (Do Vale et al., 2022), Retailers must partner with specialized digital service providers to complete this transformation. Companies in the retail and digital service ecosystems collaborate to build a meta-ecosystem that benefits customers. Retailers handle retail, while digital agencies manage digital services in this meta-ecosystem. Digital solutions improve physical interactions, not replace them (Palmié et al., 2022a). DT integrates digital technologies and organizational improvements to boost innovation, efficiency, and customer satisfaction (He et al., 2023). Since digital technologies are becoming integrated into all corporate operations, digital strategy and business strategy will become interconnected (Chen et al., 2021). The DT is crucial for TBMs that are seeing disruptions caused by technological improvements and evolving the customer behaviors (Schallmo et al., 2017), For instance, traditional brick-and-mortar businesses may struggle to compete with internet retailers that offer convenience and customized experiences (Verhoef et al., 2021). While TDMs differ fundamentally from traditional ones, they can coexist and complement each other to effectively cater to the varied demands and preferences of customers (Schallmo et al., 2017). The process of DT encompasses more than just the adoption of new technologies; it also entails substantial modifications to the overall organizational structure and value delivery system (Verhoef et al., 2021), and necessitates collaboration and knowledge sharing among many functional divisions inside a business, such as marketing, IT, operations, and customer service, as well as external entities (Schallmo et al., 2017; Bataineh et al., 2016). Incumbent organizations sometimes struggle to innovate their business model due to the coexistence of the current model and the new model together with the value chain elements (Bouncken et al., 2021). BMI plays a vital role in facilitating DT by allowing businesses to develop novel value propositions, rethink consumer relationships, and seize new sources of revenue (Do Vale et al., 2022). Businesses that modify their business models can thrive in competitive markets and effectively manage digital disruption (Warner & Wäger, 2019; Bouncken et al., 2021). This encompasses exploring of concepts such as subscription-based services, online marketplaces, and data-driven personalized solutions (De Souza et al., 2020). Furthermore, utilizing digital platforms and technology can improve productivity and customer satisfaction via digital inventory management, operational automation, and data analytics to derive insights and facilitate informed business decisions (Boojihawon & Ngoasong, 2018).Firms require a mindset that is entrepreneurial and a willingness to accept and manage risks in order to effectively navigate the process of DT (Palmié et al., 2022a). Drieschner et al. (2019); Türk (2023) argue that simply incorporating digital technology into existing business models is insufficient, and claims that firms must reconsider and redesign their entire process of generating value in order to effectively exploit the advantages of DT. Another argument is that the incorporation of digital technology into TBMs provides a possible challenge in adjusting to the rapidly evolving digital environment. The traditional organizational culture may conflict with the agility and adaptability necessary for DT, resulting in opposition and difficulties in implementation (Al-Bourini et al., 2013; Verhoef et al., 2021). Lack of technological competency and expertise in emerging technologies might also prevent a successful DT (Bouncken et al., 2021). Insufficient digital skills and expertise within the organization may prevent the achievement of successful DT (Bouncken et al., 2021). Therefore, it is imperative for businesses to allocate resources towards the training and education of their workforce in digital technologies and the change of business models (Drieschner et al., 2019; Al-Abdallah et al. 2023). Recognizing the complexity and risks of transitioning TBMs to DT, which requires significant investment in resources, training, and technology infrastructure, is crucial (Bouncken et al., 2021). DT is an essential procedure for TBMs that are encountering disruptions caused by technological breakthroughs and evolving the customer behaviors (Bouncken et al., 2021). Nevertheless, firms that completely embrace DT and adapt their business models can survive, thrive, and gain a competitive edge (Drieschner et al., 2019).

2.4. Digital Transformation in Iraq

Traditional Iraqi businesses may require the innovation of their business models to tackle the challenges of DT. In general, DT and DBMs can assist Iraqi TBs in overcoming challenges, expanding, and maintaining competitiveness in a rapidly evolving business landscape. Traditional Iraqi businesses must prioritize specific strategies and factors to effectively manage DT. This encompasses comprehending the impacts and advantages of DT, allocating resources for technology and infrastructure, prioritizing cybersecurity and data protection, promoting an appropriate legislative framework and incentives, and investigating novel business models. DT modifies the operations of organizations and value provision by incorporating digital technology into business and society (De Souza et al., 2020; Teoh et al., 2023). DT incorporates digital technology into every facet of business and society, altering business operations and value provision. The DT in Iraq has the potential to enhance economic growth, improve government service delivery, and elevate the quality of life for citizens (Salih et al., 2024). Iraq must execute DT to enhance governmental efficiency and transparency, mitigate corruption, and advance healthcare, education, and public transportation services. DT might accelerate Iraq's assimilation into the global digital economy, drawing foreign investment and generating employment opportunities (Chen et al., 2021; Salih et al., 2024). Iraq can address infrastructural and security challenges to enhance digital connectivity and innovation through the adoption of DT. The governmental and private sectors in Iraq must invest in digital infrastructure, literacy, innovation, and entrepreneurship. Examine the labor ramifications of Iraq's digital transition. The transition to digital technology and intelligent systems may alter the work market, requiring reskilling and upskilling to address potential unemployment (Warner & Wäger, 2019; Salih et al., 2024). Effective DT requires strategic planning, substantial investment, and a comprehensive awareness of the numerous issues involved. As Iraq undergoes DT, businesses must acknowledge that their operations and culture will evolve. Digital technologies such as the Internet of Things, Artificial Intelligence, and Big Data necessitate technical and technological proficiency. This alteration necessitates a novel organizational business paradigm and culture that aligns with the demands of the digital age (Paul et al., 2020; ALmasoodi et al., 2023).

2.5. Challenges of Digital Transformation in Iraq

Traditional Iraqi businesses must comprehend the challenges and risks associated with DT prior to initiating the process. Challenges encompass, Traditional Iraqi businesses may lack the necessary digital skills and knowledge to comprehend and utilize emerging technologies such as the Internet of Things and artificial intelligence. They may have difficulties in incorporating digital technologies into their operations and business processes. Traditional Iraqi businesses may encounter opposition from employees and stakeholders who are either unfamiliar with digital technologies or concerned about job security. This resistance could hinder the digital transition and its efficacy. TBs undertaking DT may encounter challenges in Iraq due to inadequate internet and technological infrastructure. Traditional Iraqi enterprises must remain alert regarding potential hazards of digital transition, such as cyberattacks and data breaches. These risks erode customer trust and entail financial costs. Compliance with privacy regulations, data retention, and usage restrictions can complicate digital operations. Adopting and preserving new technology can be expensive, particularly for smaller financial institutions (ALmasoodi et al., 2023;Salih et al., 2024). To mitigate these challenges and risks, TBs in Iraq can take several steps. First, they can invest in building digital competence and expertise within their organization by providing training and educational programs for employees (Warner & Wäger, 2019). Second, they can work towards creating a culture of innovation and openness to change within the organization, addressing any concerns or fears related to DT (Reim et al., 2020). Third, TBs in Iraq can collaborate with technology providers and government organizations to improve access to technology and infrastructure. Additionally, they can prioritize cybersecurity and data privacy measures to protect their digital assets and maintain customer trust (Schneider, 2015). Furthermore, policymakers need to ensure that there is a supportive regulatory framework and incentives in place to encourage TBs in Iraq to embrace DT

(Kronblad & Envall Pregmark, 2021). As a result, this research will investigate the primary motives and drivers behind SMEs DT initiatives, the specific challenges and opportunities SMEs encountered at the different stages of DT process, and the impact of such transformation on the SME financial performance, operational efficiency, and customer experience.

3. Methodology

This study focuses on DT in Iraqi TBs. This study aims to comprehend how TBs in Iraq are undergoing DT and their impact on their performance. The reasoning for this study is deductive, as it involved doing a comprehensive analysis of existing literature in information systems, management, and business disciplines to identify crucial variables and challenges related to DT in TBs in Iraq (Sekaran & Bougie, 2016). Descriptive analytical methodology is most suitable, this methodology will help describe without any manipulation and analyze, the key drivers, challenges, and outcomes of DT among business owners and upper management individuals (Kothari, 2004). The research approach employed is qualitative, the data collecting technique employed is a semi-structured interview, wherein interviews were conducted with representatives from traditional firms in Iraq to obtain primary data regarding their experiences, challenges, and strategies pertaining to DT, this technique provides elasticity while preserving the structure of inquiry, allowing researchers to examine complex topics such as DT (Silverman, 2021). A method of qualitative research was used to thoroughly investigate the complicated nature of DT, facilitating the acquisition of comprehensive, nuanced data that quantitative methods may overlook. Comprehensive interviews afforded the opportunity to examine individuals' distinct viewpoints and experiences. This technique is limited by potential biases in self-reported data and difficulties in generalizing findings due to the small, non-random sample size.

3.1. Population and Targeted Population

A purposive sampling technique was employed to identify businesses that transitioned from traditional to digital models. This methodology was used to assure the inclusion of only those businesses possessing direct expertise in DT, allowing an in-depth review of their experiences, challenges, and responses (Ahmad & Wilkins, 2024).

Two prominent digital financial service providers, Fast Pay (Electronic Wallet) and FIB (Digital Bank), were contacted to acquire a list of registered enterprises involved in electronic payments. The number of companies and organizations registered in financial institutions to utilize internet banking services for online business in Fast Pay was 140, while First Iraqi Bank has 200 registrations, most of these businesses are startups. Businesses that transferred from traditional operations to digital models were recognized from the provided listings. This was derived from publicly accessible business data, direct corporate descriptions, and industry classifications. Thirty organizations that fulfilled the requirements for DT were identified as possible participants for the study. Executives from all 30 chosen businesses were contacted through direct calls to solicit participation in semi-structured interviews. Notwithstanding several follow-ups, only 7 executives volunteered for involvement in the study. The study was undertaken from June 2024 to September 2024. The data gathering strategy mostly involved in-person meetings at the respondents' offices and video chats. Each interview spanned 45 to 90 minutes, facilitating comprehensive discussions.

Research conducted by the United Nations Development Program (UNDP) on Micro, Small, and Medium Enterprises (MSME) in Iraq highlights the challenges in determining the population for such studies in Iraq. One of the main reasons is that 83% of businesses are not registered in government related departments. The study also reveals that there is limited reliance on technology, such as the Internet, social media platforms, and E-commerce. However, 40% of the businesses surveyed reported using mobile phones in their daily operations (UNDP, 2023). The response rate was lower than expected, but the quality and relevance of the participants provided excellent insights into DT. The study admits this limitation and justifies the sample size based on the firm’s detailed information. Secondary data sources, such as UN agency sector reports of the country, were used to strengthen the research. Finally, the study fulfills the purposive sampling minimum of five. (Tongco, 2007).

An overview of the selected businesses is presented in Table 1.

Table 1. Overview of businesses

Company	Industry	Number of Employees	Year of foundation	Position of Interviewee
Company A	Education	10	2020	CEO
Company B	Tourism	300	2010	Cofounder and Managing Director
Company C	Trading & Retail	20	2011	Founder and CEO
Company D	Trading & Retail	200	1997	Head of E-Commerce
Company E	Trading & Retail	200	2017	CTO
Company F	Real Estate	3,001[1]	2002	IT Director
Company G	Trading & Retail	150	1943	CEO

[1] The number of employees at Company F is estimated and varies depending on the number of projects being implemented.

The respondents exhibited similarities, including engagement in the Iraqi market and having undergone diverse phases of DT. Although the group exhibited some heterogeneity in terms of industry and organizational size, their shared background established a robust foundation for recognizing similar themes and trends. Nonetheless, the findings may not comprehensively reflect all TBs in Iraq due to the limited sample size.

3.2. Ressearch Instrument

Based on the sources provided and the focus on DT in Iraq, the following semi-structured interview questions for the qualitative research. These questions are designed to explore the processes, experiences, challenges, and impacts of DT on TBs:

1. What was the status of the company before the digital status phase in terms of customer satisfaction and performance?
2. What were the main drivers behind your decision to pursue DT? (Palmié et al., 2022b)
3. Can you describe the main steps your business took toward DT? (Ivančić, L. et al., 2019)

4. How did you assess the digital readiness of your organization before beginning the transformation process? (Ivančić, L. et al., 2019)
5. Can you elaborate on the challenges and risks your business faced during the DT process? And what strategy you employed to mitigate them? (Laudien & Pesch, 2019; Hussein et al., 2020)
6. How has DT impacted your customer relations and customer trust, particularly in terms of data security and privacy? (Hussein et al., 2020)
7. Can you provide examples of how DT has affected your business performance—either positively or negatively? (Li, L. 2022)

4. Results and Discussion

A systematic technique for qualitative data analysis was employed to guarantee the rigor and validity of the analysis. The gathered data were encoded and examined with NVivo software. The coding procedure engaged multiple discussion sessions to improve inter-coder reliability. Discrepancies in code were rectified by communication and agreement. NVivo enabled the systematic organization and analysis of coded data, facilitating the discovery of principal themes and sub-themes. The subsequent sections present these themes and sub-themes, accompanied by supporting samples from the data. This rigorous method guaranteed a thorough and nuanced comprehension of the complex factors affecting DT.

This research examined the motives, barriers, and outcomes of DT in traditional Iraqi businesses via semi-structured interviews with executives from seven firms. The study aimed to address three fundamental inquiries: 1) What are the primary motives and drivers behind SMEs DT initiatives? 2) What specific challenges and opportunities arose at the different stages of DT process? 3) What is the impact of DT on financial performance, operational efficiency, and customer experience?

4.1. Drivers of Digital Transformation

Findings reveal that competitiveness, cost minimization, and customer involvement were the main drivers for digital adoption. Competition emerged as a significant motivator, with businesses recognizing the need to adapt to survive in an increasingly digital marketplace, this aligns with global trends where businesses leverage digital tools to gain a competitive edge (Theme 1.1) (Spieth et al., 2014; Evans et al., 2017; Schallmo et al., 2017; Bouncken et al., 2021). The pursuit of organizational efficiency and cost savings further (Theme 1.2) underscores the pragmatic approach Iraqi businesses adopt towards DT, viewing it as a means to streamline operations and optimize resource allocation, the representative of company B said that “The management has decided to shift to digital operations in order to enhance operational control”, the literature highlights the role of DT in optimization of operations (Verhoef et al., 2021; Do Vale et al., 2022; Teoh et al., 2023). Furthermore, the emphasis on customer interaction and satisfaction (Theme 1.3) for personalized customer experiences and enhanced engagement emerged as a key motivator, A representative from Company A reported that: “Distinguish ourselves from the competition in order to expand our customer base” aligning with the findings of (Spieth et al., 2014; Evans et al., 2017; Schallmo et al., 2017; Bouncken et al., 2021; Teoh et al., 2023; He et al., 2023).

4.2. Challenges and Risks During Transformation

Despite the recognized benefits, Iraqi businesses face significant challenges in their DT journeys. Limited access to advanced technology, particularly reliable internet connectivity, (Theme 2.1) poses a substantial barrier, emphasizing the need for infrastructural development to fully realize the potential of digitalization, "payment kiosk machines are used to resolve internet outages." Stated the Company F representative, this remains a critical concern in the studies of (Schneider, 2015; Bouncken et al., 2021; Warner & Wäger, 2019; ALmasoodi et al., 2023; Salih et al., 2024). Concerns regarding data privacy and security (Theme 2.2) highlight the importance of robust cybersecurity measures and regulatory frameworks to build trust in the digital ecosystem, The representative of Company A stated that “The copyright act is absent in Iraq”. this finding was in line with the studies finding of (De Souza et al., 2020; Teoh et al., 2023; ALmasoodi et al., 2023; Salih et al., 2024). Cultural resistance to change (Theme 2.3), often stemming from a lack of awareness or fear of job displacement, underscores the need for change management strategies that address employee concerns and foster a culture of digital literacy, The representative of company G stated that “To minimize the risk associated with the change, I approached the younger staff with the assumption that they would be more receptive to it.”. Warner & Wäger, (2019), Drieschner et al. (2019), Paul et al., (2020), Reim et al., (2020), Verhoef et al., (2021), Türk, (2023), ALmasoodi et al., (2023), and Salih et al., (2024) highlight the potential for cultural resistance to hinder DT adoption, emphasizing the need for organizational "mindset shifts" and embracing new technologies. Legacy systems (Theme 2.4) and a notable skills gap (Theme 2.5) further compound these challenges, emphasizing the need for investments in both technological upgrades and human capital development, Company D representative pointed out that “The logistics operation was centralized to a single site instead of picking up things from the branch closest to the customer's location. This has negatively impacted customer satisfaction in terms of both cost and delivery time”. The last findings were in line with the finding in the studies (Warner & Wäger, 2019; Salih et al., 2024; Bouncken et al., 2021; Drieschner et al., 2019; Paul et al., 2020; ALmasoodi et al., 2023).

4.3 Impact of Digital Transformation on Business Performance

Despite these challenges, our findings demonstrate that businesses successfully navigating the digital landscape experience tangible benefits. Increased operational effectiveness through process automation and data-driven decision-making leads to improved efficiency and resource utilization (Theme 3.1), interviewee of company G stated that “The company primarily focuses on implementing online sales channels to enhance operational efficiency and effectiveness, based on the Six Sigma concept”. Our finding is in line with the findings of studies (Teoh et al., 2023; He et al., 2023). Enhanced customer experiences and interactions through digital channels strengthen customer relationships and drive loyalty (Theme 3.2), as stated by representative of company E “Expanded the customer base, including a rise in the number of loyal consumers that shop offline and online.", Furthermore, DT fosters increased agility and innovation, enabling businesses to adapt quickly to market changes and explore new opportunities. These factors contribute to better sales generation and improved market competitiveness (Theme 3.3), positioning businesses for sustainable growth. The findings were confirmed by the findings of studies (Vaska et al., 2021; Do Vale et al., 2022; Trischler & Li-Ying, 2023; Teoh et al., 2023; He et al., 2023). Finally, Verhoef et al. (2021) argued that DT modifies the organizational structure and value delivery system, this is confirmed our finding of the integration of sustainability and corporate responsibility principles (Theme 3.4) through digital solutions highlights a growing awareness of the broader societal impact of business operations, "the application was developed from scratch necessitated to involve all departments in the company, focusing on the application interface to be friendly and maintain sustainability of development during the operation to cope to customer demand." As reported by the representative of company F. Not all businesses had comparable advantages from the transformation, suggesting that the effectiveness of transformation is contingent upon industry type, investment in digital infrastructure, and staff adaptation.

5. Conclusions

The findings reveal that competitiveness, operational efficiency, and customer engagement are the primary drivers motivating DT efforts. Despite significant challenges, such as limited access to advanced technology, cultural resistance, digital skills shortages, and regulatory constraints, businesses that successfully navigate these barriers experience tangible benefits, including enhanced operational efficiency, improved customer experience, greater agility, and increased market competitiveness.

The study underscores the significance for business leaders of investing in worker upskills to bridge digital skill gaps, formulating strategic change management plans to mitigate cultural resistance, and enhancing cybersecurity while promoting clearer digital legislation. Policymakers could consider investing in internet infrastructure to facilitate digital growth, implementing legal reforms to rectify deficiencies in digital commerce legislation, and providing incentives for Businesses to embrace digital solutions. Collaboration among businesses, technology suppliers, and government organizations should be promoted to exchange resources, expertise, and best practices.

While the study offers valuable insights, its scope is limited by the sample size of seven businesses. Although the selected cases represent various industries and organizational sizes, they may not fully capture the breadth of experiences across Iraq. Consequently, the study's findings are indicative rather than representative, necessitating caution in generalizing the results. The theoretical contributions of this research lie in its exploration of DT in a developing country context, emphasizing the interplay of technological, cultural, and organizational factors. For managerial practice, the study highlights the importance of investing in infrastructure, upskilling the workforce, and fostering collaboration among stakeholders to create a supportive environment for DT. Managers are encouraged to prioritize strategic alignment between digital initiatives and organizational goals while addressing potential resistance to change through effective communication and training.

Future research should address the study's limitations by expanding the sample size and exploring DT in specific sectors such as healthcare, education, and logistics. Longitudinal studies could provide insights into the long-term effects of DT on organizational performance. Comparative analyses with other developing countries would offer a broader understanding of common challenges and innovative solutions. Additionally, examining employee perspectives on DT's impact on their roles, satisfaction, and productivity would yield a more comprehensive understanding of its organizational implications.

This study enriches the limited research on DT in Iraq by providing empirical insights into the motives, obstacles, and business implications associated with digitalization. Although findings indicate that DT can enhance efficiency and competitiveness, structural barriers and resistance to change persist as significant obstacles. Resolving these challenges through strategic investments, regulatory reforms, and workforce development will be crucial for securing a successful digital future for Iraqi businesses.

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