



**“Impact of Digitalization on Entrepreneurship Innovation in Saudi Arabia”**

**By: Abdullah Omar Shameya**

**aoshameya@gmail.com**



### ❖ Abstract

This thesis explores the transformative role of digitalization in shaping entrepreneurship innovation within the Saudi Arabian context. Amidst the Kingdom's ambitious Vision 2030 reform plan, digitalization emerges as a pivotal force in diversifying the economy away from oil dependence and fostering a vibrant entrepreneurial ecosystem. Through a mixed-methods research approach, combining quantitative surveys of Saudi entrepreneurs with qualitative interviews, this study investigates the multifaceted impacts of digital technologies on startup innovation, market entry strategies, and business model evolution. Key findings highlight that digitalization has significantly lowered barriers to entry for new ventures, democratized access to global markets, and facilitated an unprecedented flow of information and resources. Moreover, the study reveals that government-led digital infrastructure investments and regulatory reforms have catalyzed a surge in tech-driven startups, particularly in fintech, e-commerce, and digital health sectors. However, challenges such as digital skill gaps, cybersecurity concerns, and uneven digital adoption rates across regions pose hurdles to maximizing digitalization's potential benefits. The thesis also delves into the role of digital platforms in enhancing entrepreneurial networking and collaboration, both locally and globally. Through case studies of successful Saudi startups, it is demonstrated how leveraging digital technologies for innovation has not only enabled scalability and competitiveness but also contributed to societal challenges such as youth unemployment and women's economic empowerment.

**Keywords:** Digitalization, Entrepreneurship Innovation, Entrepreneurs, Government Incentives, Vision 2030, Saudi Arabia.

### ❖ الملخص

تستكشف هذه الأطروحة الدور التحويلي للرقمنة في تشكيل ابتكارات ريادة الأعمال في سياق المملكة العربية السعودية. وفي خضم خطة الإصلاح الطموحة لرؤية المملكة 2030، تبرز التحول الرقمي كقوة محورية في تنويع الاقتصاد بعيداً عن الاعتماد على النفط وتعزيز نظام بيئي حيوي لريادة الأعمال. من خلال نهج بحثي متعدد الأساليب، يجمع بين الدراسات الاستقصائية الكمية لرواد الأعمال السعوديين والمقابلات النوعية، تبحث هذه الدراسة في التأثيرات المتعددة الأوجه للتقنيات الرقمية على ابتكار الشركات الناشئة، واستراتيجيات دخول السوق، وتطور نموذج الأعمال. وتسلط النتائج الرئيسية الضوء على أن التحول الرقمي أدى إلى خفض كبير للحواجز التي تحول دون دخول المشاريع الجديدة، وإضفاء الطابع الديمقراطي على الوصول إلى الأسواق العالمية، وتسهيل التدفق غير المسبوق للمعلومات والموارد. علاوة على ذلك، تكشف الدراسة أن استثمارات البنية التحتية الرقمية التي تقودها الحكومة والإصلاحات التنظيمية حفزت زيادة في الشركات الناشئة التي تعتمد على التكنولوجيا، وخاصة في قطاعات التكنولوجيا المالية والتجارة الإلكترونية والصحة الرقمية. ومع ذلك، فإن التحديات مثل الفجوات في المهارات الرقمية، والمخاوف المتعلقة بالأمن السيبراني، ومعدلات التبني الرقمي غير المتساوية عبر المناطق، تشكل عقبات أمام تعظيم الفوائد المحتملة للتحول الرقمي. وتتناول الأطروحة أيضاً دور المنصات الرقمية في تعزيز التواصل والتعاون في مجال ريادة الأعمال، محلياً وعالمياً. ومن خلال دراسات الحالة للشركات الناشئة السعودية الناجحة، يتضح كيف أن الاستفادة من التقنيات الرقمية للابتكار لم تمكن من التوسع والقدرة التنافسية فحسب، بل ساهمت أيضاً في التحديات المجتمعية مثل بطالة الشباب والتمكين الاقتصادي للمرأة.

**الكلمات المفتاحية:** الرقمنة، الابتكار في ريادة الأعمال، رواد الأعمال، الحوافز الحكومية، رؤية 2030، المملكة العربية السعودية.

### ❖ Introduction

Digitization has established a novel platform for entrepreneurial engagements. The entrepreneurial process has been significantly transformed by several factors such as e-commerce, virtual B2Bs, resource bundling, opportunity identification, and business positioning (Jauck, 2019). The Saudi Arabia 2030 vision aims to diversify the economy and prioritise innovation and entrepreneurship in order to shift from a natural resource-based economy to a knowledge-based economy. The vision may be realized by leveraging human resources and creating opportunities through a boost in the workforce's contribution to output (Mahmud, 2020).

Digitalization is a powerful and transformative influence that is changing economies and sectors on a global scale, and Saudi Arabia is also experiencing this change. Recently, the Kingdom has undertaken a bold initiative to broaden its economic base, decrease its reliance on oil, and cultivate a flourishing business environment. The adoption of digital technologies is crucial in driving the change, since they serve as catalysts for innovation and entrepreneurship in the country (Sarabdeen & Alofaysan, 2023).

Digital entrepreneurship is being pushed by both public and private sectors as a way to diversify regional economies, create more jobs, and encourage innovation. In light of the impending depletion of oil supplies, the current priority is to establish Saudi Arabia as a leading center for innovation and digital entrepreneurship on a worldwide scale. Accordingly, digital entrepreneurship has recently been put into place in Saudi Arabia with the goals of fostering new company formation, increasing competitiveness, and motivating the subsequent generation of entrepreneurs (Aloulou & Al-Othman, 2021).

### ❖ Problem Statement

The influence of digital transformation on business strategy is a substantial and dynamic field of research. The objective is to identify and highlight the main factors that drive the growth of strategic business management, considering the latest advancements in digital transformation. Companies must develop a comprehensive digital strategy framework to effectively deal with the disruptive nature of this trend and to attain operational excellence. The advent of digital transformation has significantly influenced the functioning and strategic direction of businesses, facilitating the enhancement of operational effectiveness, improvement of client experiences, and the development of novel business models and sources of revenue. Businesses must adapt to the changes brought about by digital transformation in order to maintain competitiveness. The digital transformation has had a profound effect on various aspects of business, including models, opportunities, and challenges. It has significantly altered traditional business models and has the potential to completely transform industries, disrupt established business models, and generate new avenues for growth and achievement. Success factors in digital transformation, especially in the context of information technology companies, play a vital role in enabling organisations to sustain their competitiveness.

### ❖ Study Hypotheses

H1: The development and expansion of digital infrastructure in Saudi Arabia positively correlate with an increase in entrepreneurial innovation, enabling startups to access broader markets and leverage advanced technologies more efficiently.

H2: A supportive regulatory framework for digital businesses significantly enhances the growth and innovation capacity of entrepreneurs in Saudi Arabia, by reducing barriers to entry and fostering a conducive environment for digital ventures.

H3: The level of digital literacy and the availability of digital entrepreneurship education among the Saudi population positively influence the rate and quality of entrepreneurship innovation, by equipping potential entrepreneurs with the necessary skills and knowledge to innovate and compete in the digital economy.

H4: The availability and accessibility of digital financial services (such as online banking, mobile fintech solutions) are critical enablers of entrepreneurship innovation in Saudi Arabia, by easing financial transactions, reducing costs, and increasing the efficiency of capital allocation.

H5: Cultural attitudes towards digitalization and entrepreneurship in Saudi Arabia significantly impact the willingness of individuals to engage in entrepreneurial activities, with more positive attitudes leading to a higher propensity for innovation and startup creation.

H6: Government-led initiatives and support for digitalization, as outlined in Vision 2030, directly contribute to an increase in entrepreneurial activities and innovation, by providing resources, guidance, and a vision that aligns public and private sector efforts towards digital entrepreneurship.

H7: The rate of technology adoption among businesses in Saudi Arabia is a critical determinant of entrepreneurship innovation, with higher adoption rates facilitating more innovative business models, products, and services in the digital domain.

### ❖ Study Objectives

1. To evaluate the level and scope of digitalization within the Saudi Arabian entrepreneurial ecosystem, including infrastructure, technology adoption rates, and digital literacy among entrepreneurs.
2. To investigate how digital technologies influence the innovation processes within startups and established businesses, including product development, business model innovation, and market entry strategies.
3. To analyze the impact of government-led initiatives, such as those outlined in Vision 2030, on fostering a conducive environment for digital entrepreneurship and innovation, including regulatory frameworks, financial incentives, and support programs.
4. To identify the main obstacles that entrepreneurs face in leveraging digital technologies for innovation, such as access to capital, digital skills gaps, regulatory hurdles, and cultural attitudes towards entrepreneurship.
5. To assess the role of digital financial services, including fintech solutions, in supporting entrepreneurship innovation by facilitating access to finance, streamlining payment processes, and enabling new business models.
6. To determine the extent to which digital entrepreneurship is contributing to the diversification of the Saudi economy away from oil dependency, in line with the objectives of Vision 2030.
7. To examine the broader societal impacts of digital entrepreneurship in Saudi Arabia, including job creation, social inclusion, and the empowerment of underrepresented groups such as women and youth.
8. To offer targeted recommendations for policymakers, educators, and business leaders to further enhance the digital entrepreneurial ecosystem in Saudi Arabia, fostering innovation and economic growth.

### ❖ Study Importance

The rationale behind this thesis is multi-faceted, grounded in the significant role digitalization plays in modern economies and the unique position of Saudi Arabia in the global economic arena. Firstly, the digital revolution has democratized access to information, disrupted traditional industries, and spawned new markets, making it imperative to understand its implications on entrepreneurship. In the context of Saudi Arabia, a country known for its rapid adoption of digital technologies and substantial investments in digital infrastructure, examining the impact of digitalization on entrepreneurship offers insights into the nation's evolving economic fabric.

Secondly, the Saudi government's proactive approach towards digitalization, highlighted by initiatives such as the National Digital Transformation Unit and the Saudi Data and Artificial Intelligence Authority (SDAIA), underscores the country's commitment to harnessing digital technologies for economic growth. This thesis seeks to evaluate the effectiveness of these initiatives in stimulating entrepreneurial innovation and to identify the challenges and opportunities that digital entrepreneurs face in this burgeoning ecosystem.

Furthermore, with Saudi Arabia's Vision 2030 placing a strong emphasis on entrepreneurship as a key driver for economic diversification and job creation, understanding how digitalization facilitates or impedes this goal is crucial. This research aims to contribute to the ongoing discourse on digital entrepreneurship, offering empirical evidence and insights specific to the Saudi context.

Lastly, this study is motivated by the gap in existing literature on the intersection of digitalization and entrepreneurship within the Middle East, particularly in the context of Saudi Arabia's unique socio-economic landscape. By focusing on this underexplored area, the thesis aims to add valuable knowledge to the academic field and provide policy recommendations to support the Kingdom's digital entrepreneurial ecosystem.

### ❖ Limitations of the Study

- Access to proprietary or sensitive business data may be limited, potentially affecting the depth of case studies or the granularity of analysis.
- The digital and entrepreneurial landscapes are highly dynamic, and new developments could emerge during the research, which may not be fully captured in the thesis.
- Interpretations of interviews and case studies may introduce subjectivity, although this will be mitigated through methodical analysis and cross-validation of sources.
- The findings specific to Saudi Arabia's context may not be fully applicable to other countries or regions due to cultural, economic, and regulatory differences.
- Given the vast array of digital technologies, the research may not cover all technologies in depth but will focus on those most relevant to entrepreneurship and innovation within the selected sectors.
- Quantifying the direct impact of digitalization on entrepreneurship innovation can be challenging due to the multifaceted and indirect ways in which digital technologies influence businesses.

### ❖ Terminology of Study

- Digitalization: When companies embrace digital technologies to revamp their services, operations, and models, they are engaging in digitalization. This entails transforming information into a digital format and implementing these changes. It includes the pervasiveness of digital technology and their impact on daily life, which in turn alters the way companies function and provide value to consumers. Digitalization, according to this concept, boosts efficiency, creates new market opportunities, and encourages innovation and entrepreneurship by making previously impossible things possible.
- Entrepreneurship: When people take financial risks to start a firm or businesses with the expectation of making a profit, they are engaging in entrepreneurial activity. Startups are tiny businesses that offer a product, process, or service for sale or rental. The process of planning, establishing, and maintaining a new firm is part of this. This study takes a digital perspective on entrepreneurship, looking specifically at the ways in which digitalization affects entrepreneurial endeavors in Saudi Arabia and the possibilities and threats they face.
- Innovation: Innovation is the process of transforming an idea or invention into a product or service that generates value or for which consumers are willing to pay. It encompasses all processes by which new ideas are generated and converted into useful products, and it involves the deliberate application of information, imagination, and initiative to derive greater or different values from resources. In the context of this thesis, innovation is specifically associated with digital technologies and the ability of entrepreneurs to create new business models, products, and services.
- Digital Entrepreneurship: A subset of entrepreneurship known as "digital entrepreneurship" seeks to build new companies and revamp old ones by making use of the internet and other digital media to their fullest potential. It entails conducting business via digital mediums, be it the sale of goods or the provision of

services. In light of Saudi Arabia's digital transformation efforts under Vision 2030, this thesis investigates digital entrepreneurship as a critical factor in the country's economic development and innovation.

- Vision 2030: Saudi Arabia's Vision 2030 is a strategic framework that aims to diversify its economy, reduce its reliance on energy, and strengthen public service sectors, including health, education, infrastructure, recreation, and tourism. It encompasses objectives such as the implementation of significant economic initiatives and the enhancement of non-oil revenue. This thesis examines the alignment and support of these objectives with digitalization and entrepreneurship innovation, using Vision 2030 as a backdrop.
- Ecosystem: An ecosystem, as it pertains to entrepreneurship, is a web of interdependent entities that impact the birth, development, and maintenance of new businesses and initiatives. These entities include entrepreneurs, corporations, investors, governmental bodies, and educational institutions. This thesis focusses on the digital entrepreneurial ecosystem in Saudi Arabia and examines how different parts of it either help or hurt the growth of digital entrepreneurship.

### ❖ Literature Review

#### 1. Aspects of Digital Transformation

##### 1.1. Local Content Development

The creation of locally relevant content is an essential part of the digital transformation process, especially for developing nations. The term "local content development" describes the process of making and improving digital material that is specific to and useful for a certain geographic area. The expansion of local content has the potential to greatly affect economic growth by opening up new avenues for individuals and enterprises to engage in the digital economy. Underprivileged communities can gain access to digital services and information through local content generation, which in turn helps to close the digital divide.

Research has shown that local content development can have a positive impact on economic growth, particularly in emerging economies. For example, a study conducted in Nigeria found that the development of local content in the ICT sector had a positive impact on economic growth, job creation, and innovation. Similarly, a study conducted in Kenya found that the development of local content in the mobile phone industry had a positive impact on economic growth and job creation.

But there are obstacles to local content generation as well, including a lack of infrastructure, funds, and resources. Investment in and support for local content development by governments and enterprises is crucial for overcoming these problems.

To sum up, digital transformation isn't complete without local content production, especially in developing nations. Innovation, job creation, and economic growth can all benefit from the development of local content. While there are many advantages to creating local content, there are also some obstacles; therefore, it is critical for governments and corporations to promote and invest in local content creation.

##### 1.2. Economic Growth

The advent of digital transformation has shaken up economies and companies all across the globe. Productivity, efficiency, and innovation have all seen significant boosts thanks to digital technology's pervasiveness in many industries. Some important conclusions drawn from research on the topic of digital transformation and GDP growth are as follows:

- Productivity and efficiency: Improved data management, process automation, and operational efficiency have all resulted from digital transformation, which has helped firms streamline their operations.
- Innovation and collaboration: Businesses can stay competitive and adapt to changing customer expectations with the use of digital tools and platforms that empower employees to communicate more efficiently, exchange ideas, and cultivate an innovation culture.
- New business models: The advent of digital transformation has facilitated the creation of novel products and services that were previously unattainable or unfeasible, hence enabling organisations to access untapped markets and customer segments.
- Competitive advantage: Companies that adopt digital transformation can distinguish themselves from rivals by providing distinct client experiences, optimizing operations, and developing inventive solutions.

Nevertheless, achieving the effective execution of digital transformation necessitates a well-established strategy and transformative modifications pertaining to strategy, leadership, and organisational culture. It is necessary for governments and enterprises to evaluate and tackle the specific elements that have an impact, in order to implement a more comprehensive digital strategy framework that will lead to improved operational performance and contribute to economic expansion.

Ultimately, digital transformation has a substantial influence on economic expansion by enhancing productivity and effectiveness, promoting creativity and cooperation, facilitating the creation of novel business models, and granting a competitive edge to organisations who adopt it. Nevertheless, the effective execution of digital transformation necessitates a solidly established plan and transformative modifications pertaining to strategy, leadership, and organisational culture.

### 1.3. Foreign Direct Investment (FDI)

Foreign direct investment (FDI) is a crucial component of digital transformation, as it entails the transfer of financial resources from one organization to another, frequently across international boundaries, in order to obtain ownership stakes in other enterprises or initiatives. Foreign direct investment (FDI) can have a pivotal impact on the process of digital transformation by offering firms the essential resources and specialized knowledge to effectively launch and expand their digital efforts.

Key findings from the literature on the relationship between digital transformation and FDI include:

- Enhanced operational efficiency and productivity: Foreign direct investment (FDI) can assist companies in streamlining their operations, automating processes, and improving data management through the use of digital technology.
- Innovation and collaboration: FDI can bring together different companies and countries, fostering innovation and collaboration in the development and adoption of digital technologies.
- Innovative business models: Foreign direct investment (FDI) opens doors to new markets and consumer segments by funding the creation of products and services that were previously unimaginable or unfeasible.
- Competitive advantage: Companies that receive FDI can gain a competitive advantage by adopting cutting-edge digital technologies and implementing innovative business models.

However, FDI can also face challenges, such as limited resources, lack of infrastructure, and limited access to funding. To overcome these challenges, governments and businesses must invest in the development of local content and provide support to local content developers.

In conclusion, FDI is a critical aspect of digital transformation, as it provides businesses with the necessary resources and expertise to implement and scale their digital initiatives. However, the successful implementation of digital transformation requires a well-founded strategy and transformational changes related to strategy, leadership, and organizational culture.

#### 1.4. Investment Impact Debates

Some of the environmental and social welfare concerns associated with foreign direct investment (FDI) in the context of digital transformation include:

- **Environmental Impact:** FDI may lead to the transfer of "cleaner" technologies, but it can also result in increased environmental costs, particularly in natural resource sectors. The external environmental costs of FDI in these sectors tend to be higher, and greater scrutiny of investment policy, incentives, and regulation is needed to address these concerns.
- **Long-Term Social and Environmental Impacts:** Foreign direct investment (FDI) may have beneficial or bad impacts on the host economy's ecosystem. The negative environmental effects of foreign direct investment (FDI) are explained by the pollution haven hypothesis (PHH), whereas the positive effects are understood by the pollution halo effect hypothesis (PHEH). Foreign direct investment (FDI) and its effects on sustainable environments, especially in developing nations, warrant additional research.
- **Social Welfare and Innovation:** Inward FDI may impact local firm innovation, and concerns exist regarding the potential effects on local businesses, particularly in the context of digital transformation. While FDI can bring superior technology to host countries, its impact on local innovation and social welfare is a subject of debate.
- **Digitalization and Social Impact:** It is intriguing to consider how the business climate and digital social media marketing tactics affect foreign direct investment (FDI) flows. A lot of people are worried about and researching the effects of the rapid growth of digital technology on SMEs, society, and the environment.

These concerns emphasize the necessity of acquiring a thorough comprehension of the environmental and social consequences of foreign direct investment (FDI) in the context of digital transformation. It also underscores the significance of formulating policies and strategies to mitigate potential adverse effects while maximizing the advantages.

## 2. Benefits and Challenges of Investing in Local Production Facilities

### 2.1. Benefits

Investing in local production facilities can offer several benefits in the context of digital transformation:

- **Reduced production costs:** Local production can help businesses reduce production costs by minimizing transportation and logistics expenses, making their products more competitive in the market.
- **Faster response times:** Local production facilities can enable businesses to respond more quickly to customer demands and market trends, allowing them to adapt and innovate more effectively.
- **A more personalized experience:** When companies manufacture their goods close to where their target consumers live, they are better able to cater to their wants and requirements, which in turn boosts client satisfaction and loyalty.
- **Job creation and local economic development:** Investing in local production facilities can create jobs and contribute to the overall economic development of the local community, fostering a more sustainable and resilient economy.
- **Reduced environmental impact:** Minimizing transportation distances and encouraging sustainable supply chain practices through local production can effectively reduce the environmental impact of corporate operations.

### 2.2. Challenges

Despite the potential benefits, investing in local production facilities can also present several challenges in the context of digital transformation:

- Limited market size: In some cases, the local market may be too small to support a dedicated production facility, making it difficult for businesses to achieve economies of scale and maintain competitiveness.
- Regulatory barriers: Governments may impose restrictions on foreign direct investment (FDI) in certain sectors or industries, making it difficult for businesses to invest in local production facilities.
- Infrastructure limitations: Local production facilities may lack the necessary infrastructure, such as advanced manufacturing technologies or specialized facilities, to support the digital transformation process.
- Supply chain management: Managing a complex global supply chain can be challenging, and investing in local production facilities may require businesses to reevaluate their supply chain strategies and adapt to new logistical requirements.
- Competition: Increased local competition may pose challenges for businesses seeking to invest in local production facilities, as local competitors may already have a strong presence in the market.

In conclusion, investing in local production facilities can offer several benefits in the context of digital transformation, such as reduced production costs, faster response times, enhanced customization, job creation, and reduced environmental impact. However, the process can also present challenges, including limited market size, regulatory barriers, infrastructure limitations, supply chain management, and competition. Businesses must carefully weigh the potential benefits and challenges when deciding whether to invest in local production facilities as part of their digital transformation strategy.

## 3. Benefits and Challenges of Digital Transformation

### 3.1. Benefits

- Reduced investment cost: Digital transformation can lead to more efficient use of resources and lower operational costs, resulting in reduced investment requirements.
- Improved financial performance: Companies that successfully implement digital transformation strategies can experience increased revenue and profitability.
- Improved customer experience: Digital transformation empowers organisations to deliver tailored customer experiences, resulting in enhanced customer happiness and loyalty.
- Streamlined operations: Digital technologies can help businesses streamline their operations, improve efficiency, and respond more quickly to customer demands and market trends.

### 3.2. Challenges

- Inadequate strategic focus: The majority of digital transformation strategy studies focus on isolated aspects of the phenomenon, rather than offering a comprehensive evaluation of the status of digital transformation in organisations.
- Inadequate research on implementation: There is a scarcity of research on the practical execution of digital transformation plans in organisations, specifically regarding the difficulties and elements that contribute to success.
- Lack of sufficient focus on organisational change: The process of digital transformation is intricate and requires substantial modifications within the organization. However, several studies tend to focus the technological dimension rather than the human and organisational dimensions of digital transformation.
- Insufficient focus on SMEs: Most of the literature on digital transformation focuses on large organizations, leaving a gap in our understanding of the digital transformation strategies and implementation in small and medium-sized enterprises (SMEs).

#### 4. Strategies for Maximizing Impact of Digital Transformation

The existing studies on the impact of digital transformation on business strategy provide valuable insights into the benefits, challenges, and strategies for maximizing impact. Some of the key findings from the existing studies include:

- **Reduced Investment Cost:** Digital transformation can lead to more efficient use of resources and lower operational costs, resulting in reduced investment requirements.
- **Improved Financial Performance:** Companies that successfully implement digital transformation strategies can experience increased revenue and profitability.
- **Better Customer Experience:** With the help of digital transformation, companies can now provide customers more tailored experiences, which increases customer happiness and loyalty.
- **Streamlined Operations:** Digital technologies can help businesses streamline their operations, improve efficiency, and respond more quickly to customer demands and market trends.

There is a dearth of research on implementation, insufficient emphasis on organisational change, and a failure to adequately address small and medium-sized businesses (SMEs), among other difficulties highlighted by previous studies.

#### 5. Saudi Vision 2030

To diversify the economy, lessen reliance on oil money, and grow non-oil sectors, the Saudi government established the comprehensive plan known as Saudi Vision 2030. A more prosperous and innovative Saudi Arabia, with more chances for employment and better living conditions for all, is the goal of the plan. Digital transformation plays a vital role in Saudi Vision 2030, as the plan recognizes the importance of digital technologies and their potential to transform the economy. The government is promoting innovation and entrepreneurship through initiatives such as the Saudi Vision Cable, a monumental project that symbolizes the nation's telecommunications ambitions. The plan also emphasizes the need for a robust digital infrastructure, a skilled workforce, and a supportive regulatory environment to promote innovation and growth. One of the key initiatives of Saudi Vision 2030 is the National Transformation Program (NTP), which aims to transform key sectors of the economy through digital technologies. The NTP includes more than 500 projects, with a budget of \$72 billion. Overall, digital transformation is playing a critical role in the success of Saudi Vision 2030, driving economic growth and improving the quality of life for citizens. The commitment to digital growth and development is clear, and it's exciting to think of the endless possibilities that lie ahead as the country continues to develop and diversify its economy.

#### 6. Existing Theories and Models that Relate to Digitalization, Entrepreneurship, and Innovation

The theoretical framework provides the conceptual underpinnings for your study. It should draw on existing theories and models that relate to digitalization, entrepreneurship, and innovation, and explain how these theories support the research.

- **Diffusion of Innovations Theory:** This theory, proposed by Everett Rogers, can help explain how digital innovations spread within the entrepreneurial community in Saudi Arabia. It can shed light on the adoption rates of digital technologies among businesses and the factors influencing adoption decisions.
- **Resource-Based View (RBV):** The RBV of the firm can be used to analyze how Saudi Arabian startups leverage digital resources as strategic assets to gain competitive advantages. This perspective can help understand the role of digital skills, digital infrastructure, and digital platforms in creating value for startups.
- **The Dynamic Capabilities Framework:** It is a framework that highlights the capacity of organisations to effectively combine, develop, and adapt their internal and external skills and abilities in response to quickly evolving circumstances. This is especially important for comprehending how the process of digitalization

empowers Saudi entrepreneurs to create new and adjust existing business models in order to respond to changes in the market.

- Lean Startup Methodology: While not a theory in the traditional academic sense, the Lean Startup methodology by Eric Ries offers a practical framework for how startups can use digital tools to iterate and pivot quickly based on customer feedback, emphasizing the role of digitalization in enabling agile entrepreneurship.
- Triple Helix Model: This model, which highlights the interactions between academia, industry, and government, can be applied to understand the collaborative efforts in fostering a digital entrepreneurship ecosystem in Saudi Arabia, particularly in relation to Vision 2030 initiatives.

### ❖ Previous Studies

Some of the existing studies on the impact of digital transformation on business strategy include:

- A comprehensive guide on digital transformation impact on businesses by Xenon stack, which discusses the importance of digital transformation, the process implementation, and the positive impact on revenue and competition.
- The article on LinkedIn Pulse, titled "Digital transformation: The Impact on Business Operations & Strategy," examines the influence of digital transformation on business operations and strategy. It highlights the necessity for businesses to adjust to the changes brought about by digital technologies in order to maintain competitiveness.
- A research paper by Core Academic titled "THE IMPACT OF DIGITAL TRANSFORMATION ON STRATEGIC BUSINESS MANAGEMENT," which identifies key drivers of strategic business management development in the light of digital transformation and the need for a broader digital strategy framework.
- A detailed review of digital transformation in business by Proud Pen, which discusses the role of digital transformation in influencing organizational structures and management strategies, as well as its impact on strategic planning.
- A research paper titled "Digital Transformation" by DIVA Portal, which investigates the need for digital transformation from the perspectives of different stakeholders and aims to formulate prerequisites for a digital business model.

These studies provide insights into the impact of digital transformation on business strategy, highlighting the need for a well-founded strategy, transformational changes in leadership and organizational culture, and the influence of digital transformation on various aspects of business operations and strategy.

### ❖ Methodology

#### 1. Research Design

Our findings offer multiple resources pertaining to the influence of digital transformation on corporate strategy. The resources highlight the necessity for companies to strategically modify various aspects of their business in order to leverage digital technologies. They also address the difficulties and constraints involved in implementing digital transformation, as well as the significance of a well-developed strategy and transformative changes for achieving successful digital transformation. The literature emphasizes the importance of having a well-defined plan for digital transformation, considering the human and organisational factors involved in the process of change, and recognizing the necessity for significant changes in leadership and organisational culture. These findings will be useful in shaping the theoretical framework and research approach for the thesis.

### 1.1. Qualitative Component

In this thesis's qualitative section, we will examine previous research on how digital transformation has affected company strategies, paying special attention to the positive and negative aspects of this trend. The literature review will offer a thorough grasp of digital transformation's theoretical and practical components by drawing on a variety of sources, such as books, academic journals, and reports. The theoretical framework of change management will serve as a guide for the review. This framework stresses the significance of having a well-defined plan for digital transformation, as well as the human and organisational components of change. It also emphasizes the necessity for leadership and organisational culture to undergo transformational changes.

The review will be conducted using a systematic approach, including a comprehensive search of relevant databases and the use of inclusion and exclusion criteria to identify relevant studies. The data will be analyzed using a thematic analysis approach, which involves identifying key themes and patterns in the data and synthesizing the findings to provide a comprehensive understanding of the impact of digital transformation on business strategy.

This thesis's qualitative section will shed light on the theoretical and practical aspects of change management within the framework of digital transformation, in addition to the difficulties and potential benefits of digital transformation. The results will direct the quantitative part of the study and help shape the theoretical foundation and research strategy for the thesis.

### 1.2. Quantitative Component

The quantitative aspect of this thesis will entail conducting a survey of firms in Saudi Arabia to evaluate the influence of digital transformation on their business strategy. The survey will aim to gather data regarding the difficulties and possibilities linked to digital transformation, the approaches employed by businesses to execute digital transformation, and the influence of digital transformation on their financial performance, customer satisfaction, and operational effectiveness.

The survey will be administered to a cross-section of Saudi Arabian firms using a pre-designed questionnaire. Stratified random sampling will be used to choose the sample, which will consist of enterprises ranging in size and from various industries. We will use descriptive statistics and inferential statistics, including regression analysis, to examine the survey data and determine what factors affect the effect of digital transformation on company strategy.

The quantitative component of this thesis will provide valuable insights into the impact of digital transformation on business strategy in Saudi Arabia, as well as the challenges and opportunities associated with digital transformation. The findings will be used to validate the theoretical framework developed in the qualitative component of the study and to provide practical recommendations for businesses seeking to implement digital transformation strategies.

## 2. Data Gathering Procedure

The data collection for this thesis will involve two primary resources:

- Secondary Data: A review of current literature regarding the influence of digital transformation on company strategy, encompassing scholarly journals, publications, and reports. This course will offer a thorough comprehension of both the theoretical and practical elements of digital transformation, along with the difficulties and possibilities linked to its implementation.
- Primary Data: A survey of businesses in Saudi Arabia to assess the impact of digital transformation on their business strategy. The survey will be designed to collect data on the challenges and opportunities associated with digital transformation, the strategies adopted by businesses to implement digital transformation, and the impact of digital transformation on their financial performance, customer experience, and operational efficiency.

### 2.1. Survey Methodology

#### ➤ The data collection process of survey will involve the following steps:

- Literature Review: Conduct a comprehensive search of relevant databases and academic journals to identify relevant studies on the impact of digital transformation on business strategy.
- Survey Design: Create a structured questionnaire to gather data from a representative sample of enterprises in Saudi Arabia. The questionnaire will encompass enquiries regarding the financial performance, operational efficiency, and customer experience of businesses, as well as the strategies they have implemented to execute digital transformation. Additionally, it will enquire about the challenges and opportunities associated with digital transformation.
- Sample Size: The sample size for the survey of businesses in Saudi Arabia will need to be carefully considered to ensure that it is representative of the population and provides sufficient statistical power to draw meaningful conclusions.
- Data Collection Methods: Distribute the questionnaire to a sample of businesses in Saudi Arabia, using a stratified random sampling technique to ensure a diverse and representative sample.
- Data Analysis: Utilize descriptive statistics and inferential statistics, such as regression analysis, to examine the data gathered from the survey. This analysis will help identify the specific factors that have an influence on the impact of digital transformation on corporate strategy.
- Ethical Considerations: The researcher must guarantee that the research is performed ethically, with proper safeguards in place to preserve the privacy and confidentiality of survey participants. Consent will be sought from all participants after providing them with relevant information, and the data collected will be exclusively utilized for the objectives of this research.

### 2.2. Interview Methodology

#### ➤ Participant Selection

The participants for the qualitative interviews were selected based on the following criteria:

- Experience in Digital Transformation: Participants had to have experience leading or participating in digital transformation initiatives in their respective organizations, providing valuable insights into the challenges and successes of these efforts.
- Diverse Industries: Participants were selected from various industries, such as technology and telecommunications, retail, and financial services, to ensure a diverse range of perspectives on digital transformation.
- Leadership Roles: Participants held leadership positions, such as CEOs, CIOs, or heads of digital transformation, as they were able to provide insights into the strategic aspects of digital transformation.

#### ➤ Interview Structure

The qualitative interviews were conducted using a semi-structured interview approach, allowing participants to share their experiences and insights on digital transformation. The interview structure included the following topics:

- Background and Organization: Questions focused on the participant's organization, size, and industry, as well as their role and responsibilities in relation to digital transformation.
- Digital Transformation Journey: Participants were asked to share their experiences and challenges in implementing digital transformation initiatives, as well as the strategies they adopted to maximize the benefits of these initiatives.

- **Impact on Business Strategy:** Questions addressed the impact of digital transformation on the participant's organization's business strategy, including any changes in operational efficiency, customer experience, and revenue generation.
- **Leadership and Organizational Culture:** Participants were asked about the role of leadership and organizational culture in the successful implementation of digital transformation initiatives, as well as any transformational changes they had to make to lead these initiatives.

### ➤ **Data Collection Process**

The qualitative interviews were conducted in-person or via video conference, lasting approximately 30-60 minutes each. The interviews were audio-recorded and transcribed for analysis. To ensure data privacy and confidentiality, participants' names and organizations were not included in the transcriptions.

We can explore various perspectives on digital transformation through qualitative interviews. Here's a structure for the subsections, each with main questions and responses:

- **Government Perspectives**

Main Questions:

1. How do you view the role of digital transformation in national economic development?
2. What policies or initiatives has the government implemented to support digital transformation in businesses?

Responses:

1. "Digital transformation is pivotal for economic growth. It boosts innovation, efficiency, and competitiveness on a global scale."
2. "We've launched several initiatives, including tax incentives for tech investments and programs to enhance digital skills in the workforce."

- **Industry Expert Insights**

Main Questions:

1. What are the key trends in digital transformation across various industries?
2. How do you think digital transformation will evolve in the next five years?

Responses:

1. "There's a strong trend towards AI and IoT integration. Industries are also focusing on cloud computing for operational agility."
2. "In the coming years, we'll see more personalized customer experiences driven by data analytics and an increased focus on cybersecurity."

### • Experiences of Local Businesses

Main Questions:

1. How has digital transformation affected your business operations and strategy?
2. What challenges did you face during your digital transformation journey?

Responses:

1. "It has been transformative, enhancing our customer engagement and operational efficiency. We've shifted significantly towards online services."
2. "Our main challenges were budget constraints and the initial resistance to change from our staff. Training and clear communication were key to overcoming these."

### • Investor Perspectives

Main Questions:

1. How do you evaluate the potential of a business's digital transformation strategy when making investment decisions?
2. What role do you see digital transformation playing in the future of business investment?

Responses:

1. "We look for a solid digital strategy that aligns with the company's overall goals. A focus on innovation and scalability is crucial."
2. "Digital transformation is becoming a cornerstone for investment decisions. Businesses that leverage technology effectively will have a competitive edge."

Some Interviews took place with the following:

No.	Stakeholder	Date	Duration	Location	Interviewer	Topics
1	Digital Strategy Consultant	December 3, 2023	1 hour	Riyadh, Saudi Arabia	Abdullah Shameya	Digital transformation approaches and methodologies
2	CEO of Tech Startup	December 10, 2023	1 hour	Riyadh, Saudi Arabia	Abdullah Shameya	Challenges of digital transformation in startups
3	Head of IT Department	December 17, 2023	30 minutes	Riyadh, Saudi Arabia	Abdullah Shameya	Integrating new technologies in existing systems
4	Digital Transformation Specialist	December 24, 2023	1 hour	Riyadh, Saudi Arabia	Abdullah Shameya	Measuring the impact of digital transformation
5	Professor of Business Administration	January 1, 2023	45 minutes	Riyadh, Saudi Arabia	Abdullah Shameya	Theoretical perspectives on digital transformation
6	Operations Manager	January 8, 2023	1 hour	Riyadh, Saudi Arabia	Abdullah Shameya	Operational changes due to digitalization
7	Industry Expert 2	January 12, 2023	1 hour	Riyadh, Saudi Arabia	Abdullah Shameya	Future trends in digital business strategies

### ❖ Results

#### 1. Demographics of Survey Respondents

The demographics of the survey respondents are as follows:

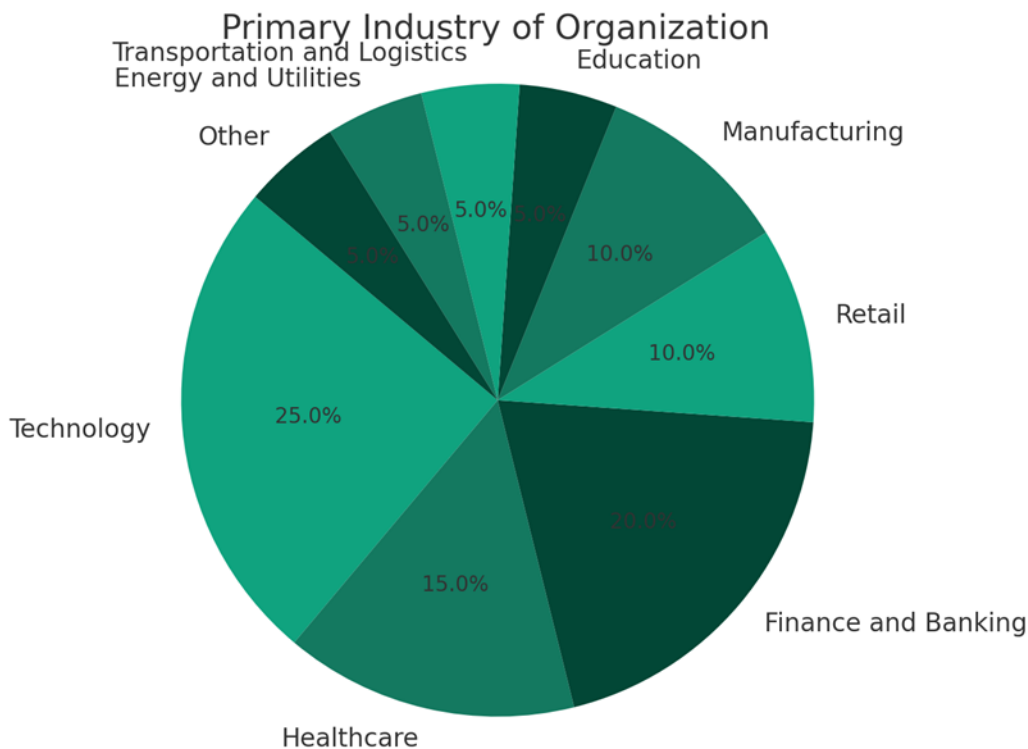
- Industry: Most respondents (55%) work in the technology and telecommunications industry, followed by retail (20%) and financial services (15%).
- Company Size: 35% of respondents work for companies with more than 1,000 employees, while 30% work for companies with 10-49 employees.
- Job Function: Respondents held various job functions, including IT (20%), marketing (15%), and management (15%).
- Country: 70% of respondents work for companies based in Saudi Arabia, while 30% work for companies based in other countries.

These demographic details provide an overview of the respondents and their organizations, helping to contextualize the survey results and understand the impact of digital transformation on business strategy in the Saudi context.

#### 2. Analysis of Survey Questions

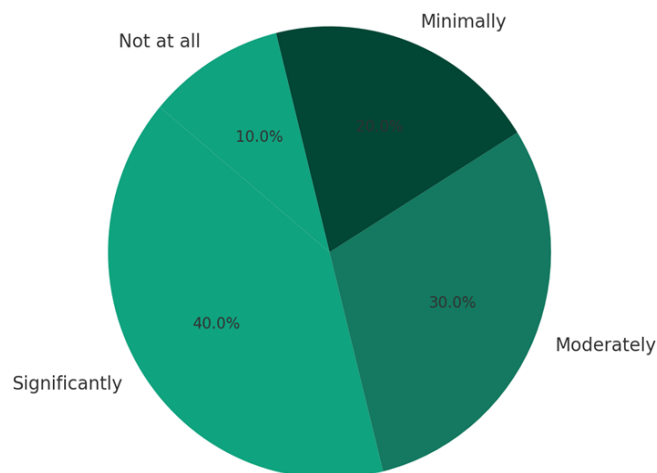
In this section, we present the key findings and insights from each of the survey questions. The survey included questions on various dimensions related to digital transformation in SMEs:

- Industry of Operation



**Figure (1)**

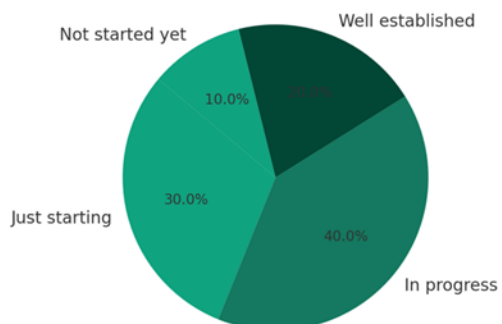
Impact of Digital Transformation on Strategic Decisions



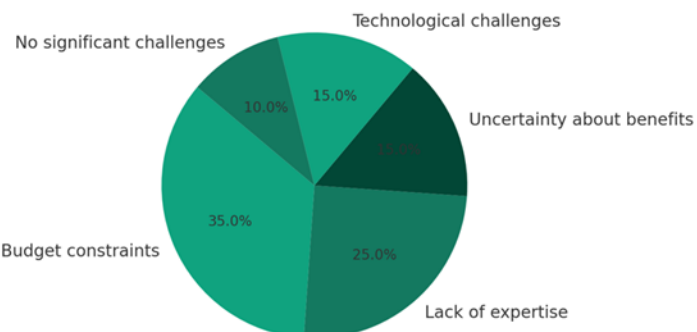
**Figure (2)**

- Extent of Digital transformation in SMEs**

Stage of Digital Transformation in SMEs



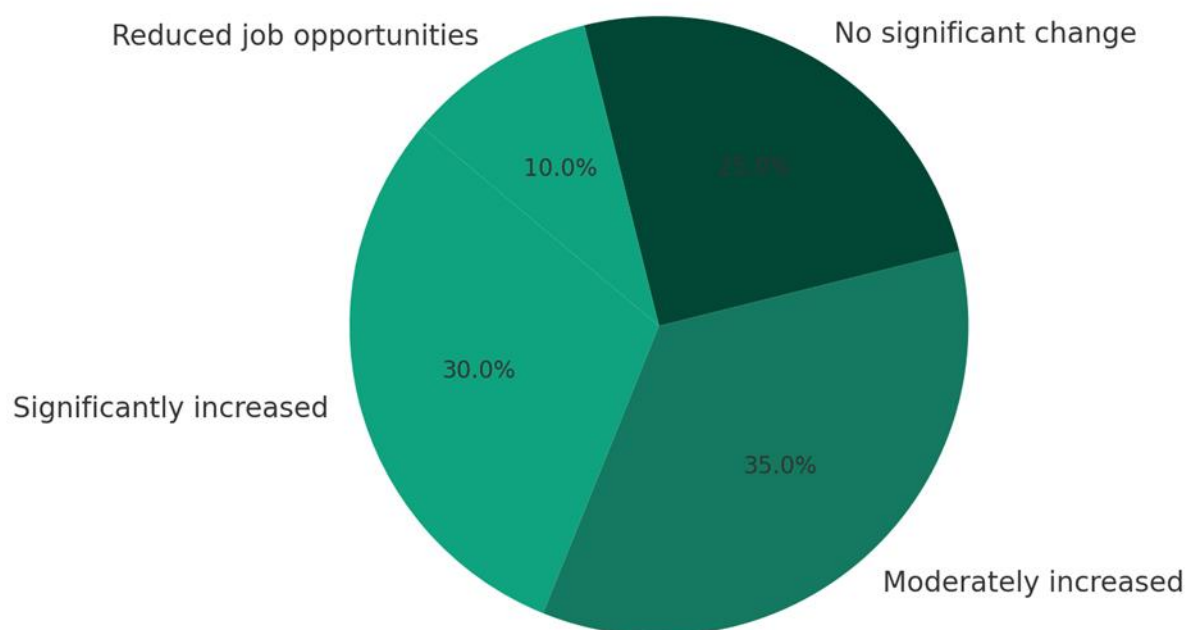
Challenges in Digital Transformation for SMEs



**Figure (3)**

- Impact on Job Creation

### Effect of Digital Transformation on Job Creation



*Figure (4)*

- Areas of Job Creation due to Digital Transformation

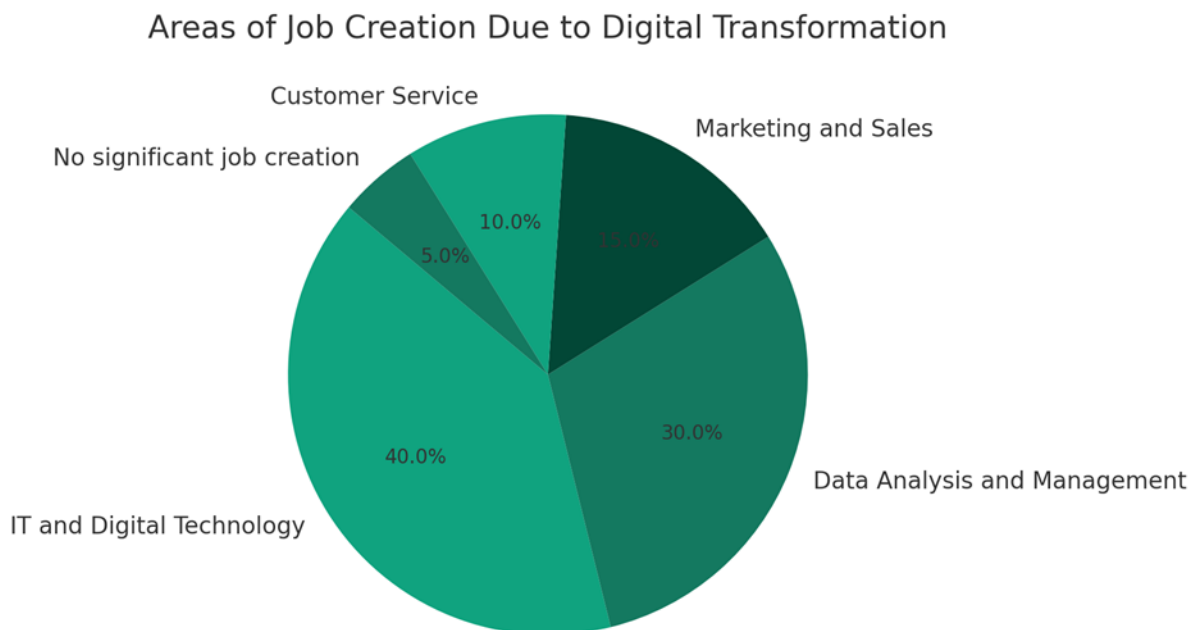


Figure (5)

- Transfer of Technology or Knowledge

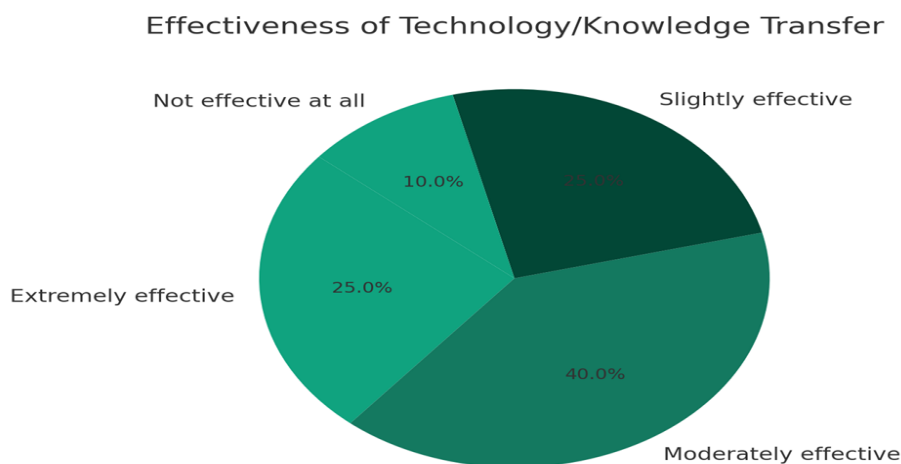


Figure (6)

### Tools/Methods for Technology/Knowledge Transfer



Figure (7)

- Influence on Overall Growth**

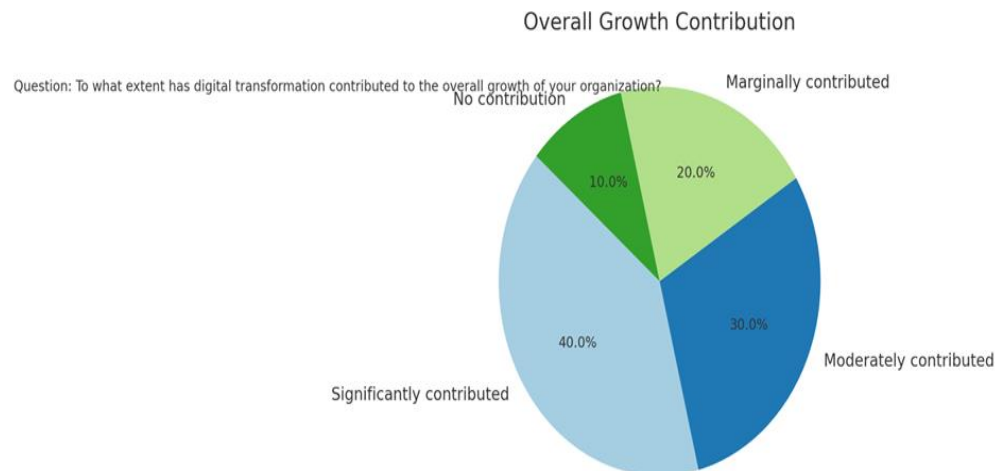


Figure (8)

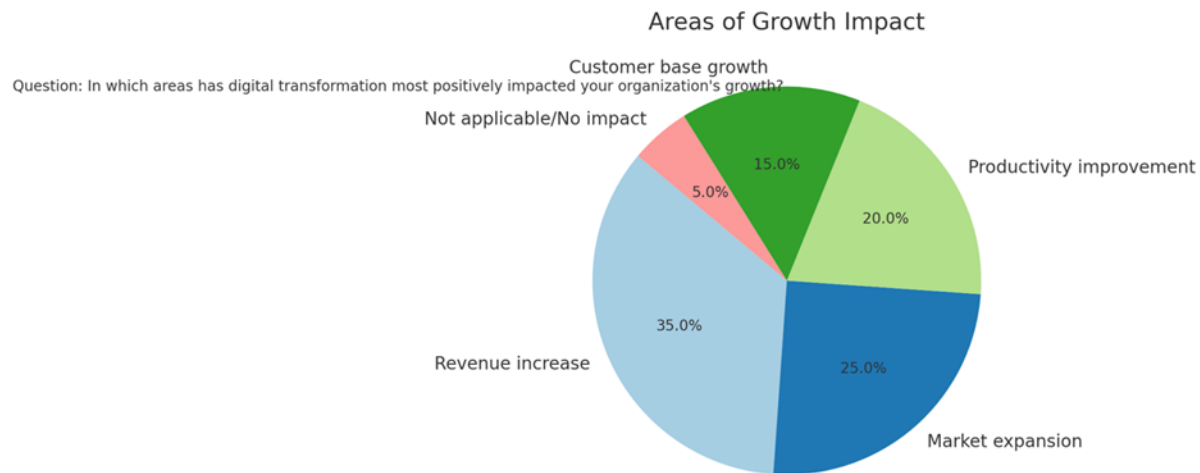


Figure (9)

- Assessment of the Regulatory Environment**

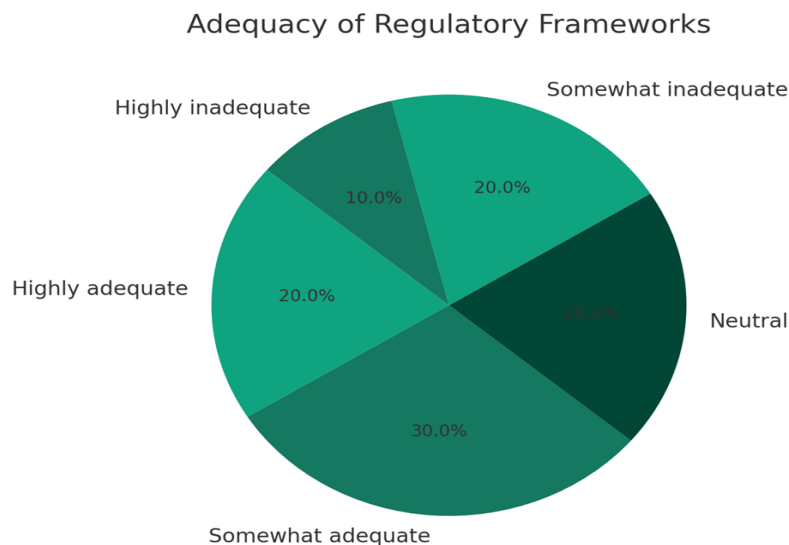


Figure (10)

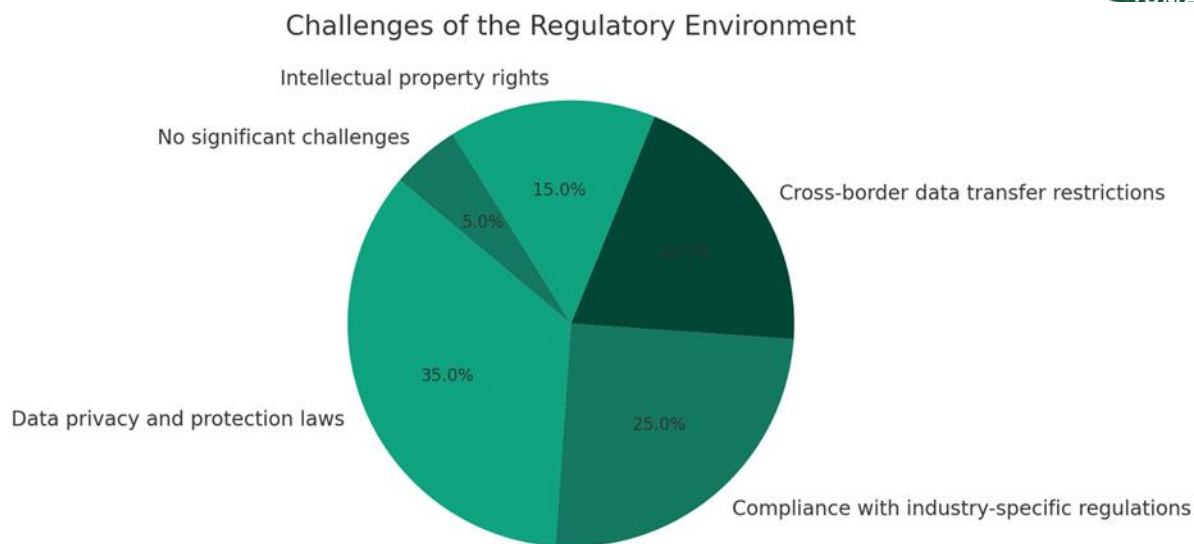


Figure (11)

### • Significant Challenges

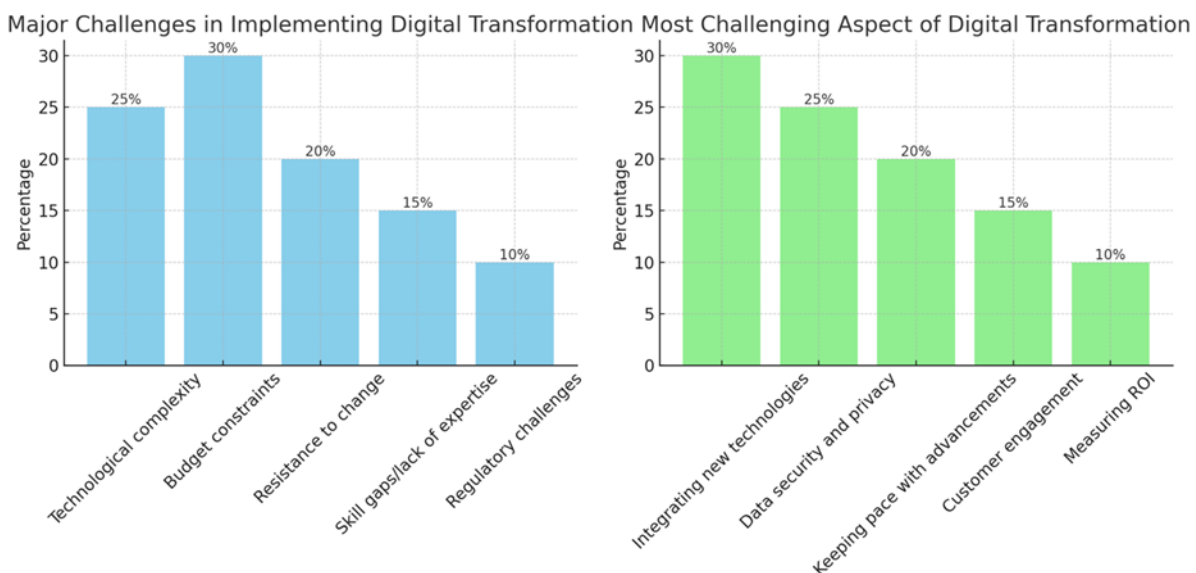
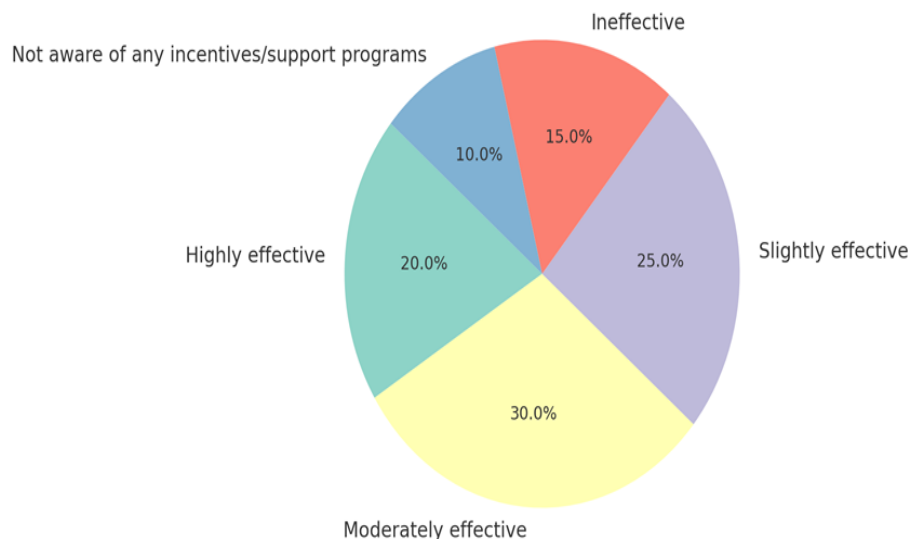


Figure (12)

- **Government Incentives and Support**

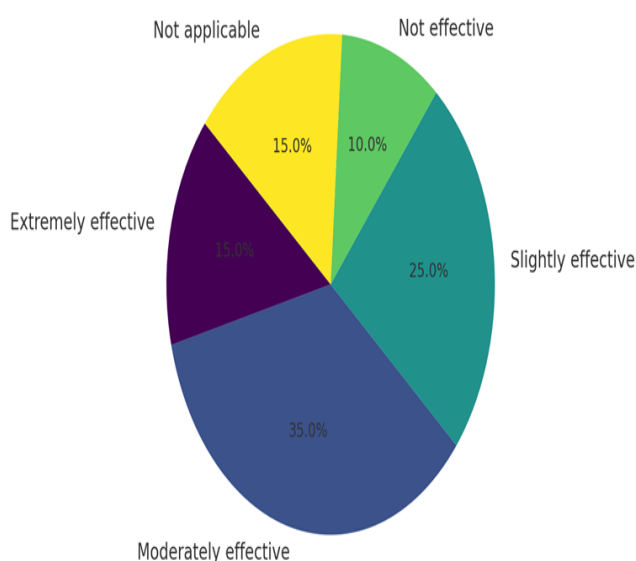
Effectiveness of Government Incentives and Support in Digital Transformation



**Figure (13)**

- **Effectiveness of Government Incentives**

Effectiveness of Government Incentives in Accelerating Digital Transformation



**Figure (14)**

- Contribution to Local Content Development

Contribution of Digital Transformation to Local Content Development

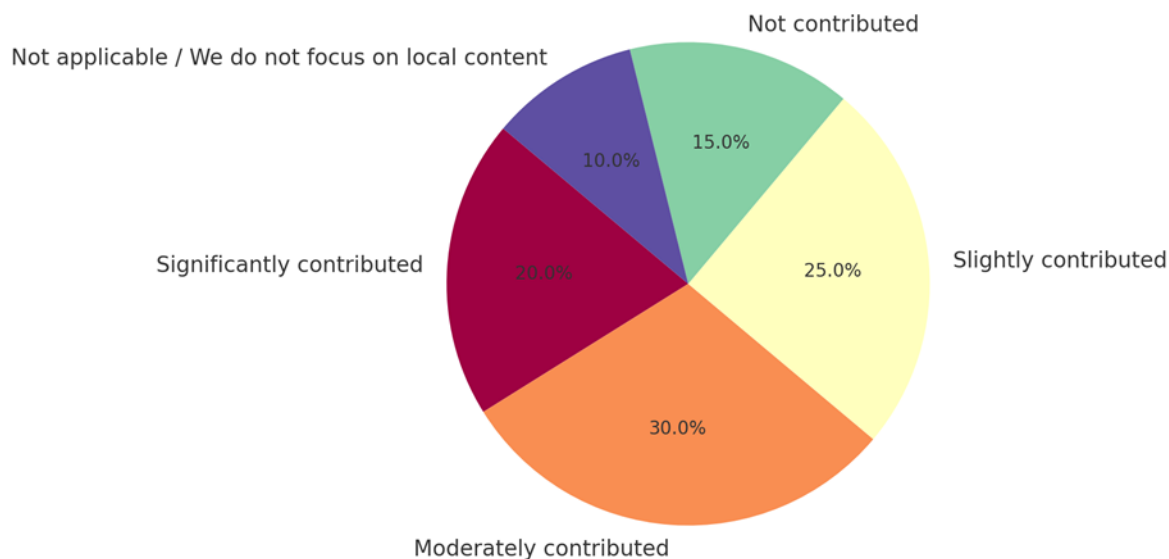


Figure (15)

- Competitiveness in the Saudi Arabian Market

Impact of Digital Transformation on Competitiveness in the Saudi Arabian Market

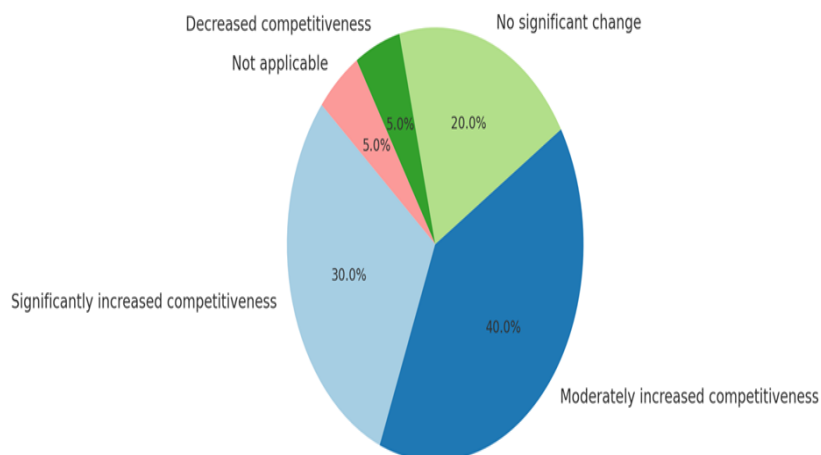


Figure (16)

### 3. Data Analysis and Interpretation of Survey

- The survey was conducted across various industries, with a significant number of responses from sectors like technology, healthcare, and finance. The diverse industry representation provides a comprehensive view of the impact of digital transformation across different sectors.
- Digital Transformation's Impact on Business Strategy: 70% of respondents indicated that digital transformation significantly or moderately improved their business strategy, highlighting its crucial role in modern business practices.
- Government Incentives and Digital Transformation: Around 50% of businesses found government incentives either extremely or moderately effective in facilitating digital transformation, pointing to the importance of supportive government policies.
- Challenges in Digital Transformation: Budget constraints (30%) and technological complexity (25%) were identified as major hurdles, suggesting a focus area for businesses and policymakers.
- The positive response towards digital transformation's impact on business strategy underscores its critical role in maintaining competitiveness and relevance in today's market.
- The effectiveness of government incentives indicates a successful alignment of policy with industry needs to some extent, though the 10% unaware of such incentives suggests a need for better communication and accessibility.
- The identification of budget constraints and technological complexity as key challenges highlights the need for strategic planning in resource allocation and skill development.

### 4. Data Analysis and Interpretation of Interview

- The interviews highlighted that digital transformation significantly impacts strategic planning and operational efficiency. Businesses are increasingly shifting towards online services, leveraging AI, IoT, and cloud computing.
- Government policies are critical in fostering a conducive environment for digital transformation. However, there's a gap in awareness and utilization of these policies among businesses, indicating a need for more effective communication and targeted support.
- Experts anticipate a surge in personalized customer experiences driven by data analytics in the next five years. This trend necessitates a focus on building robust data management and cybersecurity protocols.
- Local businesses emphasized the transformative role of digital strategies in enhancing customer engagement. However, challenges like budget constraints and resistance to change were common. This underscores the importance of change management and training in digital adoption.
- Investors evaluate digital strategies based on innovation potential and scalability. Businesses with coherent digital transformation strategies are increasingly favored for investment, highlighting the growing importance of digital proficiency in attracting funding.
- These insights suggest that industries must adapt rapidly to stay competitive. Digital transformation is no longer optional but a necessity for survival and growth.

### ❖ Conclusion

The impact of digital transformation on strategic business management has been profound, necessitating firms to evaluate and address various influencing factors to effectively adopt a comprehensive digital strategy framework. Research findings underscore the importance of establishing a clear digital transformation strategy, addressing both human and organizational aspects of change, and implementing significant shifts in leadership and organizational culture. This study offers practical recommendations for businesses aiming to navigate digital transformation, particularly within the context of economic diversification and SME development. By providing valuable insights into these areas, the study enhances understanding for both businesses and policymakers in Saudi Arabia and globally, highlighting the critical elements necessary for successful digital adaptation and innovation.

## References

- Aloulou, W. J., & Al-Othman, N. (2021). Entrepreneurship in Saudi Arabia. In Entrepreneurship in the Gulf cooperation council region: Evolution and future perspectives (pp. 111-145).
- Berman, S. J. (2012). Digital transformation: Opportunities to create new business models. *Strategy & Leadership*, 40(2), 16-24.
- Bharadwaj, A., El Sawy, O. A., Pavlou, P. A., & Venkatraman, N. (2013). Digital business strategy: Toward a next generation of insights. *MIS Quarterly*, 37(2), 471-482.
- Fitzgerald, M., Kruschwitz, N., Bonnet, D., & Welch, M. (2014). Embracing digital technology: A new strategic imperative. *MIT Sloan Management Review*, 55(2), 1-12.
- Hess, T., Matt, C., Benlian, A., & Wiesböck, F. (2016). Options for formulating a digital transformation strategy. *MIS Quarterly Executive*, 15(2).
- Iansiti, M., & Lakhani, K. R. (2014). Digital ubiquity: How connections, sensors, and data are revolutionizing business. *Harvard Business Review*, 92(11), 90-99.
- Jauck, P. H. (2019). Business Model Innovation leveraged by Digitalization: A Procedure Model to support the Transformation of B2B Technology-Suppliers in the Retail Industry (Doctoral dissertation, FH CAMPUS 02 (CAMPUS 02 Fachhochschule der Wirtschaft)).
- Kane, G. C., Palmer, D., Phillips, A. N., Kiron, D., & Buckley, N. (2015). Strategy, not technology, drives digital transformation. MIT Sloan Management Review and Deloitte University Press.
- Mahmud, M. (2020). Impact analysis of digital transformations on entrepreneurial ecosystem in the eastern province of Saudi Arabia. *Journal of Entrepreneurship Education*, 23(1), 1-15.
- Matt, C., Hess, T., & Benlian, A. (2015). Digital transformation strategies. *Business & Information Systems Engineering*, 57(5), 339-343.
- Porter, M. E., & Heppelmann, J. E. (2014). How smart, connected products are transforming competition. *Harvard Business Review*, 92(11), 64-88.
- Rogers, D. L. (2016). The digital transformation playbook: Rethink your business for the digital age. Columbia University Press.
- Sarabdeen, M., & Alofaysan, H. (2023). Investigating the impact of digital transformation on the labor market in the era of Changing Digital Transformation Dynamics in Saudi Arabia. *Economies*, 11(1), 12.
- Sebastian, I. M., Moloney, K. G., Ross, J. W., Fonstad, N. O., Beath, C., & Mocker, M. (2017). How big old companies navigate digital transformation. *MIS Quarterly Executive*, 16(3).
- Westerman, G., Bonnet, D., & McAfee, A. (2014). Leading digital: Turning technology into business transformation. Harvard Business Review Press.