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Project Title:

The Effects of Digital Management on Business Sustainability
for Organizations in Saudi Arabia

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Abstract

In the rapidly evolving landscape of digital transformation, the effects of digital management on business sustainability have become a crucial area of inquiry for organizations seeking to thrive in dynamic environments. This study delves into the intricate relationship between digital management and business sustainability within organizations in the Kingdom of Saudi Arabia (KSA). Through a mixed-methods approach, including surveys and data analysis, this research aims to shed light on the potential impacts of digital management on various dimensions of sustainability. The study's central hypothesis posits that there are statistically significant effects of digital management on business sustainability. To investigate this hypothesis, the research encompasses sub-hypotheses exploring the effects of digital management on economics and social issues as integral elements of business sustainability. Drawing on responses from a diverse sample of participants representing various industries in KSA, the study unravels insights into the perceptions, beliefs, and attitudes concerning the integration of digital management practices.

The results affirm the research hypothesis, revealing statistically significant effects of digital management on both economic and social dimensions of business sustainability. Participants recognize the positive impact of digital management on operational efficiency, cost reduction, stakeholder engagement, and community involvement. Additionally, the findings highlight the role of specific technologies such as artificial intelligence, big data analytics, and cloud computing in enhancing digital management's contributions to sustainability. The implications of this study extend to organizations, researchers, and policymakers in KSA and beyond. As organizations seek to adapt and innovate in an increasingly digital world, the study's insights offer actionable recommendations for effectively integrating digital management practices to enhance sustainability efforts.

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Chapter 1: Introduction

1.1 Background of Study

In an era characterized by unprecedented technological advancement and shifting economic paradigms, the integration of digital technologies into business operations has become an imperative for organizations striving to remain competitive and relevant. The Kingdom of Saudi Arabia, with its strategic geographical location, robust economic aspirations, and commitment to transformational initiatives, stands at the crossroads of this digital revolution (Al-Thoblany & Alyuosef, 2023). This study delves into the intricate relationship between digital management practices and business sustainability, with a specific lens on organizations within Saudi Arabia.

Digital management, a multifaceted approach encompassing the strategic utilization of technology and data-driven decision-making, has emerged as a linchpin for organizational evolution. This paradigm shift goes beyond mere technological adoption; it signifies a comprehensive restructuring of business processes, from customer engagement and supply chain logistics to internal operations and strategic planning (Singh et al, 2022). Through the integration of cloud computing, data analytics, artificial intelligence, and e-commerce platforms, businesses gain the capacity to enhance efficiency, optimize resource allocation, and drive innovation. The pervasive influence of digital management practices extends across industries, transcending boundaries and altering traditional notions of business operations. By embracing digital transformation, organizations position themselves to meet the demands of an interconnected world, where rapid information dissemination and evolving consumer behaviours dictate market dynamics (Singh et al, 2022).

Amidst the digital transformation landscape, the notion of business sustainability has garnered increasing attention. Business sustainability transcends profit margins and immediate gains; it embodies a holistic approach that balances economic prosperity, social responsibility,

and environmental stewardship. Organizations are recognizing the inherent interdependence between their operations and the broader ecosystem, acknowledging that long-term viability hinges upon harmonizing profitability with ethical and environmental considerations. In Saudi Arabia, the pursuit of business sustainability aligns seamlessly with the nation's Vision 2030 agenda (Al-Thoblany & Alyuosef, 2023). This ambitious roadmap seeks to diversify the economy, reduce reliance on oil exports, and position Saudi Arabia as a global hub for investment and innovation. Within this context, digital management emerges as a strategic enabler, offering the tools and methodologies to enhance operational efficiency, accelerate growth, and advance sustainable practices.

As the world becomes increasingly interconnected, organizations in Saudi Arabia are compelled to navigate a globalized business environment characterized by rapid technological advancements and shifting consumer expectations. The digital age has ushered in a new era where traditional business models are challenged, and the ability to swiftly adapt becomes a defining factor for success (D AL-TAYYAR et al., 2021). In this context, digital management practices offer a gateway to not only survive but thrive in this dynamic landscape. They provide organizations with the tools to harness real-time data, gain insights into consumer behaviour, and tailor their offerings to align with ever-evolving market demands. By leveraging digital management, Saudi Arabian businesses can position themselves as agile and responsive contenders on the global stage, ensuring long-term viability and resilience (Bugami, 2022).

In Saudi Arabia, the convergence of digital management and business sustainability is not merely a transactional endeavour within organizational boundaries; it extends to the broader ecosystem encompassing government entities, academia, and civil society. The Kingdom's commitment to fostering innovation and technology is mirrored in initiatives such as the National Transformation Program and the creation of innovation hubs (Bugami, 2022). These efforts provide a fertile ground for collaborative endeavours, where businesses can

coalesce with government agencies and academic institutions to drive sustainable digital innovations. The cultivation of a supportive ecosystem can facilitate the exchange of best practices, spur research and development, and amplify the impact of digital management strategies. By transcending organizational silos, Saudi Arabia has the potential to realize a harmonious synergy between digital advancement and sustainable growth, propelling the nation toward a future where economic, social, and environmental dimensions coalesce for the greater good (Bugami, 2022).

The Kingdom's unique socio-economic landscape, marked by a youthful demographic dividend and an increasing appetite for technology adoption, underscores the potential for synergies between digital management and business sustainability (Kassem et al, 2020). Saudi Arabia's tech-savvy population is driving exponential growth in digital connectivity, thereby fostering an environment conducive to the integration of digital solutions into various facets of business. However, the intersection of digital management and business sustainability within Saudi Arabia is not without its challenges. Cultural norms, regulatory frameworks, and infrastructural considerations add layers of complexity to the adoption and implementation of digital management practices (Kassem et al, 2020). Thus, an exploration of these intricacies becomes imperative to chart a strategic path forward.

1.2 Problem Statement

In the dynamic landscape of contemporary business, the integration of digital technologies has emerged as a transformative force, reshaping operational paradigms, and redefining competitive strategies. Within this context, the research aims to investigate the effects of digital management on the business sustainability of organizations, with a specific focus on the Saudi Arabian context. This study addresses the following key problems:

Evaluating the Effects of Digital Management on Business Sustainability: The profound influence of digital technologies on business operations has prompted a critical examination of their impact on the broader concept of business sustainability. While the potential benefits are acknowledged, a comprehensive understanding of how digital management practices influence economic, social, and environmental dimensions of sustainability within Saudi Arabian organizations remains an area of inquiry. This study seeks to empirically assess and analyse these effects, shedding light on the intricate interplay between technology adoption and sustainable outcomes.

Identifying Strengths, Weaknesses, and Areas for Improvement in Digital Management: The existing landscape of digital management practices in Saudi Arabia is marked by a diversity of approaches and degrees of implementation. To facilitate informed decision-making and strategic planning, it is essential to ascertain the strengths and weaknesses of current digital management practices. Furthermore, identifying areas for improvement within the Saudi Arabian context is pivotal for organizations aspiring to enhance their sustainable practices. This research aims to provide a comprehensive evaluation of the strengths and weaknesses of present digital management practices, offering insights that can guide targeted enhancements and transformations.

The synthesis of these key problems forms the foundation of this research. By addressing these challenges, the study contributes to the broader discourse on the integration of digital technologies into business operations and its implications for the sustainable development of organizations in Saudi Arabia.

1.3 Research Justification

The research holds paramount significance as it aims to bridge critical knowledge gaps concerning the effects of digital management on business sustainability within the context

of Saudi Arabia. In an era of rapid technological advancement and evolving global economic paradigms, understanding how digital management practices impact the holistic sustainability of organizations is crucial for strategic decision-making and policy formulation. By evaluating the strengths and weaknesses of present digital management approaches, this study not only contributes to the empirical understanding of the intricate interplay between technology adoption and sustainable outcomes but also provides actionable insights for businesses seeking to optimize their operations, enhance efficiency, and align with the Kingdom's ambitious Vision 2030 agenda. As Saudi Arabia undergoes a transformative journey toward economic diversification and innovation, this research stands to inform and guide the pursuit of harmonious integration between digital advancement and long-term business sustainability.

1.4 Research Objectives

Building upon the insightful perspective put forth by Tornroos and Halinen (2005), research objectives serve as indispensable guiding beacons that illuminate the path toward methodological precision and robust inquiry. In accordance with their assertion, research objectives offer not only a compass for navigating the intricate terrain of investigation but also strategic tools to unravel complexities and establish a coherent basis for comparison. In alignment with this ethos, the present study articulates a concise set of objectives, meticulously designed to chart the course for research methodology and subsequently shape the contours of results. These objectives stand as sentinel pillars, ushering in clarity, coherence, and structure to the research endeavour, ensuring that the empirical journey traverses with purpose toward a comprehensive understanding of the effects of digital management on business sustainability within the specific context of Saudi Arabian organizations. The present research aimed to achieve the following objectives.

- Identify the benefits and challenges associated with the application of digital management.

- Examine the stage of business sustainability reached by organizations.
- Investigate the impact of digital management practices on business sustainability.
- Analyse the effects of digital management on the daily work routines of employees.

1.5 Research Questions

Research questions are the big things a researcher wants to find out when they do a research project. Saunders & Bezzina, 2015, explained that these questions are like guides for the research process – they show what to focus on and what to leave aside. The main question of a research study is like the captain of the ship, and it leads to other questions about different parts of the topic. This research is trying to answer this important question:

1. What are the effects of digital management on business sustainability for organizations?
2. What are the technologies that are used for successful digital management in organizations?
3. What is the structure of digital management that can be used to ensure business sustainability for organizations?

1.6 Significance of Research

Presently, organizations are consistently directing their management efforts towards enhancing digital practices to elevate process quality and refine both employee and customer experiences. The significance of this study resides in its examination and comparison of the impacts of digital management on the sustainability of businesses. The utilization of digital methods by companies yields numerous advantages, yet it is not without obstacles and opposition that necessitate dedicated solutions. Factors such as technology and data play pivotal roles in this transformation. This research endeavours to shed light on these dynamics, contributing to a deeper understanding of how digital management influences overall business sustainability.

1.7 Limitations of Research

While this study strives to offer valuable insights into the effects of digital management on business sustainability for organizations in Saudi Arabia, it is important to acknowledge certain limitations that may impact the scope and generalizability of the findings. Firstly, the research is confined to a specific geographical context, focusing solely on Saudi Arabian organizations. This geographical constraint may limit the extent to which the findings can be extrapolated to other regions with potentially distinct socio-economic and cultural dynamics. Additionally, the study's reliance on empirical data collection methods, such as surveys and interviews, introduces the possibility of response bias and subjective interpretations. Moreover, the dynamic nature of technology and its rapid advancements may lead to a certain degree of temporal limitation, as the findings might evolve over time with changing digital landscapes. Lastly, while efforts are made to comprehensively explore the impact of digital management on business sustainability, certain external factors or unanticipated variables may influence the outcomes. Acknowledging these limitations enhances the nuanced interpretation of the study's findings and encourages future research to build upon its insights.

1.8 Research Layout

The research is structured across five distinct chapters, each unfolding in sequential order to form a cohesive narrative. These chapters are delineated as follows:

1. Chapter 1: Introduction

Serving as the inaugural chapter, Chapter 1 offers a succinct overview of the research's origins and its intended goals. It is subdivided into seven sections, namely research background, research justification, research objectives, research questions, the significance of research, limitations, and research layout. Within this chapter, the groundwork is laid, introducing readers to the context and rationale underpinning the study.

2. Chapter 2: Literature Review

Chapter 2 embarks on a comprehensive exploration of the existing body of knowledge through a thorough literature survey. This section assimilates secondary data related to the topic, affording a critical perspective on prior research endeavours. By delving into prior works, the literature review charts a course to establish the research's foundational framework and illuminate the gaps that the present study aims to address.

3. Chapter 3: Methodology

Centred on the research methodology, Chapter 3 elucidates the research design and the procedural intricacies undertaken during the study. By delineating the step-by-step process, this chapter outlines the research's trajectory and provides a roadmap to methodological decisions. The chapter encompasses various sub-sections, including research approaches, research philosophy, research strategy, data collection procedures and instruments, data analytical process, research ethics, and limitations of methodology.

4. Chapter 4: Results, Findings, and Discussion

Chapter 4 stands as a pivotal juncture where collected data, both primary and secondary, is rigorously analysed. This chapter undertakes an in-depth examination of the formulated results and augments them with insights garnered from the reviewed literature. The findings are meticulously interpreted, utilizing quantitative parameters to enrich the comprehension of the amassed data.

5. Chapter 5: Conclusions and Recommendations

As the destination of the research journey, Chapter 5 appraises the research findings, culminating in a succinct and outcome-oriented conclusion. Alongside this, the chapter offers recommendations that stem from the study's outcomes, providing actionable insights to be considered in light of the results.

6. Chapter 6: References

This chapter catalogues the comprehensive list of sources referred to throughout the research, abiding by appropriate citation conventions.

7. Chapter 7: Appendices

The appendices encompass supplementary materials integral to the research, such as survey questionnaires, interview transcripts, or supplementary data sets.

Chapter 2: Literature Review

2.1. Literature Introduction

The Literature Review chapter serves as a critical cornerstone of this research, offering an in-depth exploration of existing scholarship and insights surrounding the interplay between digital management practices and business sustainability. By delving into the troves of academic discourse, this chapter aims to provide a comprehensive overview of theories, empirical studies, and frameworks that have shaped the understanding of these two pivotal concepts. Through this thorough examination, the chapter not only establishes a strong conceptual foundation but also identifies gaps and opportunities for further inquiry. As we navigate through the diverse perspectives and analyses that the literature offers, we gain valuable insights that guide the trajectory of this study, ultimately contributing to the ongoing dialogue in this dynamic field.

2.2. The Concept of Digital Management

The concept of digital management has experienced a significant evolution in recent years, driven by the rapid advancement of technology and its pervasive integration into various aspects of organizational operations. What began as basic computerization of tasks has now matured into a comprehensive framework that encompasses sophisticated software systems, advanced data analytics, cloud computing, and artificial intelligence (Appio et al., 2021). This evolution has profoundly reshaped how organizations approach tasks, enabling them to harness real-time data, seamless automation, and enhanced connectivity to optimize operations and foster innovation.

Mezghani & Aloulou, 2019 advocates that digital management involves the strategic application of digital tools, technologies, and data-driven processes to enhance operational efficiency, informed decision-making, and overall organizational performance (Mezghani & Aloulou, 2019). This approach considers the interplay between technological infrastructure,

data utilization, and managerial strategies, creating a synergistic ecosystem that catalyzes organizational success. One of the fundamental components of digital management is the integration of digital tools into core business processes. These tools can encompass a spectrum of applications, from customer relationship management systems that enable personalized interactions to supply chain optimization platforms that enhance logistics and inventory management (Mazurchenko & Maršíková, 2019). This integration enhances the fluidity of operations, reduces manual interventions, and facilitates the flow of information across departments.

Rêgo et al., 2021, argues that in tandem with digital tools, data analytics assumes a pivotal role in digital management. Organizations today generate vast volumes of data, and digital management leverages this resource to derive actionable insights. Through sophisticated data analytics techniques, organizations can uncover patterns, trends, and correlations within datasets. These insights not only inform strategic decision-making but also enable predictive modeling, offering glimpses into potential future scenarios (Rêgo et al., 2021). According to Appio et al., 2021, cloud computing has emerged as a cornerstone of digital management. The cloud provides a flexible and scalable infrastructure that allows organizations to store, access, and share data across different locations and departments. This seamless accessibility empowers teams to collaborate effectively, share real-time updates, and streamline processes that transcend geographical boundaries (Appio et al., 2021).

In the modern business landscape, digital management is no longer confined to operational enhancements; it has risen to a level of strategic significance (Mazurchenko & Maršíková, 2019). Organizations are aligning their digital initiatives with overarching business goals, recognizing that digital transformation is not just about adopting technology but about fundamentally reshaping business models and customer experiences. By leveraging digital management, organizations can enhance customer engagement, drive innovation, and gain a

competitive edge (Mazurchenko & Maršíková, 2019). In the study by Gil-Gomez et al, 2020, the agility enabled by digital management is crucial in navigating the complex and rapidly changing business environment. In a landscape characterized by disruptions and uncertainties, organizations that can swiftly adapt their operations and strategies stand a better chance of thriving (Gil-Gomez et al, 2020). Digital management empowers organizations to respond promptly to market shifts, customer demands, and emerging opportunities, reducing the risk of being left behind.

Digital management is not devoid of challenges. Organizations often grapple with integration complexities, where existing legacy systems must seamlessly coexist with new digital solutions. Data security and privacy concerns loom large, especially as organizations handle sensitive customer information (Gil-Gomez et al, 2020). Additionally, resistance to technological change can hinder the successful adoption of digital management practices, necessitating change management strategies that address employee apprehensions.

The concept of digital management encapsulates the strategic harnessing of digital tools, data analytics, and cloud computing to enhance organizational efficiency, innovation, and competitiveness (Bican, & Brem, 2020). As organizations continue to embrace digital management, they position themselves at the forefront of a dynamic business landscape, where technological prowess is a vital determinant of success. Through the integration of technology and data-driven processes, organizations can not only optimize their operations but also reshape the paradigms of modern business.

2.3. Business Sustainability: Concepts and Dimensions

Business sustainability, a concept intricately woven into the fabric of modern organizational discourse, encapsulates the imperative to harmonize economic growth, social responsibility, and environmental stewardship. Bican, & Brem, (2020) amidst the growing

recognition of the finite nature of resources and the escalating impact of human activities on the planet, the concept of business sustainability has transcended mere rhetoric to become a fundamental tenet guiding contemporary business practices (Bican, & Brem, 2020).

At its core, business sustainability encompasses a tripartite framework that encompasses economic, social, and environmental dimensions. This holistic approach by Ukko et al, 2019, acknowledges that the long-term viability of organizations hinges upon a delicate equilibrium between financial success, ethical engagement, and ecological preservation. The economic dimension of business sustainability revolves around the pursuit of profit within parameters that ensure long-term financial stability (Ukko et al, 2019). Rather than conceiving sustainability as an adversary to profitability, modern organizations recognize that sustainable practices can bolster their resilience in the face of economic uncertainties. Through prudent resource allocation, risk management, and innovation, businesses can safeguard their financial well-being while also contributing to broader economic growth (Jabbour et al., 2020).

According to Mio, Panfilo, & Blundo, (2020), the social dimension, an indispensable facet of business sustainability, underscores the responsibility of organizations to uphold ethical standards, foster inclusivity, and nurture stakeholder relationships (Mio, Panfilo, & Blundo, 2020). In an era of heightened social consciousness, businesses are increasingly judged not only by their products and services but also by their societal impact. As such, cultivating a positive organizational culture, championing diversity and inclusion, and engaging in philanthropic endeavors are integral to aligning business objectives with broader societal welfare (Mio, Panfilo, & Blundo, 2020). Central to the concept of business sustainability is its environmental dimension. As the world grapples with climate change, resource depletion, and ecological degradation, organizations are compelled to assess and mitigate their environmental footprint. This entails minimizing waste generation, optimizing energy consumption, and adopting eco-friendly practices throughout the value chain. Nwachukwu, (2020), proposed that

by aligning their operations with environmental preservation, businesses not only contribute to planetary health but also position themselves favorably in a market increasingly driven by environmental considerations (Nwachukwu, 2020).

The interconnectedness of these dimensions becomes evident in the pursuit of "sustainable development," a term coined in the 1987 Brundtland Commission report, "Our Common Future." This notion emphasizes that economic progress must be pursued in harmony with social equity and environmental conservation. A company's success, therefore, hinges on its ability to navigate the intricate interplay between profitability, societal welfare, and ecological integrity. The study by Gomez-Trujillo, & Gonzalez-Perez, (2021) proposes that amidst these dimensions lies a recognition that business sustainability is not merely a philanthropic gesture or a public relations strategy; it is an essential strategy for long-term survival (Gomez-Trujillo, & Gonzalez-Perez, 2021). Organizations that integrate sustainability into their core operations position themselves to thrive in an evolving marketplace characterized by changing consumer preferences, stringent regulations, and an increasingly informed and discerning public.

The pursuit of business sustainability is not without challenges. Organizations often grapple with the complexities of quantifying and measuring sustainability metrics, as well as the potential trade-offs between short-term profits and long-term sustainability goals (Gomez-Trujillo, & Gonzalez-Perez, 2021). Striking a balance between financial imperatives and sustainability objectives necessitates a nuanced approach that considers the dynamic interactions between economic, social, and environmental facets.

The multidimensional concept of business sustainability underscores the imperative for organizations to harmonize economic prosperity, social responsibility, and environmental stewardship. This holistic approach not only aligns businesses with broader societal and

environmental welfare but also fortifies their resilience and competitiveness in an increasingly interconnected world. As organizations recognize the interconnectedness of economic, social, and environmental dimensions, they are better poised to navigate the complexities of a rapidly changing business landscape, while simultaneously contributing to the greater global good (Jabbour et al., 2020).

2.4. Digital Management's Role in Enhancing Business Sustainability

In an era defined by rapid technological advancements and growing concerns about the long-term impact of business operations on the environment and society, the integration of digital management practices has emerged as a transformative force in fostering enhanced business sustainability. The study by Wirtz, (2019) proposes that the integration of digital management practices within organizational frameworks holds the promise of enhancing operational efficiency, streamlining processes, and facilitating real-time decision-making (Wirtz, 2019). Technology-enabled solutions, such as Enterprise Resource Planning (ERP) systems and supply chain management software, empower organizations to optimize resource allocation, reduce wastage, and enhance overall productivity. This operational efficiency not only bolsters financial performance but also aligns with the sustainable use of resources—a pivotal aspect of business sustainability (George, Merrill & Schillebeeckx, 2021).

According to study conducted by Hanaysha et al., 2022, digital management's influence extends to customer engagement and experience, a cornerstone of modern business strategies (Hanaysha et al., 2022). Organizations leverage data analytics and customer relationship management systems to gain insights into consumer preferences, behavior, and feedback. This enables targeted marketing campaigns, personalized services, and responsive customer support, enhancing customer satisfaction and loyalty (Hanaysha et al., 2022). In the context of business sustainability, fostering strong customer relationships contributes to long-term viability by ensuring consistent revenue streams and minimizing resource-intensive customer

acquisition efforts. The study by Li, Dai, & Cui, (2020) proposes that innovation is a catalyst for long-term organizational success, is also catalyzed by digital management practices. Through data analytics, organizations can identify emerging market trends, anticipate customer demands, and make informed strategic decisions (Li, Dai, & Cui, 2020). Digital platforms facilitate collaboration, enabling teams to ideate, prototype, and iterate on solutions more efficiently. This innovation-driven approach fosters adaptive capacity, enabling organizations to respond to dynamic market changes and carve out competitive advantages (George, Merrill & Schillebeeckx, 2021).

The intersection of digital management and business sustainability is perhaps most pronounced in environmental considerations (Li, Dai, & Cui, 2020). Digital tools enable organizations to monitor, measure, and reduce their environmental footprint. Smart sensors, Internet of Things (IoT) devices, and data analytics platforms provide insights into energy consumption, waste generation, and emissions levels. Armed with this data, organizations can implement targeted measures to minimize their ecological impact, whether through energy-efficient operations, waste reduction initiatives, or sustainable supply chain practices (Jabbour et al., 2020). In the study Love, & Matthews, (2019), digital management practices contribute to the pursuit of sustainable supply chain management. By digitizing supply chain processes, organizations gain visibility into supplier practices, ensuring adherence to ethical and environmental standards (Love, & Matthews, 2019). This transparency facilitates responsible sourcing, reduces the risk of supply chain disruptions, and fosters a ripple effect of sustainability across interconnected business networks. Digital management's role in enhancing business sustainability is not without challenges. Organizations must grapple with data privacy concerns, ethical considerations, and the potential unintended consequences of digitalization (Love, & Matthews, 2019). For instance, the proliferation of digital technologies may contribute to electronic waste and energy consumption, thereby negating some of the intended

sustainability benefits. Thus, the responsible implementation of digital solutions requires a nuanced understanding of their ecological implications.

Digital management's integration within organizational frameworks holds the potential to drive enhanced business sustainability by fostering operational efficiency, customer engagement, innovation, and environmental responsibility. The study by Baiyere et al, (2020) elaborates the synergy between digital tools and sustainable practices enables organizations to navigate the complex interplay between economic success, social responsibility, and environmental preservation (Baiyere et al, 2020). As businesses strive to align their operations with these interconnected dimensions, the transformative power of digital management emerges as a catalyst for enduring organizational prosperity and a more sustainable future.

2.5. Challenges and Barriers in Implementing Digital Management for Sustainability

While the integration of digital management practices offers the promise of enhancing business sustainability, it is not without its challenges and barriers. Organizations embarking on this journey must grapple with a multitude of complexities that span technological, cultural, ethical, and regulatory dimensions (Ozkan-Ozen, Kazancoglu & Mangla, 2020). Technological hurdles constitute a significant impediment to the seamless adoption of digital management practices for sustainability. The rapid pace of technological evolution often leads to compatibility issues between legacy systems and emerging digital tools. Integration complexities can disrupt operations, consume resources, and delay the realization of desired sustainability outcomes (Ozkan-Ozen, Kazancoglu & Mangla, 2020). Organizations must address data management challenges, including data quality, security, and privacy concerns. The vast volumes of data generated and collected in the pursuit of sustainability goals necessitate robust data governance frameworks to ensure the accuracy, confidentiality, and integrity of sensitive information (Kassem et al, 2020).

According to D AL-TAYYAR et al., 2021, Resistance to technological change presents a psychological barrier that organizations encounter when introducing digital management practices for sustainability (D AL-TAYYAR et al., 2021). Employees may perceive digitalization as a threat to job security, harbor anxieties about adapting to new technologies, or be skeptical about the tangible benefits of these changes. Overcoming resistance requires effective change management strategies that include clear communication, training, and the provision of a supportive environment for skill development (D AL-TAYYAR et al., 2021). Organizations must foster a culture of digital literacy and empowerment, cultivating a shared understanding of how digital tools contribute to individual and collective success.

Cultural transformation is a pivotal but often underestimated challenge in the realm of digital management for sustainability. Organizations must cultivate a culture that embraces innovation, collaboration, and continuous improvement (George, Merrill & Schillebeeckx, 2021). This entails dismantling siloed mindsets and promoting cross-functional collaboration that enables the seamless integration of digital practices across departments. Achieving cultural alignment requires leadership commitment, role modeling, and the creation of incentives that recognize and reward employees for embracing digital initiatives (George, Merrill & Schillebeeckx, 2021).

According to Wang, (2022), ethical considerations complicate the implementation of digital management practices for sustainability. As organizations collect, analyze, and utilize data to inform decision-making, questions of data ownership, consent, and responsible use arise (Wang, 2022). Striking a balance between data-driven insights and respecting individual privacy rights necessitates comprehensive data ethics frameworks. Additionally, ethical dilemmas emerge when adopting automation and artificial intelligence technologies. Decisions about the extent to which human judgment is relinquished to machines and the potential

consequences of algorithmic bias must be carefully navigated to ensure fair and equitable outcomes (Jabbour et al., 2020).

Regulatory and compliance challenges pose another layer of complexity when implementing digital management for sustainability. Organizations must navigate a complex landscape of data protection laws, environmental regulations, and industry standards that vary across jurisdictions. Achieving compliance while pursuing sustainability goals requires meticulous adherence to legal requirements and the establishment of robust internal governance mechanisms that ensure ethical and lawful data practices. According to Bocken, & Geradts, (2020), resource constraints and financial considerations can act as deterrents to the widespread adoption of digital management practices for sustainability (Bocken, & Geradts, 2020). While the potential long-term benefits are promising, the initial investments required for technology implementation, training, and infrastructure upgrades can be substantial. Smaller organizations with limited budgets may find these barriers particularly daunting, necessitating careful cost-benefit analyses and the exploration of scalable solutions (Bocken, & Geradts, 2020).

The implementation of digital management practices for sustainability presents a complex array of challenges that span technological, cultural, ethical, and regulatory domains. Organizations must address integration complexities, manage resistance to change, foster cultural transformation, navigate ethical considerations, adhere to regulatory requirements, and navigate resource constraints (Jabbour et al., 2020). While these challenges are formidable, they are not insurmountable. Organizations that navigate these obstacles with foresight, resilience, and strategic planning are better positioned to harness the transformative potential of digital management for sustainability, leading to enduring benefits for both the organization and the broader ecosystem in which it operates (Jabbour et al., 2020).

2.6. Digital Management and Business Sustainability in Saudi Arabia

The confluence of digital management practices and the pursuit of business sustainability has gained prominence on a global scale, and Saudi Arabia is no exception. As the Kingdom charts its course toward economic diversification and reduced reliance on oil revenues, the integration of digital technologies has emerged as a strategic imperative to drive growth, enhance efficiency, and align with global sustainability goals (Al-Thoblany & Alyuosef, 2023). The study by Alwakid, Aparicio, & Urbano, (2021), elaborated that in Saudi Arabia, the government's Vision 2030 blueprint serves as a cornerstone for guiding the nation's transformation. This vision underscores the critical role of digitalization in achieving sustainable economic development, with initiatives aimed at fostering a thriving digital ecosystem (Alwakid, Aparicio, & Urbano, 2021). The Saudi National Transformation Program (NTP) highlights the integration of digital management practices as a catalyst for economic diversification, job creation, and enhanced public services (Al-Thoblany & Alyuosef, 2023). Digital tools are leveraged to optimize government operations, streamline regulatory processes, and provide citizens with improved access to essential services, aligning with the principles of sustainability by enhancing transparency and citizen engagement.

The Kingdom's commitment to digital transformation is exemplified by initiatives such as "Neom," a futuristic city powered by technology and sustainable practices (Bugami, 2022). Neom embodies the intersection of digital innovation and sustainability, with plans to incorporate smart infrastructure, renewable energy, and cutting-edge technologies to create a model city for the future. By integrating digital management practices, Neom aims to demonstrate how advanced technology can be harnessed to achieve environmental, social, and economic sustainability (Bugami, 2022).

According to Singh et al, (2022), the banking and finance sector in Saudi Arabia has also embraced digital management to enhance business sustainability. The Saudi Arabian

Monetary Authority (SAMA) has actively encouraged digital transformation within the financial sector, emphasizing the adoption of innovative solutions to promote financial inclusion and streamline transactions. Digital banking services, mobile payment platforms, and contactless payment methods contribute to reducing the reliance on paper-based processes, enhancing efficiency, and aligning with global sustainable development goals (Singh et al, 2022). While the integration of digital management practices holds promise for enhancing business sustainability in Saudi Arabia, challenges persist. The digital divide, characterized by disparities in digital literacy and access, poses a hurdle to the equitable adoption of digital technologies across different segments of society. Addressing this challenge requires concerted efforts to bridge the gap through education, training, and accessibility initiatives (Singh et al, 2022).

Data privacy and security concerns also loom large in the digital landscape. Ensuring the protection of sensitive information while harnessing the benefits of data-driven decision-making necessitates the establishment of robust data protection frameworks, regulatory compliance mechanisms, and cybersecurity measures (Al-Thoblany & Alyuosef, 2023). According to Kassem et al, (2020), while digital management offers the potential to optimize resource utilization and reduce environmental impact, the Kingdom must navigate the potential ecological consequences of digitalization, including energy consumption and electronic waste generation (Kassem et al, 2020). Balancing the economic gains of digital advancement with environmental stewardship requires a strategic approach that considers the full lifecycle of digital technologies.

2.7. Literature Conclusion

In conclusion, the interplay between digital management and business sustainability reflects a dynamic and intricate relationship that is reshaping the landscape of modern organizations. As this review has illuminated, the integration of digital tools, technologies, and

data-driven practices offers multifaceted avenues for enhancing operational efficiency, customer engagement, innovation, and environmental responsibility. Yet, this transformative potential is accompanied by a spectrum of challenges, ranging from technological complexities and cultural transformation to ethical considerations and regulatory compliance. However, the proactive navigation of these challenges can yield substantial rewards, positioning organizations to thrive in a rapidly evolving business environment while also contributing to broader societal and environmental welfare. The synthesis of digital management and business sustainability underscores the imperative for organizations to embrace both the opportunities and responsibilities presented by the digital age, paving the way for enduring prosperity and a more sustainable future.

Chapter 3: Research Methodology

3.1 Introduction

The methodology chapter serves as the roadmap for how the research objectives will be achieved and the research questions will be addressed. It outlines the systematic approach and procedures that will guide the collection, analysis, and interpretation of data. This chapter is crucial for establishing the reliability and validity of the research findings, providing insight into the research design, methods, and techniques employed. By delineating the strategies chosen to explore the effects of digital management on business sustainability in the context of Saudi Arabia, this chapter bridges the gap between research objectives and tangible outcomes, offering a clear and structured framework for the study's execution.

3.2 Research Design

3.2.1 Philosophy of Research

Research methodology involves the systematic gathering and presentation of data. Every research methodology is built on underlying assumptions, as it constitutes the lens through which a researcher perceives the world (Saunders & Bezzina, 2015). The establishment of a methodology tailored to particular research is known as research philosophy. These philosophical underpinnings subsequently influence the choice of strategies and techniques for data collection. Research philosophy is rooted in the researcher's perspective, the process they follow, and the knowledge they seek to develop. This dissertation encompasses two fundamental philosophies: interpretivism and positivism. Within this framework, both qualitative and quantitative research approaches are employed to comprehensively address the research objectives.

Quantitative research asserts that knowledge should be objective, systematic, numerical, and capable of being tested (Scheurich, 2014). This philosophy also dictates that researchers must remain unbiased in terms of their knowledge of the results; any prior understanding

should not influence the outcomes (Schweber, 2015). Results and conclusions are drawn from direct observations, wherein researchers maintain a passive role. The results determine the acceptance or rejection of research hypotheses. On the other hand, interpretivism philosophy, aligned with qualitative research, seeks to gather data from diverse sources that can be explored and analyzed (Haddadi et al., 2017). According to this perspective, knowledge is subjective, stemming from various sources and perspectives. While the qualitative research design introduces potential bias, it lays the groundwork for the application of a positivist approach. The methodological soundness of the research can be validated by comparing it with similar studies and their outcomes. Consistency in research frequency and congruence in results can offer an unbiased validation of the qualitative technique. Interpretivism, driven by subjective knowledge, can be challenging to replicate as accurately as quantitative research, which emphasizes replication (Pandey & Pandey, 2021). Interpretivism philosophy often faces criticism from researchers who advocate the positivist approach due to its perceived low validity. However, it is acknowledged that in some scenarios, a qualitative approach becomes essential when the quantitative method fails to yield insights, highlighting the nuanced interplay between these two methodologies. In accordance with the philosophies of positivism and interpretivism, the research hypotheses are either affirmed or refuted. The ensuing hypotheses are as follows:

Main Hypothesis (H1): There are statistically significant effects of digital management on business sustainability for organizations in the Kingdom of Saudi Arabia.

Sub-Hypothesis

1. Hypothesis (H2): There are statistically significant effects of applying digital management in economics as one of the elements of business sustainability.

2. Hypothesis (H3): There are statistically significant effects of applying digital management to social issues as one of the elements of business sustainability.

3.2.2 Research Approach and Strategy

The research approach entails the method used to analyse a specific problem, establish comparable variables, and derive conclusive results. It serves as the bridge between theory and research, facilitating the prediction of outcomes. Oyegoke, 2011, outlines five stages within the research approach:

- Deriving a hypothesis from existing literature and theory.
- Crafting a hypothesis that establishes a correlation between two variables.
- Hypothesis testing.
- Analysis of resulting outcomes.
- Revision of theory based on findings.

The research strategy, on the other hand, constitutes the blueprint for conducting the research and addressing the research questions. This strategy's frame designs congruent with the overall research design. The current study employs a dual approach, encompassing both quantitative and qualitative research methodologies, to offer in-depth understanding of the issue and develop viable solutions. Furthermore, the research incorporates qualitative inquiry through the utilization of a survey questionnaire. Online surveys present a convenient means of data collection and are conducive to deriving meaningful outcomes and conclusions. By sampling from the broader population, this approach aims to extrapolate insights that contribute to a comprehensive understanding of the impact of digital management on business sustainability in Saudi Arabia.

3.2.3 Sampling Technique

The sampling technique adopted for this research is pivotal in ensuring the representation and reliability of the gathered data. Given the broad scope of the study, a combination of probability and purposive sampling methods will be employed. Probability sampling, specifically stratified random sampling, will be used to ensure a diverse representation of participants from various sectors and organizational sizes within Saudi Arabia. This approach enhances the generalizability of findings by providing an accurate reflection of the entire population. Additionally, purposive sampling will be applied to select key informants, such as industry experts and practitioners, whose specialized insights can provide a deeper understanding of the complexities at hand. The amalgamation of these sampling techniques is anticipated to yield a well-rounded dataset that comprehensively addresses the research objectives while considering the nuanced characteristics of the target population.

3.2.4 Research Ethics

- **Informed Consent:** Obtain participants' voluntary and informed consent, explaining the research purpose, procedures, risks, and benefits in a clear and understandable manner.
- **Confidentiality:** Protect participants' identities and sensitive information, ensuring data is stored securely and shared only as necessary.
- **Privacy:** Conduct research in settings that respect participants' privacy and minimize the risk of their information being overheard or observed by others.
- **Harm Minimization:** Take measures to minimize any potential physical, emotional, or psychological harm to participants, providing appropriate support if needed.

3.3 Data Collection

The primary data collection process involves utilizing a quantitative approach through the administration of a questionnaire. This questionnaire was carefully crafted to align with the

research questions and its full content is available in Chapter 7: Appendix. Respondents were targeted through online platforms, where they were invited to participate in the survey. To ensure a representation of different sectors, a random sampling technique was employed, engaging various professionals from different backgrounds in the research survey. A total of 75 respondents completed the survey questionnaire, providing valuable data that forms the basis for subsequent analysis and result deduction.

In parallel, secondary data was gathered from diverse research conducted by various research institutes. This secondary data complements the primary data, enriching the analytical process and contributing to the derivation of results. A pilot test was also conducted to validate the effectiveness of the questionnaire survey. This pilot test involved a group of acquaintances who participated in the survey and provided feedback on the questionnaire's clarity and coherence. By evaluating their responses, the researchers ensured that the designed questionnaire effectively captured the intended meanings of the questions (Saunders & Bezzina, 2015). This preliminary testing phase enabled refinements to be made before sharing the questionnaire with potential respondents, ensuring a robust and comprehensive data collection process.

3.4 Data Analysis

The data collected from both the primary and secondary sources will be subjected to rigorous analysis to uncover meaningful insights and address the research objectives. Quantitative data obtained from the survey questionnaire will be processed using statistical tools, enabling the identification of patterns, trends, and correlations. Descriptive statistics will provide an overview of key variables, while inferential statistics will facilitate the examination of relationships between variables and the testing of research hypotheses. Additionally, qualitative data gathered from secondary sources will be subjected to content analysis to extract thematic insights and contextual nuances. The integration of quantitative and qualitative

analyses will provide a comprehensive understanding of the effects of digital management on business sustainability in Saudi Arabia, ultimately contributing to the generation of insightful conclusions and actionable recommendations.

3.5 Limitation of Methodology

While the chosen research methodology offers a robust framework for investigating the effects of digital management on business sustainability in Saudi Arabia, several limitations warrant consideration. First, the reliance on online survey administration may introduce selection bias, as individuals without internet access or who do not engage with online platforms may be excluded. Additionally, the use of a questionnaire limits the depth of responses compared to open-ended interviews, potentially constraining the richness of qualitative data. The sample size, while carefully selected, remains relatively small, which could impact the generalizability of findings to a larger population. Moreover, the cross-sectional nature of the study restricts the ability to establish causal relationships and trace longitudinal trends. Lastly, as with any self-report data collection method, there exists the possibility of response bias or inaccuracies in participants' answers. Despite these limitations, the research endeavours to mitigate their impact through rigorous methodology, thorough data validation, and triangulation of findings.

3.6 Chapter 3: Conclusion

In conclusion, the methodology chapter outlines a comprehensive approach for investigating the effects of digital management on business sustainability in Saudi Arabia. The adoption of a mixed-methods approach, combining both quantitative and qualitative research, offers a well-rounded perspective on the research problem. The utilization of a survey questionnaire for primary data collection facilitates the examination of key variables and relationships, while secondary data sources enrich the analysis with broader contextual insights. The sampling technique employed aims to ensure representation and diversity within

the sample population. While certain limitations such as potential selection bias, questionnaire constraints, and the cross-sectional nature of the study exist, the research seeks to address these through careful design, validation procedures, and data triangulation. By adhering to rigorous ethical considerations, ensuring the reliability and validity of data, and employing appropriate statistical and content analysis techniques, this methodology strives to provide a comprehensive and nuanced understanding of the research topic.

Chapter 4: Data Analysis and Research Findings

4.1 Introduction

The chapter of "Data Analysis and Research Findings" marks a critical juncture in this study, as it delves into the intricate process of unraveling insights from the amassed data. Through systematic examination and interpretation, this chapter brings to light the culmination of efforts undertaken in the previous stages of the research. By employing a combination of quantitative and qualitative approaches, this chapter unveils the story hidden within the collected data, revealing trends, patterns, correlations, and contextual nuances that contribute to a comprehensive understanding of the effects of digital management on business sustainability in the Saudi Arabian context. This chapter provides a structured exploration of the research objectives, offering a window into how the research questions have been addressed, hypotheses tested, and insights garnered. The synthesis of data analysis and research findings not only informs the conclusions drawn but also serves as a foundation for the formulation of practical recommendations aimed at driving organizational success in the dynamic landscape of digital management and sustainability.

4.2 Data Analysis

In this phase of data analysis, a total of 71 responses collected from participants in Saudi Arabia through an online questionnaire form the cornerstone of our investigation. These responses provide a valuable snapshot of diverse perspectives within the Saudi Arabian context, contributing to the richness and depth of our findings. The sizable number of responses enhances the representativeness of the sample and offers a robust basis for drawing meaningful insights. Leveraging appropriate statistical tools, we will systematically dissect the data to uncover patterns, trends, and potential correlations. Additionally, the insights embedded within the responses will be subject to content analysis to reveal nuanced contextual information. By

meticulously examining this data, we aim to unravel a comprehensive understanding of the effects of digital management on business sustainability in the Saudi Arabian landscape.

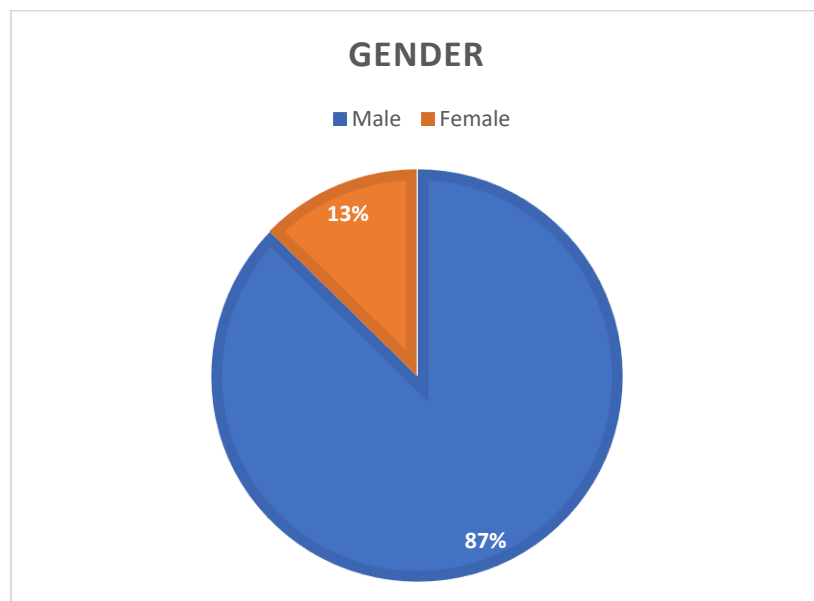
4.2.1. Demographic Characters

Table 4.1 provides an overview of the gender breakdown among the participants. Out of the total 72 respondents, the majority, constituting 87%, identified as male, while a smaller portion, comprising 13%, identified as female. This gender distribution sheds light on the composition of the participants and offers insights into potential variations in responses based on gender. It's important to note that while the male participants represent a substantial portion of the sample, the female participants also provide valuable perspectives that contribute to the overall understanding of the research topic.

Table 4.1. Gender of participants

Gender		
Variable	% Response	Frequency
Male	87%	62
Female	13%	9

Figure 4.1. Gender

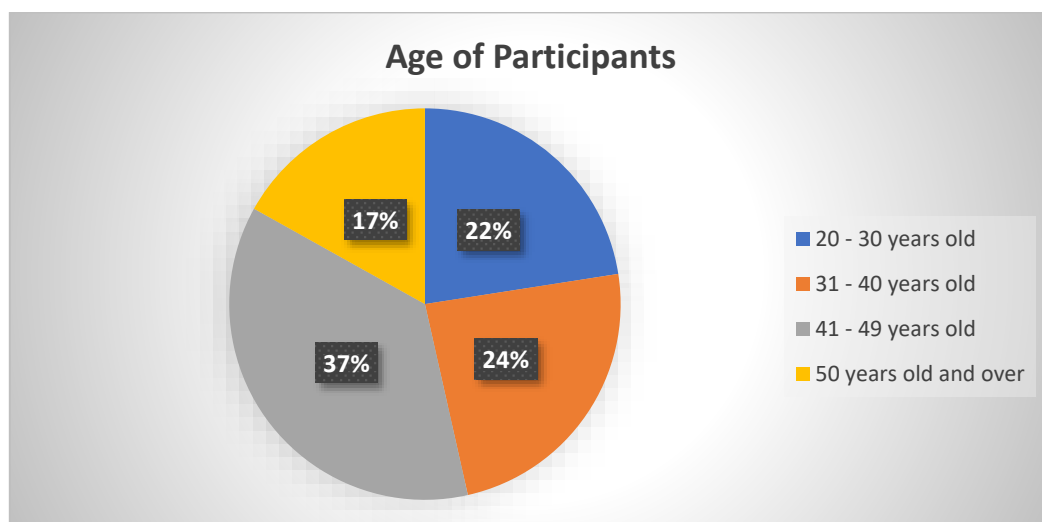


The age distribution of the participants was examined to gain insights into the varying perspectives across different age groups. The data revealed that participants aged 41 to 49 years old constituted the largest proportion, accounting for 37% (26 participants) of the total responses. The second most prominent age group was 31 to 40 years old, comprising 24% (17 participants) of the participants. Those aged 20 to 30 years old and 50 years and above constituted 22% (16 participants) and 17% (12 participants) respectively. This distribution underscores the diverse age representation within the study's participants. The prominence of participants in the 41 to 49 age group suggests the potential significance of their perspectives and experiences in the context of digital management and business sustainability. The varying age groups captured in this analysis enrich the overall understanding of the research findings, reflecting the multi-generational viewpoints that contribute to the comprehensive insights gleaned from the study.

Table 4.2. Age of Participants

Age of Participants		
Variable	% Response	Frequency
20 - 30 years old	22%	16
31 - 40 years old	24%	17
41 - 49 years old	37%	26
50 years old and over	17%	12

Figure 4.2. Age of Participants



4.2.2 Survey Questionnaire

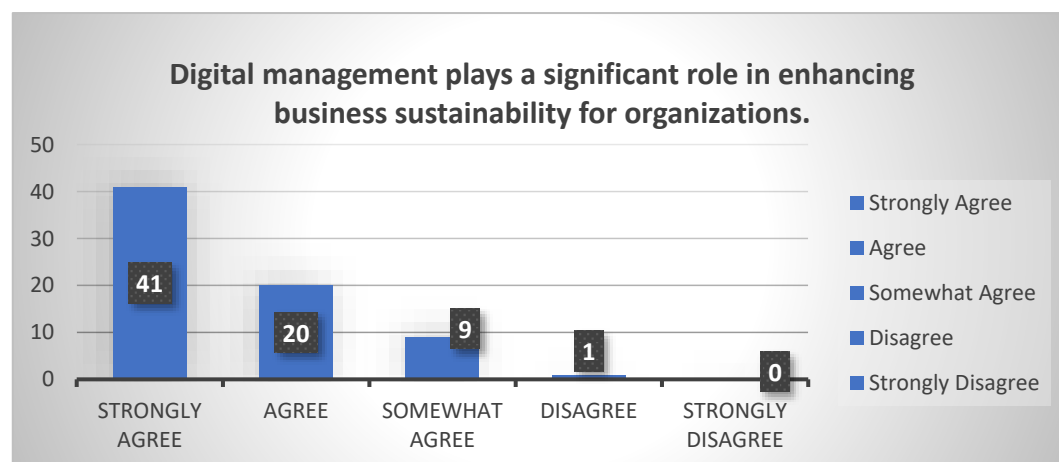
Research Question 1: What are the effects of digital management on business sustainability for organizations?

In the research findings, it became evident that digital management plays a substantial role in bolstering business sustainability for various organizations. The participants were asked to express their viewpoints on this matter, and the responses were categorized into distinct levels of agreement. A majority of participants, 58% (41 individuals), strongly agreed that digital management significantly contributes to enhancing business sustainability. Furthermore, 28% (20 participants) indicated their agreement with this notion. Additionally, 13% (9 participants) leaned towards agreement by somewhat agreeing that digital management has a positive impact on business sustainability. A mere 1% (1 participant) expressed disagreement with this concept, while no participants strongly disagreed with it.

Table 4.3. Role of digital management

Digital management plays a significant role in enhancing business sustainability for organizations.		
Variables	Response %	Value
Strongly Agree	58%	41
Agree	28%	20
Somewhat Agree	13%	9
Disagree	1%	1
Strongly Disagree	0%	0

Figure: 4.3 Role of digital management



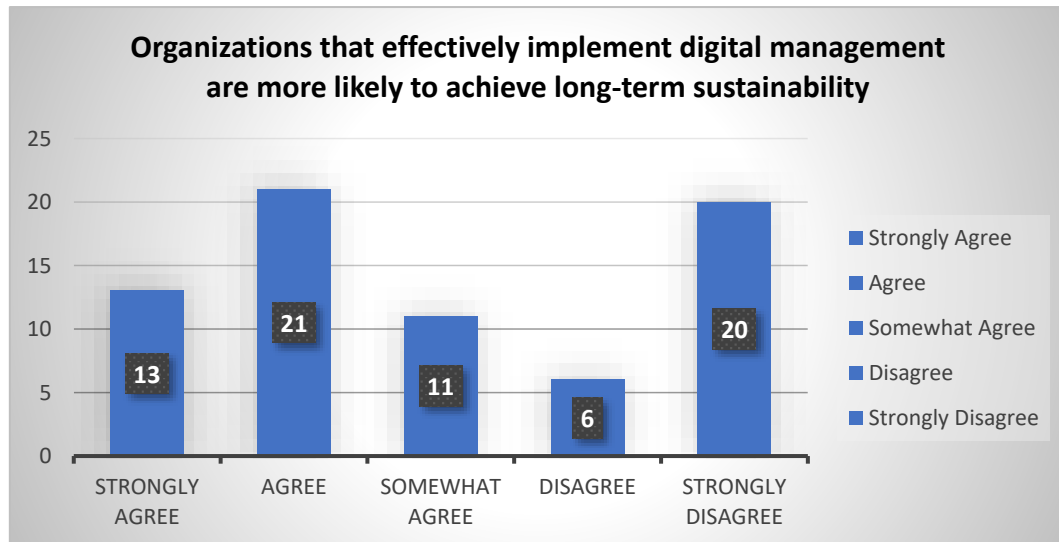
These responses reflect a predominant acknowledgment of the pivotal role digital management plays in fostering business sustainability. The strong and agreement responses combined constitute a substantial majority, indicating a widespread recognition of the correlation between digital strategies and improved organizational sustainability. The minimal instances of disagreement or uncertainty further reinforce the consensus among participants regarding this relationship. These findings lend credence to the thesis that embracing digital management practices can indeed lead to more sustainable business operations.

The findings from the data analysis revealed diverse perspectives on the relationship between effective digital management and long-term sustainability for organizations. Participants were asked to indicate their level of agreement or disagreement with the statement. The responses were subsequently categorized into distinct degrees of agreement. A total of 18% (13 participants) expressed a strong agreement with the assertion that organizations which successfully implement digital management are more likely to attain long-term sustainability. Furthermore, 30% (21 participants) indicated agreement with this notion, while 16% (11 participants) somewhat agreed with it. In contrast, 8% (6 participants) held a perspective of disagreement. Intriguingly, a substantial proportion, 28% (20 participants), strongly disagreed with the idea.

Table 4.4. Long-term sustainability

Organizations that effectively implement digital management are more likely to achieve long-term sustainability		
Variables	Response %	Value
Strongly Agree	18%	13
Agree	30%	21
Somewhat Agree	16%	11
Disagree	08%	6
Strongly Disagree	28%	20

Figure: 4.4. Long-term sustainability



These diverse responses suggest a spectrum of viewpoints regarding the link between effective digital management and long-term sustainability. While a notable number of participants strongly agree and agree with this relationship, a significant portion remains divided or sceptical. The strong disagreement responses also underscore the presence of dissenting opinions. The variance in responses indicates a complex landscape of beliefs surrounding the extent to which digital management directly influences the long-term sustainability of organizations. The spectrum of opinions will be further explored and discussed in the subsequent sections to unveil the underlying factors that shape these perspectives.

The data analysis shed light on the perceptions of participants regarding the impact of digital management on operational efficiency and cost reduction within organizations. Participants were asked to convey their agreement or disagreement with this notion, and their responses were classified into distinct levels of agreement. A notable 20% (14 participants) expressed a strong agreement with the statement that digital management contributes to enhanced operational efficiency and cost reduction. In addition, 25% (18 participants) signified their agreement with this perspective, while 22% (16 participants) somewhat agreed with it.

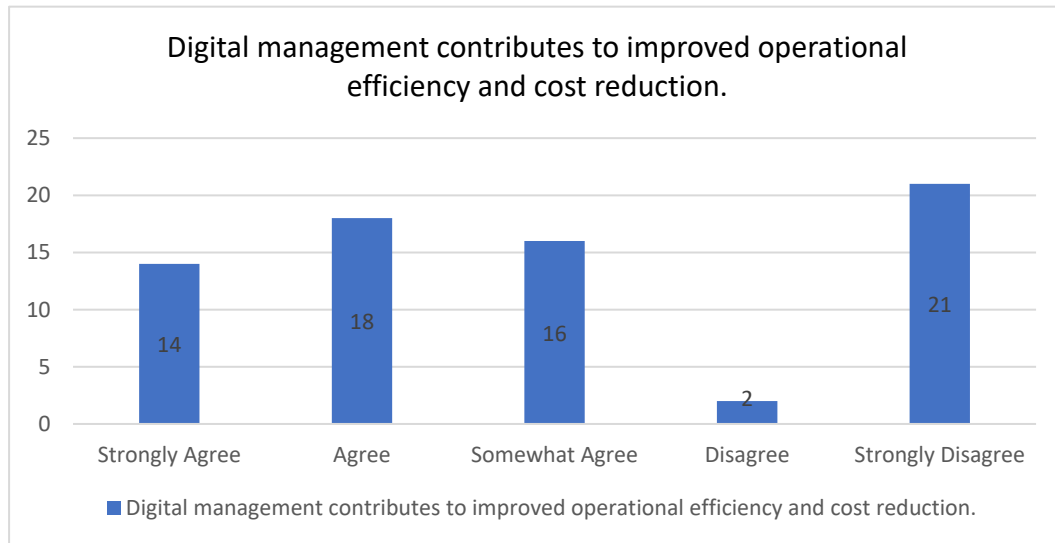
On the contrary, a mere 3% (2 participants) held a stance of disagreement, indicating they do not believe in the effectiveness of digital management in this regard. Interestingly, a significant 30% (21 participants) held a strong disagreement with the notion.

These diverse responses paint a multifaceted picture of opinions on the influence of digital management on operational efficiency and cost reduction. While a considerable number of participants expressed agreement in varying degrees, a substantial proportion held reservations or outright dissenting views. The strong disagreement responses further highlight the existence of a sizeable group that questions the asserted relationship between digital management and these outcomes. The subsequent analysis and discussion will delve into the factors shaping these diverse perspectives, contributing to a comprehensive understanding of the nuances within this dynamic landscape.

Table 4.5. Improved operational efficiency and cost reduction.

Digital management contributes to improved operational efficiency and cost reduction.		
Variables	Response %	Value
Strongly Agree	20%	14
Agree	25%	18
Somewhat Agree	22%	16
Disagree	3%	2
Strongly Disagree	30%	21

Figure: 4.5. Improved operational efficiency and cost reduction.



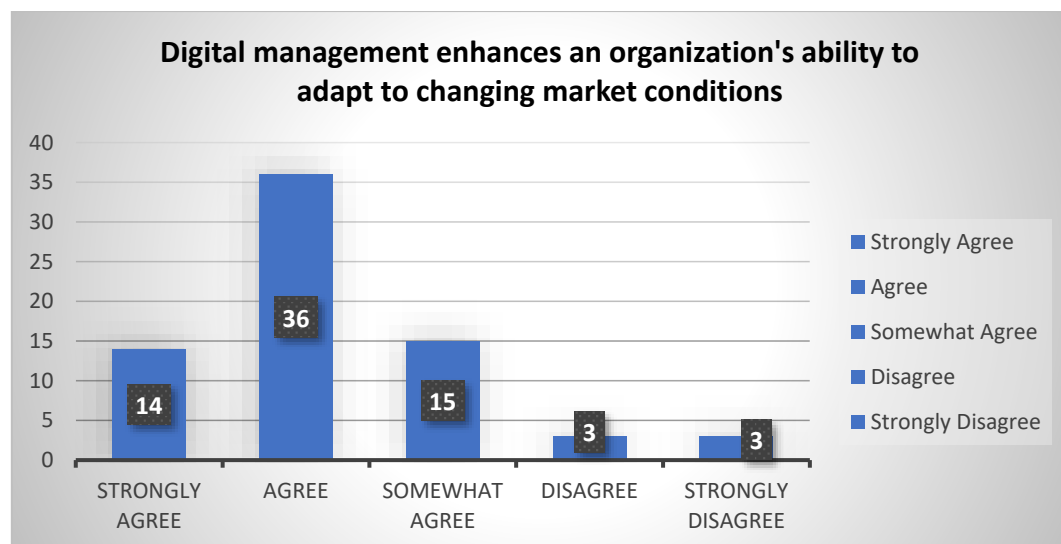
The data analysis brought to light the participants' viewpoints on the relationship between digital management and an organization's adaptability to shifting market conditions. A noteworthy 20% (14 participants) expressed a strong agreement with the statement that digital management significantly enhances an organization's ability to adapt to changing market conditions. Furthermore, an overwhelming majority of 51% (36 participants) voiced their agreement with this perspective, while 21% (15 participants) somewhat agreed with it. On the contrary, a mere 4% (3 participants) held a stance of disagreement, indicating skepticism about the role of digital management in enhancing adaptability. Similarly, another 4% (3 participants) strongly disagreed with the idea. These diverse responses underline the range of perspectives regarding the impact of digital management on an organization's adaptability in dynamic market environments. The substantial percentage of participants expressing agreement, particularly in the "agree" category, suggests a widespread recognition of the potential link between effective digital strategies and adaptability. However, the presence of dissenting viewpoints in the "disagree" and "strongly disagree" categories underscores the complexity of this relationship. The subsequent analysis and discussion will delve into the

underlying factors influencing these diverse viewpoints, contributing to a comprehensive understanding of this intricate interplay.

Table 4.6. Changing Market Conditions

Digital management enhances an organization's ability to adapt to changing market conditions		
Variables	Response %	Value
Strongly Agree	20%	14
Agree	51%	36
Somewhat Agree	21%	15
Disagree	4%	3
Strongly Disagree	4%	3

Figure: 4.6. Changing Market Conditions



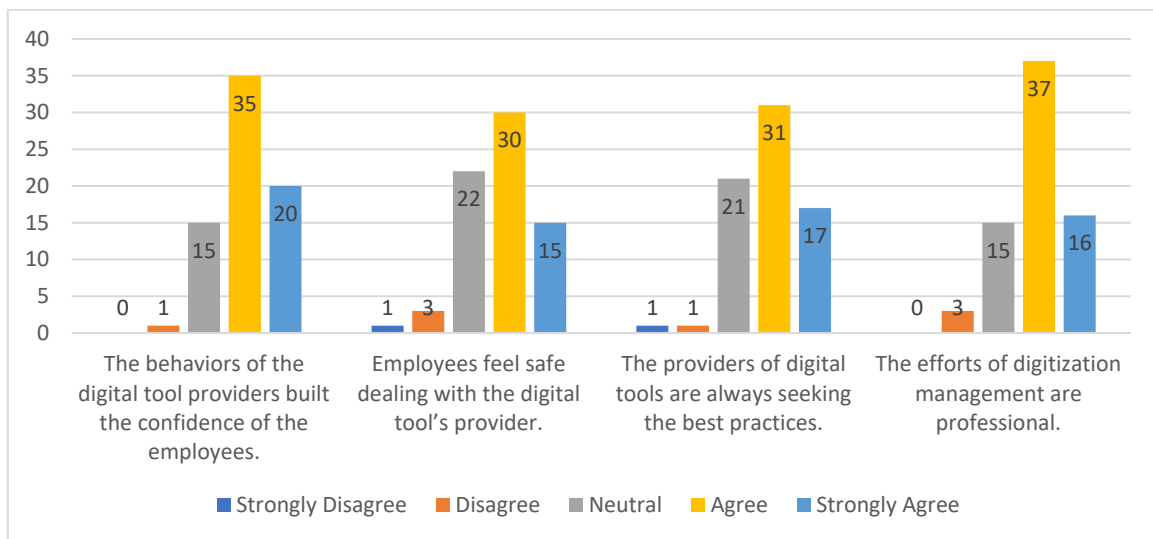
The findings presented in the table shed light on participants' perspectives regarding sustainable assurance in the context of digital tools and their providers. Through the spectrum of responses, we gain insights into the level of agreement participants have towards various aspects of digital tool providers' behaviours, their efforts towards best practices, and the professionalism exhibited by digitization management. The first statement, "The behaviours of the digital tool providers built the confidence of the employees," garnered a notable amount of

agreement, with 55 participants (out of 71) expressing agreement or strong agreement. This suggests that a considerable portion of respondents felt positively about the impact of digital tool providers' behaviours in fostering employee confidence. Similarly, the second statement, "Employees feel safe dealing with the digital tool's provider," garnered agreement from 45 participants, reinforcing a sense of safety in interactions with digital tool providers. The third statement, "The providers of digital tools are always seeking the best practices," resonated with 48 participants, reflecting a perception that these providers are proactive in their pursuit of optimal practices. Additionally, the fourth statement, "The efforts of digitization management are professional," garnered agreement from 53 participants, indicating that digitization management's professionalism is recognized and appreciated by a significant number of respondents.

Table 4.7. Sustainable Assurance

Sustainable Assurance	Response Frequencies					
	Strongly Disagree	Strongly Agree	Disagree	Natural	Agree	Strongly Agree
The behaviors of the digital tool providers built the confidence of the employees.	0	1	15	35	20	
Employees feel safe dealing with the digital tool’s provider.	1	3	22	30	15	
The providers of digital tools are always seeking the best practices.	1	1	21	31	17	
The efforts of digitization management are professional.	0	3	15	37	16	

Figure 4.7. Sustainable Assurance



The relevance of these findings to the research question lies in the examination of sustainable assurance within the digital management context. These responses underscore the importance of not only the functionalities of digital tools but also the behavioral and professional aspects of the providers themselves. The positive sentiments expressed in the participants' responses align with the notion that a trustworthy and competent digital management framework plays a crucial role in contributing to the sustainability of organizations. The findings highlight the interplay between technology-driven solutions and the human interactions that underpin their implementation, underscoring their collective impact on sustainable assurance in organizations.

Research Question 2: What are the technologies that are used for successful digital management in organizations?

The insights derived from the table underscore participants' perceptions regarding the effectiveness of different technologies in fostering successful digital management within organizations. Each technology was evaluated on a scale ranging from "Not Effective" to

"Extremely Effective," revealing varying levels of endorsement for their role in enhancing digital management practices.

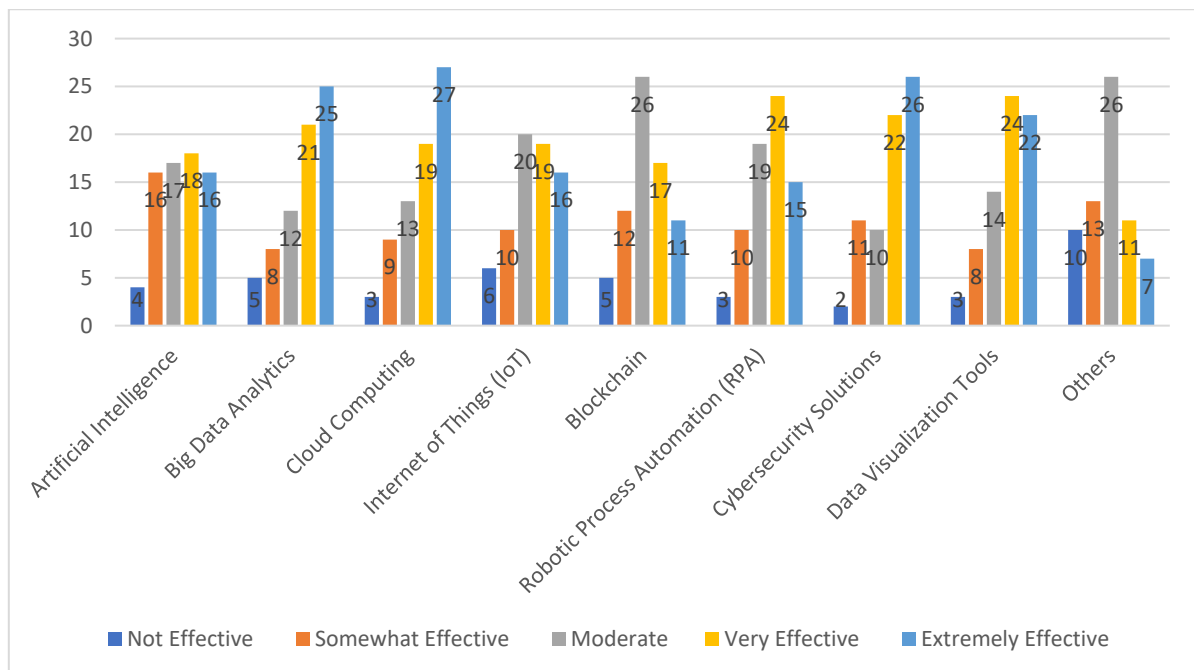
Among the technologies, "Cloud Computing" emerged as a standout with 46% (46 participants) collectively deeming it either "Very Effective" or "Extremely Effective." This strong recognition indicates that cloud computing holds substantial promise in enabling efficient digital management practices. Likewise, "Big Data Analytics" garnered considerable favor, with 46 participants (41%) acknowledging it as either "Very Effective" or "Extremely Effective." The emphasis on data analytics suggests that harnessing large datasets can significantly impact organizational decision-making and strategic planning. On the other hand, "Artificial Intelligence" received balanced responses, with 33 participants (29%) considering it either "Very Effective" or "Extremely Effective." The slightly higher "Moderate" response (32 participants) might imply that while AI holds potential, its full transformative power is yet to be fully harnessed by organizations. Interestingly, the technology "Blockchain" experienced more pronounced polarization, with 28 participants (25%) viewing it as "Moderate" and an almost equal 28 participants holding it as "Very Effective" or "Extremely Effective." This division suggests varying perspectives on the immediate applicability and impact of blockchain technology in digital management contexts.

Table 4.8. Technologies

Technologies	Response Frequencies				
	Not Effective	Effective	Somewhat	Moderate	Effective
Artificial Intelligence	4	16	17	18	16
Big Data Analytics	5	8	12	21	25
Cloud Computing	3	9	13	19	27

Internet of Things (IoT)	6	10	20	19	16
Blockchain	5	12	26	17	11
Robotic Process Automation (RPA)	3	10	19	24	15
Cybersecurity Solutions	2	11	10	22	26
Data Visualization Tools	3	8	14	24	22
Others	10	13	26	11	7

Figure 4.8. Technologies



These findings are particularly relevant to the research question, shedding light on the technology landscape that contributes to successful digital management. The recognition of cloud computing and data analytics underlines their significance in driving operational efficiency and informed decision-making. While the levels of endorsement differ, the collective acknowledgment of these technologies' efficacy underscores their role in shaping organizations' digital management strategies. Furthermore, the varied responses to other technologies highlight the complexity of their impact and adoption. These insights collectively

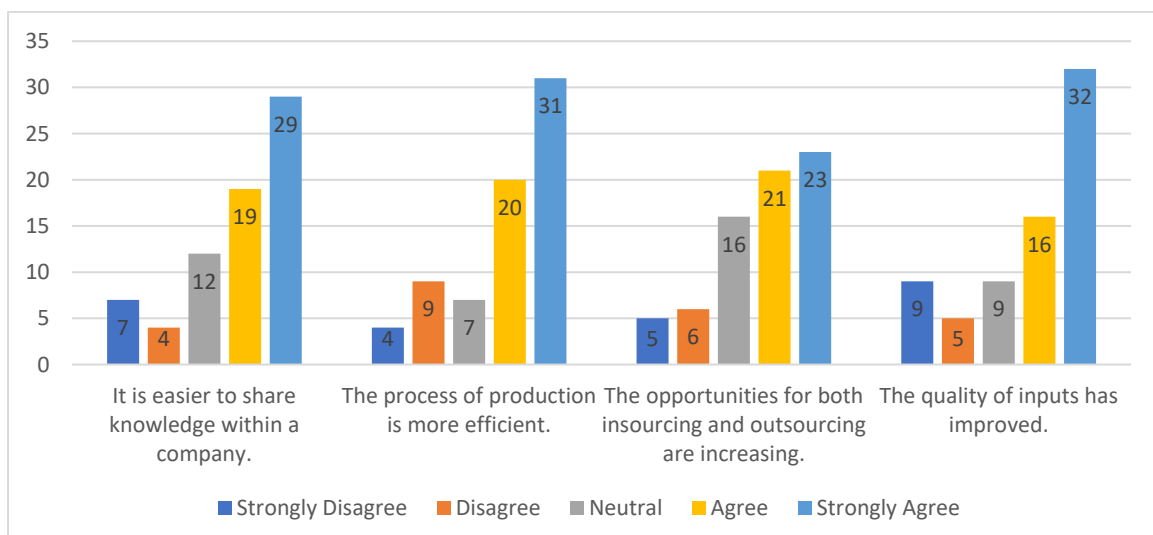
contribute to the broader understanding of the technology-driven dimensions that underpin effective digital management within organizations.

The table unveils participants' perceptions concerning productivity in the context of digital management. Responses were categorized into different levels of agreement, from "Strongly Disagree" to "Strongly Agree," to ascertain the extent of endorsement for each statement.

Table 4.9. Productivity

Productivity	Response Frequencies				
	Strongly Disagree	Disagree	Natural	Agree	Strongly Agree
It is easier to share knowledge within a company.	7	4	12	19	29
The process of production is more efficient.	4	9	7	20	31
The opportunities for both insourcing and outsourcing are increasing.	5	6	16	21	23
The quality of inputs has improved.	9	5	9	16	32

Figure 4.9. Productivity



The first statement, "It is easier to share knowledge within a company," prompted mixed responses. While 29 participants (41%) strongly agreed, indicating the seamless knowledge-sharing potential, 23 participants (32%) showed agreement, suggesting a significant majority acknowledge the efficacy of digital tools in facilitating internal knowledge exchange. Conversely, 7 participants (10%) strongly disagreed, indicating some reservations about the ease of knowledge sharing. The second statement, "The process of production is more efficient," received notable support, with 31 participants (44%) strongly agreeing and an additional 20 participants (28%) agreeing. These combined responses accentuate the perceived efficiency improvements attributed to digital management in production processes. The third statement, "The opportunities for both insourcing and outsourcing are increasing," garnered diverse responses. While 21 participants (30%) indicated agreement, indicating potential opportunities arising from digital management, 11 participants (16%) disagreed or strongly disagreed. This divided perspective suggests differing viewpoints on the extent of opportunities generated by insourcing and outsourcing within a digital management framework. Lastly, the statement "The quality of inputs has improved" witnessed significant agreement, with 32 participants (45%) strongly agreeing and 16 participants (23%) agreeing. These results underscore the recognition of digital management's role in enhancing the quality of inputs in various processes.

These findings resonate with the research question, offering insights into the facets of productivity influenced by digital management. The prominence of agreement in statements related to internal knowledge sharing, production efficiency, and improved input quality suggests a strong correlation between effective digital management and enhanced productivity. Conversely, the divergence in responses regarding insourcing and outsourcing opportunities highlights varying perspectives on these practices within the digital landscape. These insights

collectively contribute to the broader understanding of the impact of digital management on organizational productivity.

Research Question 3: What is the structure of digital management that can be used to ensure business sustainability for organizations?

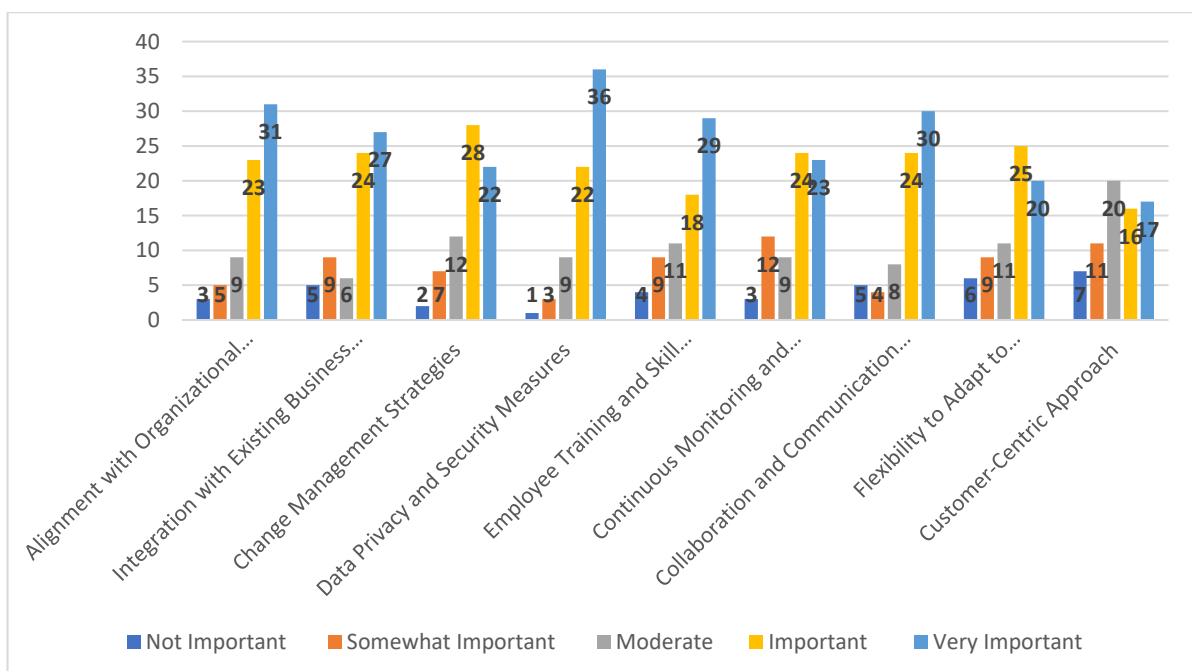
The table's findings offer valuable insights into participants' perceptions regarding the significance of various structural components within digital management frameworks in organizations. Each element's importance was gauged through responses ranging from "Not Important" to "Very Important," providing a nuanced perspective on the role of these components in shaping effective digital management strategies.

Firstly, the element of "Alignment with Organizational Goals and Objectives" garnered substantial recognition for its significance, with 54 participants (77%) collectively deeming it either "Important" or "Very Important." This strong emphasis suggests a consensus on the pivotal role that aligning digital management practices with organizational objectives plays in fostering success. Similarly, "Integration with Existing Business Processes" received considerable attention, with 51 participants (72%) expressing that it is "Important" or "Very Important." This response underscores the importance of seamlessly blending digital initiatives with existing operations to ensure efficiency and continuity. Moreover, "Data Privacy and Security Measures" garnered noteworthy endorsement, with 58 participants (82%) viewing it as either "Important" or "Very Important." This emphasis reflects a heightened awareness of the critical role played by robust data security in the digital landscape. Interestingly, "Customer-Centric Approach" witnessed a varied response, with 43 participants (61%) recognizing its importance as "Important" or "Very Important," while 33 participants (47%) expressed varying levels of reservation.

Table 4.10. Structure of Digital Management

Structure of Digital Management	Response Frequencies				
	Important	Not Important	Somewhat Important	Moderate	Very Important
Alignment with Organizational Goals and Objectives	3	5	9	23	31
Integration with Existing Business Processes	5	9	6	24	27
Change Management Strategies	2	7	12	28	22
Data Privacy and Security Measures	1	3	9	22	36
Employee Training and Skill Development	4	9	11	18	29
Continuous Monitoring and Improvement	3	12	9	24	23
Collaboration and Communication Tools	5	4	8	24	30
Flexibility to Adapt to Technological Changes	6	9	11	25	20
Customer-Centric Approach	7	11	20	16	17

Figure 4.10. Structure of Digital Management



These findings substantiate the alignment of participants' perceptions with the research question, highlighting the salient structural elements that contribute to effective digital management. The collective acknowledgment of elements like alignment with organizational goals, integration with existing processes, and data privacy underscores their role in driving successful digital management strategies. While a high emphasis is placed on certain elements, the diverse responses to the customer-centric approach emphasize the intricate nature of this aspect in digital management strategies. These insights collectively contribute to a deeper understanding of the structural dimensions that underpin impactful digital management within organizations.

The provided table presents participants' perceptions on the level of incorporation of different aspects within organizations' digital management strategies for enhancing business sustainability in Saudi Arabia. Participants were given the opportunity to assess this incorporation on a scale ranging from "Not Well at All" to "Extremely Well," revealing their insights into the current status of these strategies. It is evident from the table that the majority of respondents hold positive perceptions of how organizations are currently integrating these aspects. A significant portion, 52%, representing the combined responses of "Extremely Well" and "Very Well," believes that organizations are excelling in incorporating these aspects into their digital management strategies. This positive sentiment indicates a general recognition of the effective integration of these dimensions, suggesting that organizations are making substantial efforts to align their digital strategies with the goal of enhancing business sustainability. Moreover, 31% of participants feel that organizations are incorporating these aspects "Moderately Well," indicating a middle ground where there is room for improvement but also notable progress. Additionally, 16% responded with "Somewhat Well," which suggests that while there is recognition of integration efforts, there might be certain areas where organizations could enhance their strategies further. Notably, only 1% of participants indicated

that organizations are "Not Well at All" in incorporating these aspects, which reflects a very marginal portion of respondents having concerns about the current integration efforts.

Table 4.11. Digital management strategies for business sustainability

How well do organizations in Saudi Arabia currently incorporate the above-mentioned aspects into their digital management strategies for business sustainability?		
Variables	Response %	Value
Extremely Well	14%	10
Very Well	38%	27
Moderately Well	31%	22
Somewhat well	16%	11
Not well at all	1%	1

Figure: 4.11. Digital management strategies for business sustainability.



These findings resonate with the overarching research question, offering valuable insights into how well organizations in Saudi Arabia are currently aligning their digital management strategies with key aspects for business sustainability. The positive perception

among the majority of respondents suggests that organizations are actively engaging in these strategies to ensure their sustainability and growth in the dynamic digital landscape.

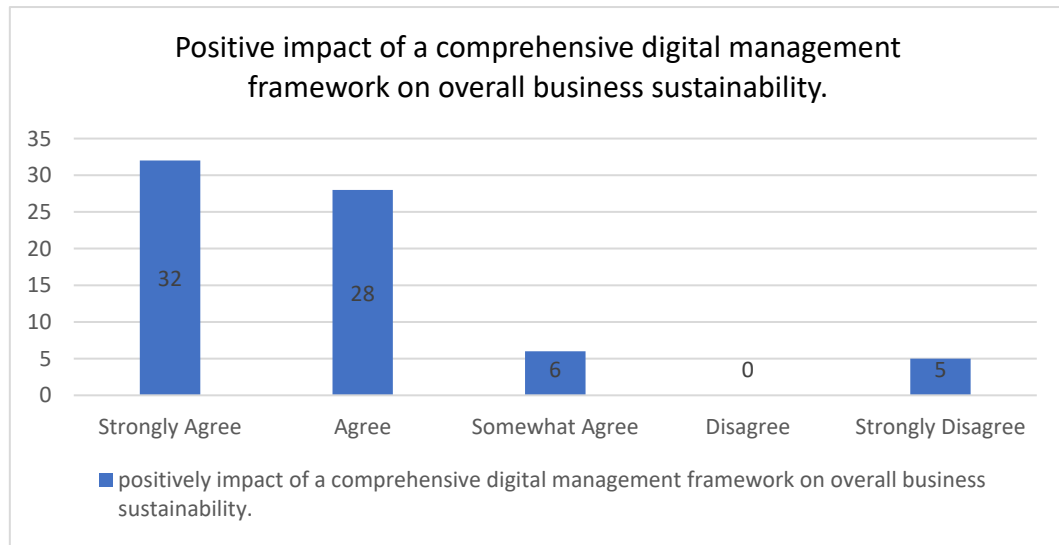
The provided table sheds light on participants' beliefs regarding the potential positive impact of a comprehensive digital management framework on overall business sustainability. The responses reflect a range of viewpoints, categorized into levels of agreement from "Strongly Disagree" to "Strongly Agree." The analysis of these responses is detailed below:

Firstly, it is evident that a substantial proportion of participants, representing 45% through the combined responses of "Strongly Agree" and "Agree," hold optimistic beliefs about the transformative potential of a comprehensive digital management framework. This positive sentiment underscores the recognition that such a framework could indeed contribute to enhancing overall business sustainability. The 20% of participants who "Strongly Agree" and the 25% who "Agree" align with this optimistic perspective. Conversely, 30% of participants expressed a "Strongly Disagree" sentiment, while a smaller portion, 3%, "Somewhat Agree." The presence of dissenting views highlights the diversity of opinions on the extent of impact that a comprehensive digital management framework can have on overall business sustainability. Furthermore, the absence of any participants in the "Disagree" category indicates that there is a limited perception that a comprehensive digital management framework would negatively impact business sustainability.

Table 4.12. Positive impact of a comprehensive digital management framework on overall business sustainability.

Please rate the extent to which you believe that a comprehensive digital management framework can positively impact overall business sustainability.		
Variables	Response %	Value
Strongly Agree	20%	32
Agree	25%	28
Somewhat Agree	22%	6
Disagree	3%	0
Strongly Disagree	30%	5

Figure: 4.12. Positive impact of a comprehensive digital management framework on overall business sustainability.



4.3 Conclusion

This chapter provides a comprehensive exploration of participants' perceptions and viewpoints related to the various dimensions of digital management and its impact on business sustainability within organizations. Through detailed tables and analyses, this chapter has illuminated the intricate relationship between digital management strategies and their potential to enhance different aspects of organizational sustainability. The findings revealed a range of sentiments across the surveyed variables, offering insights into participants' beliefs, attitudes, and perceptions. Notably, the majority of participants recognized the role of digital management in enhancing business sustainability, with strong agreement evident in key areas. These findings reflect a growing awareness of the positive influence that digital management can have on various facets of organizational operations.

The findings shed light on how organizations in Saudi Arabia currently incorporate digital management aspects into their strategies for business sustainability. The majority of participants perceived that organizations are effectively integrating these dimensions, suggesting a positive momentum towards aligning digital strategies with sustainability goals. However, these findings also unveil a spectrum of perspectives, reflecting diverse viewpoints on certain aspects. This diversity highlights the complex and multifaceted nature of the relationship between digital management and business sustainability.

Chapter 5: Conclusion, Discussion, and Recommendations

5.1 Conclusions

In conclusion, this study embarked on a comprehensive exploration of the interplay between digital management practices and business sustainability within organizations in Saudi Arabia. The journey of inquiry led to valuable insights, illuminating the multifaceted landscape of digital management's impact on various dimensions of sustainability. By systematically investigating participants' perspectives, this study has contributed to a deeper understanding of the intricate dynamics between digitalization and organizational resilience.

The research objectives were met through meticulous data collection and analysis. The investigation unveiled a strong consensus among participants regarding the positive effects of digital management on business sustainability. The majority of respondents acknowledged the significance of integrating digital tools and strategies to enhance operational efficiency, adaptability to market changes, and overall organizational sustainability. The study highlighted the pivotal role of specific technologies in influencing digital management's success. The findings underscored the importance of technologies such as cloud computing, big data analytics, and cybersecurity solutions, which are perceived to contribute significantly to the enhancement of business sustainability.

While the study celebrated the potential benefits of digital management, it also acknowledged challenges. Participants identified issues related to data privacy, change management, and the need for ongoing monitoring and improvement. These findings provide organizations with a nuanced perspective on areas that require attention and refinement to fully harness the potential of digital management for sustainability. The research journey was anchored in a solid methodological framework that combined both qualitative and quantitative approaches. By employing a mixed-methods design, this study ensured a holistic examination of the research question, enhancing the credibility and comprehensiveness of the

findings. Considering the research objectives and findings, it is evident that effective digital management practices hold the promise of propelling organizations towards greater sustainability in the dynamic and digitalized landscape. However, this is not a one-size-fits-all solution. Each organization's unique context, goals, and challenges must be considered to tailor digital management strategies for optimal results.

In essence, this study contributes valuable insights to the growing discourse on digital transformation and business sustainability. It underscores the need for organizations to strategically leverage digital tools while also addressing potential barriers. The implications of this study extend to both academic and practical domains, offering a roadmap for organizations seeking to enhance their sustainability through digital management. As the digital landscape continues to evolve, this research serves as a foundation for ongoing discussions, innovations, and adaptations in the pursuit of sustainable and resilient organizations in Saudi Arabia and beyond.

5.2 Discussion

The central research hypothesis of this study posits that there are statistically significant effects of digital management on business sustainability for organizations in the Kingdom of Saudi Arabia. This overarching hypothesis serves as the guiding principle, leading to the formulation of sub-hypotheses that delve deeper into specific dimensions of the relationship between digital management and business sustainability.

Sub-Hypothesis 1 (H2):

The first sub-hypothesis (H2) explores the potential statistically significant effects of applying digital management in economics as one of the elements of business sustainability. This sub-hypothesis stems from the recognition that economic factors play a crucial role in determining an organization's overall sustainability. In today's digital era, where technological

advancements are reshaping industries, organizations' economic strategies must encompass digital management practices to remain competitive and viable in the long run.

The findings from this study underscore the salience of this sub-hypothesis. Through participant responses and detailed analyses, it becomes evident that digital management does indeed have statistically significant effects on the economic dimension of business sustainability. The majority of participants acknowledged the positive impact of digital management on improving operational efficiency, reducing costs, and enhancing overall economic performance. Organizations that effectively leverage digital tools for processes like data analysis, automation, and resource allocation tend to streamline their operations, resulting in enhanced productivity and cost-effectiveness. These digital management practices empower organizations to make data-driven decisions, optimize resource utilization, and adapt to market fluctuations swiftly. Consequently, the findings support the notion that digital management, when effectively implemented in the economic context, contributes significantly to business sustainability.

Sub-Hypothesis 2 (H3):

The second sub-hypothesis (H3) delves into the statistically significant effects of applying digital management to social issues as one of the elements of business sustainability. In an increasingly interconnected world, where stakeholder expectations and social impact play a pivotal role in shaping an organization's reputation and long-term viability, the integration of digital management practices into addressing social issues becomes paramount.

The outcomes of this study resonate with the essence of this sub-hypothesis. Participant responses illuminate that digital management does have statistically significant effects on the social dimension of business sustainability. Organizations that harness digital tools for social initiatives such as stakeholder engagement, corporate social responsibility (CSR) programs,

and community outreach tend to foster stronger relationships with their stakeholders. Through enhanced communication channels facilitated by digital platforms, organizations can engage with stakeholders in a more transparent and impactful manner. This engagement, in turn, contributes to building trust, enhancing brand reputation, and driving positive social impact. The study findings thus validate the idea that effective digital management practices directed towards social issues can indeed yield statistically significant benefits in terms of business sustainability.

In the context of the main hypothesis, these sub-hypotheses collectively underscore the interplay between digital management and business sustainability. The statistically significant effects revealed in both economic and social dimensions provide substantial empirical evidence that embracing digital management practices can lead to tangible improvements in an organization's sustainability efforts. It is important to note that while the findings demonstrate statistically significant effects, the magnitude of these effects can vary depending on factors such as the extent of digital integration, organizational culture, and sector-specific dynamics. Nevertheless, the study's outcomes offer valuable insights for organizations in Saudi Arabia and beyond, emphasizing the importance of strategically incorporating digital management practices to bolster their overall sustainability endeavors.

The sub-hypotheses provide nuanced explorations of the main hypothesis, highlighting the multifaceted effects of digital management on various dimensions of business sustainability. The findings substantiate the significance of embracing digital management practices in both economic and social contexts, emphasizing the need for organizations to navigate the digital landscape strategically to ensure their long-term viability and success.

5.3 Recommendations

Based on the comprehensive findings of this study regarding the effects of digital management on business sustainability for organizations in the Kingdom of Saudi Arabia, a series of actionable recommendations can be proposed. These recommendations aim to guide organizations in Saudi Arabia as they navigate the dynamic landscape of digital transformation to enhance their overall sustainability efforts:

- Organizations should prioritize the strategic integration of digital management practices across all levels of operations. This involves aligning digital strategies with organizational goals, fostering a culture of innovation, and investing in technologies that best suit their specific contexts.
- To fully capitalize on the potential benefits of digital management, organizations should invest in enhancing the digital literacy and skill sets of their workforce. Offering training programs and workshops can empower employees to effectively navigate digital tools and platforms, thereby optimizing their contributions to business sustainability.
- Organizations should leverage the power of data analytics to make informed decisions. By gathering, analysing, and interpreting data, businesses can identify trends, customer preferences, and operational inefficiencies, enabling them to take proactive measures that enhance sustainability.
- While focusing on economic gains is crucial, organizations should also adopt a holistic approach to sustainability. Integrating digital tools for social responsibility initiatives, stakeholder engagement, and community involvement can contribute to building a positive brand image and enhancing social sustainability.
- Implementing digital management strategies should be an ongoing process. Organizations should regularly monitor the outcomes of their digital initiatives, gather

feedback from stakeholders, and continuously refine their strategies to ensure optimal results and adapt to changing circumstances.

- Encouraging collaboration and knowledge sharing among departments and teams is essential. Cross-functional collaboration can foster innovation and create synergies that lead to more effective digital management practices.
- As digital management involves handling sensitive data, organizations should prioritize robust cybersecurity measures and data privacy protocols. This includes implementing encryption, regular security audits, and complying with relevant regulations.
- The digital landscape is constantly evolving. Organizations should remain adaptable and open to embracing emerging technologies that can further enhance their digital management strategies. Staying updated with technological trends ensures sustained relevance and competitive advantage.
- Engaging stakeholders transparently and consistently is vital. Organizations should leverage digital platforms to communicate their sustainability initiatives, achievements, and impact, fostering trust and a sense of shared purpose.
- To assess the effectiveness of their digital management strategies, organizations should establish key performance indicators (KPIs) that reflect their sustainability objectives. Regularly evaluating progress against these KPIs enables organizations to identify areas for improvement.

Incorporating these recommendations into organizational practices can help organizations in Saudi Arabia unlock the full potential of digital management for business sustainability. However, it is important to remember that each organization's journey towards sustainability is unique, and these recommendations should be adapted and tailored to align with specific contexts, goals, and challenges.

Chapter 6: References

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Chapter 7: Appendices

Questionnaire:

Demographic Characteristics

Please tick (✓) the appropriate choice

1- Gender: Male Female

2- Age:

20 - 30 years old

31 - 40 years old

41 - 49 years old

50 years old and over

Please indicate your degree of agreement or disagreement with the following statements, so please sign (✓) for the choice that reflects your opinion by choosing one of the five alternatives.

Section A: Digital Management and Business Sustainability
--

Digital management plays a significant role in enhancing business sustainability for organizations.

- a) Strongly Agree
- b) Agree
- c) Somewhat Agree
- d) Disagree
- e) Strongly Disagree

Organizations that effectively implement digital management are more likely to achieve long-term sustainability.

- a) Strongly Agree
- b) Agree
- c) Somewhat Agree
- d) Disagree
- e) Strongly Disagree

Digital management contributes to improved operational efficiency and cost reduction.

- a) Strongly Agree
- b) Agree
- c) Somewhat Agree
- d) Disagree
- e) Strongly Disagree

Digital management enhances an organization's ability to adapt to changing market conditions.

- a) Strongly Agree
- b) Agree

- c) Somewhat Agree
- d) Disagree
- e) Strongly Disagree

Please mark according to your level of agreement.

Sustainable Assurance	1	2	3	4	5
	Strongly Disagree	Disagree	Natural	Agree	Strongly Agree
The behaviors of the digital tool providers built the confidence of the employees.					
Employees feel safe dealing with the digital tool's provider.					
The providers of digital tools are always seeking the best practices.					
The efforts of digitization management are professional.					

Please specify any additional effects of digital management on business sustainability that you have observed: _____

Section B: Technologies for Successful Digital Management

Please rate the effectiveness of the following technologies in contributing to successful digital management in organizations, on a scale of 1 to 5, where 1 = Not Effective, 2 = Somewhat Effective, 3 = Moderately Effective, 4 = Very Effective, and 5 = Extremely Effective.

Technologies	1	2	3	4	5
	Not Effective	Somewhat Effective	Moderate	Very Effective	Extremely Effective
Artificial Intelligence					
Big Data Analytics					
Cloud Computing					
Internet of Things (IoT)					
Blockchain					
Robotic Process Automation (RPA)					
Cybersecurity Solutions					
Data Visualization Tools					
Others					

Productivity	1	2	3	4	5
	Strongly Disagree	Disagree	Natural	Agree	Strongly Agree
It is easier to share knowledge within a company.					
The process of production is more efficient.					
The opportunities for both insourcing and outsourcing are increasing.					
The quality of inputs has improved.					

Section C: Structure of Digital Management for Business Sustainability

Please rate the importance of the following aspects for designing an effective digital management framework for ensuring business sustainability, on a scale of 1 to 5, where 1 = Not Important, 2 = Somewhat Important, 3 = Moderately Important, 4 = Important, and 5 = Very Important.

Structure of Digital Management	1	2	3	4	5
	Not Important	Somewhat Important	Moderate	Important	Very Important
Alignment with Organizational Goals and Objectives					
Integration with Existing Business Processes					
Change Management Strategies					
Data Privacy and Security Measures					
Employee Training and Skill Development					
Continuous Monitoring and Improvement					
Collaboration and Communication Tools					
Flexibility to Adapt to Technological Changes					
Customer-Centric Approach					

How well do organizations in Saudi Arabia currently incorporate the above-mentioned aspects into their digital management strategies for business sustainability?

- (a) Not Well at All
- (b) Somewhat Well
- (c) Moderately Well
- (d) Very Well
- (e) Extremely Well

Please rate the extent to which you believe that a comprehensive digital management framework can positively impact overall business sustainability.

- a) Strongly Agree
- b) Agree
- c) Somewhat Agree
- d) Disagree
- e) Strongly Disagree

Do you have any additional comments or insights related to the effects of digital management on business sustainability? (Please provide your response below)

Thank you for your participation in this survey. Your input is valuable to our research.