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College of Management

Department of.....



Assessing the Impact of Digital Transformation on Small and Medium-Sized Project "
".Management: A Survey Study in the Private Sector in Jeddah, Saudi Arabia

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Contents

Introduction	4
Problem Statement	6
Study Objectives.....	9
Importance of the Study	10
Research hypotheses	10
Previous Studies.....	11
Study Tools (Data Collection Tools):	20
Areas of Study	21
Sources and References	22

Chapter 1

Introduction

The current era witnesses numerous radical and rapid changes due to technological advancements across various domains, driven by the developments imposed by the COVID-19 pandemic. This has led to transformations in how we work and live. Technology and digital data have become indispensable tools for governmental entities and various business establishments to adapt to these evolving changes. This necessity has prompted national leaders to reassess their plans and envision a targeted future where modern information technologies serve as a key tool to assist governmental interests and business entities in overcoming challenges. Consequently, digital transformation has become one of the most urgent requirements for organizations of various types and activities in the current era.

Digital transformation is defined as the use of new digital techniques, such as social media, mobile phones, analytics, or embedded devices, to make significant improvements in operations, such as enhancing customer experience, streamlining processes, or creating new business models. Thus, digital transformation goes beyond merely converting resources into digital

files; it leads to the creation of value and revenue from digital assets (Abad–Segura, 2020).

The goal of digital transformation is to increase efficiency and productivity by simplifying processes and enhancing the efficiency and productivity of institutional resources. By employing digital technologies such as automation, artificial intelligence, and analytics, processes such as recruitment, payroll and benefits management, and employee development can be improved. Additionally, the employee experience can be enhanced by providing digital self–service offerings such as performance management systems, online training, and knowledge management systems. This contributes to increased employee engagement and reinforces satisfaction and loyalty to the organization. Moreover, it provides a flexible work environment capable of adapting to challenges and rapid changes in the labor market. Through the use of remote work tools, communication applications, and digital collaboration, organizations can empower dispersed work teams and enhance communication and collaboration (Ali, 2016).

This study explores the impact of digital transformation on the management of small and medium–sized projects: a survey study in the private sector in Jeddah, Saudi Arabia.

Problem Statement:

The recent and rapid developments in the digital age have compelled organizations in both the public and private sectors to innovate new ways of thinking about designing their work models. This directly impacts the functions of their resource departments, influencing the formulation of new methodologies for resource management. Some experts emphasize that digital technologies act as driving forces for electronic transformations across various sectors. While these transformations occur rapidly—measured in months—the adaptation of such foundational changes in work methods by business organizations and their employees may take years. Change management becomes a persistent obstacle to digital transformation. Although technology adoption remains a top priority for business organizations, effecting fundamental changes in leadership and talent attributes is crucial for a successful digital transformation process (Mogdemi, 2020).

Given the reality of organizations, there is a continued need for development, as affirmed by Nasr's study (2021), which indicates that data platforms in large governmental institutions, open in Egypt and Arab countries, still require further development, diversification, enrichment, and interaction between citizens and the government.

In the context of digital transformation, organizations face challenges in managing institutional resources. These challenges revolve around the evolving nature of companies and employees and their significant role in shaping the digital identity of the organization. Planning future capabilities for the workforce in the digital economy encounters complex challenges and tasks, such as integrating suitable employees into a dynamic institutional environment and assisting existing employees and leaders in acquiring new digital competencies to drive the transformation process (Ali, 2013).

Within this framework, the development process encounters challenges such as the absence of a clear strategy in human resource development to contribute to the consolidation of digital transformation. The human element is considered one of the fundamental pillars in the transformation process. Furthermore, not all employees are familiar with computer usage, with a large number lacking experience in using information for remote procedures and modern technologies used in their work. In addition, there is a lack of continuous development in the information field and a lack of a communication strategy with stakeholders through promotional activities for information services (Bhatti, 2021).

Abdul Fattah (2020) affirms that enterprise resource management faces several challenges related to technology, operations, and institutional culture. Among these challenges are changes in operations and systems. Digital transformation requires updating and improving processes and systems used in enterprise resource management, providing the latest security technologies, and applying appropriate protection measures to safeguard sensitive information. Employees may face resistance or difficulty adapting to digital transformation and using new technologies. Enterprise resource management must be able to integrate data from various sources and use appropriate analytical tools to benefit from data and make evidence-based strategic decisions. Enterprise resource management must be aware of legal requirements and ensure compliance.

Hence, the study's problem is defined by addressing the main question: What is the impact of digital transformation on the management of small and medium-sized projects: a survey study in the private sector in Jeddah, Saudi Arabia? From this, the following questions branch out:

1. Is there a good reality for digital transformation in managing small and medium-sized projects?

2. Is there a good reality for enterprise resource management in governmental institutions in the Kingdom of Saudi Arabia?
3. Are there statistically significant differences in the sample respondents' perceptions regarding the impact of digital transformation on the management of small and medium-sized projects: a survey study in the private sector in Jeddah, Saudi Arabia, attributed to the following variables: (educational qualification, years of experience)?

Study Objectives:

The main objective of the study is to understand the impact of digital transformation on the management of small and medium-sized projects: a survey study in the private sector in Jeddah, Saudi Arabia. This objective will be achieved through the accomplishment of the following sub-objectives:

- Identify the impact of digital transformation on the management of small and medium-sized projects in the Kingdom of Saudi Arabia.
- Examine the current state of managing small and medium-sized projects in governmental institutions in the Kingdom of Saudi Arabia.

- Assess the presence of statistically significant differences in the sample respondents' perceptions attributed to the following variables: (educational qualification, years of experience).

Importance of the Study:

- **Theoretical Significance:** This study holds theoretical importance as it contributes to the understanding of the impact of digital transformation on the management of small and medium-sized projects, offering insights that can enhance existing theoretical frameworks.
- **Practical Significance:** On a practical level, the study's findings will provide valuable information for businesses and governmental institutions in Jeddah, Saudi Arabia, helping them adapt to the challenges and opportunities presented by digital transformation. The research aims to offer practical recommendations and strategies for effective project management in the evolving digital landscape.

Research hypotheses

The hypotheses for the study are formulated to test the validity of the following main hypothesis: There is a statistically significant relationship in the perspectives of employees in small and medium-sized projects regarding the

impact of digital transformation on these projects in Jeddah. From this main hypothesis, the following sub-hypotheses emerge:

4. There is an impact of digital transformation on small and medium-sized projects in Jeddah.
5. There is a favorable reality of digital transformation in small and medium-sized projects in Jeddah.
6. There is a favorable reality of managing institutional resources with digital technologies in small and medium-sized projects in Jeddah.
7. There are statistically significant differences in the sample respondents' perceptions regarding the impact of digital transformation on small and medium-sized projects in Jeddah attributed to the following variables: (educational qualification, years of experience).

Previous Studies

1. **Naimi, Fatiha Habiba, & Yousfi. (2022). The Impact of Digital Transformation on Financial Reports in the Government Sector: A Field Study.** This study aimed to investigate the impact of digital transformation, resulting from recent technological changes, on financial reports that hold significant importance in the context of institutions. The focus was on highlighting the importance of financial reports and how they

evolve and adapt to the requirements of the current era. The discussion was framed by a theoretical framework related to digital transformation, with a focus on its impact on financial reports. Digital transformation techniques that contributed to improving financial reports, such as electronic disclosure and big data analysis to better understand financial statements' characteristics, were presented. The practical aspect was addressed by applying previous theories to the actual work context, using a descriptive-analytical method. The sample included 30 individuals from the study group. The results showed a clear impact between digital transformation and the development of digital accounting systems, where electronic disclosure is considered a major challenge in the accounting profession, and the digital direction of institutions has become essential. In summary, the study yielded important results, including the significance of digital transformation in accounting development and how to address new challenges such as electronic disclosure. It also emphasized adopting new technologies that support this transformation.

2. **Al Balushi, N. B. A., Al Hraasi, N. B. H., & Al Aufi, A. B. S. (2020).**

The Reality of Digital Transformation in Omani Institutions. This study aimed to explore the reality of digital transformation in the Sultanate of Oman. It examined the roles played by various institutions in the Sultanate

regarding digital transformation and the development of e-government. The progress of these institutions in the digital transformation path was evaluated, and prominent projects implemented in this context were identified, aligning with global trends in this field. The study used a qualitative descriptive methodology, employing semi-structured interviews as the main data collection tool and content analysis to examine documents related to the institutions covered. The study was applied to four government institutions: the Ministry of Technology and Communications, the Ministry of Education, the Ministry of Health, and the Royal Oman Police. One private sector institution, Bank Muscat, was also chosen. The study found significant results, indicating that the covered institutions played various roles in achieving digital transformation. Despite varying levels of transformation among these institutions, they all contributed to advancing the Sultanate toward achieving advanced digital transformation, according to the United Nations report for 2018. Other areas, such as e-participation, also witnessed significant development.

Notable transformation projects in the Sultanate included the development of infrastructure, including the electronic authentication system and the government integration platform. Other projects involved establishing the National Center for Information Security and developing SaaS centers under

the Ministry of Technology and Communications. Similar projects were also implemented in the study's covered institutions, such as the educational portal, electronic health portal, and various service applications on smartphones.

3. Fleyeh. (2022). Digital Transformation of the Islamic Finance Sector

Amid the COVID–19 Pandemic: Al Salam Bank as a Model. This study aims to review and analyze the importance and impact of digital transformation technology in organizations and institutions, focusing on Al Salam Bank Algeria as a model for digital transformation. The research also aims to shed light on the gains and challenges associated with this technology, in addition to directing attention to planned future projects to enhance digital transformation at the bank. This study relies on an analytical and descriptive methodology. Data will be collected from multiple sources, including secondary sources and interviews with officials and experts from Al Salam Bank Algeria. This data will be critically analyzed to understand various aspects of digital transformation at the bank and factors influencing its success. This study is expected to clarify the importance of digital transformation technology in enhancing the efficiency of organizations and institutions, improving performance, and interacting with both the government and private sectors. The study highlights Al Salam Bank Algeria as a case study, specifying its current experience and future

challenges. The results provide guidance to other organizations and institutions on how to achieve successful digital transformation and address potential challenges in this field.

4. **Abdel Fattah. (2020, September). The Role of Digital Transformation in Improving Government Services in Palestine.** In The 1st International Conference on Information Technology & Business ICITB2020. The necessity of digital transformation has become essential for institutions and entities seeking to develop and enhance their services to beneficiaries. This research aims to understand the concept and requirements of digital transformation, in addition to reviewing the concept of e-government and presenting the key benefits derived from enhancing digital transformation in institutional entities. The research also aims to highlight the role of digital transformation in improving the performance of government services. One of the main results of the research is that the Information and Communication Technology sector plays a pivotal role in promoting digital transformation in both government and private institutions, despite the challenges imposed by the Israeli occupation. The results also indicate that overcoming these obstacles and implementing e-government in Palestine can play a crucial role in improving government services by enhancing digital transformation. Among the primary recommendations resulting from

this research is the urgent need to complete the implementation of e-government services in all Palestinian government entities. This includes establishing official bodies responsible for creating, monitoring, maintaining, and overseeing government websites. The recommendations also include the necessity of enacting legislation that protects the planning, implementation, and monitoring processes of e-government in Palestine.

5. **Ali Ishaq Al-Adwan, T. (2023). Developing Leadership Skills for Directors of Government Schools in Light of Digital Transformation Skills.** The aim of this study was to develop leadership skills for directors of government schools using digital transformation skills as a framework. A descriptive methodology was used in this research, where a questionnaire was applied to a sample of 214 directors of government schools and their assistants in the educational administration of Al-Jamiah district. The main results of the research revolved around the importance of digital transformation in enhancing the managerial and personal knowledge of directors of government schools. These skills help improve the capabilities and potential of directors, providing them with new managerial models. Digital transformation also ensures a creative environment that supports participation, development, decision-making, and sustainable professional growth. The study suggests that the educational community benefit from

global experiences of model digital schools, considering the conditions and specific realities of the Jordanian society. It emphasizes the need to adapt these experiences to the values, habits, and culture of the society. The study also encourages the continuous implementation of evaluation and review processes for directors' performance by officials, providing continuous feedback to correct any deviations in performance. It recommends organizing periodic and continuous training courses to develop leadership skills and an understanding of digital transformation for directors, both before and during their employment and while performing administrative tasks.

6. **Elmogy, S. A. (2022). The Role of Digital Transformation in Enhancing the Efficiency of Workers in the Tourism Sector.** This study aims to understand the concept and importance of digital transformation, especially in the tourism sector, and shed light on the necessary digital techniques and tools in this sector. The research was conducted through two main aspects: first, by conducting interviews with officials and experts from the Ministry of Tourism, the Egyptian General Authority for Tourism Promotion, and the Ministry of Antiquities from January 2022 to August 2022. Second, through the distribution of survey questionnaires to marketing and executive managers in Category (A) tourism companies, using 105 valid responses

out of 118. Digital transformation technology is currently heading to be one of the primary strategies sought by institutions and entities, especially governmental authorities, to promote digital culture. This smart technology aims to make the digital revolution a fundamental basis for service delivery, given the rapid developments in communication and information technology. Based on this development, investment in digital transformation has become an integral part of the tourism industry, relying on modern technologies such as artificial intelligence, digital platforms, virtual tourism, and other advanced technologies. Among the most important research findings is the diagnosis of the weaknesses of modern methods relying on innovation in marketing Egyptian tourism products and the lack of a comprehensive vision for digital transformation in Egyptian government bodies, such as the Ministry of Tourism and the Ministry of Antiquities. Therefore, the study recommends the necessity of developing an integrated plan to achieve digital transformation in these bodies, in collaboration between the private and public sectors, directing efforts towards developing a national strategy for digital government. The study also emphasizes the importance of monitoring and implementing this strategy to ensure commitment, achieve quality, and support digital innovation to build a sustainable digital government in the future.

Definition of the Study Methodology and Why It Was Chosen:

The descriptive–analytical approach is considered one of the most important tools that aid in studying and analyzing social, economic, political, and other phenomena and issues. This methodology involves a detailed description of the studied phenomenon and its systematic and scientific analysis, utilizing statistical tools to analyze collected data and information.

In the case of researching the impact of digital transformation on the management of small and medium–sized projects: A survey study in the private sector in Jeddah, Saudi Arabia, the descriptive–analytical methodology can be employed to analyze the questionnaire distributed to project personnel.

Additionally, the descriptive–analytical approach can be used to establish a theoretical and conceptual framework for digital transformation and analyze potential effects on improving small and large projects. It helps identify key variables that need analysis to determine the relationship between digital transformation and enhancing institutional resource performance.

Therefore, the descriptive–analytical methodology is a crucial tool for studying the assessment of the impact of digital transformation on the management of small and medium–sized projects: A survey study in the private sector in

Jeddah, Saudi Arabia. It can be used to analyze data, ensure the validity of results, and reach accurate scientific conclusions.

Study Tools (Data Collection Tools):

The study tool (questionnaire) was formulated in a way that enables the researcher to correctly examine the study variables. The study tool was validated by a group of specialized professors to ensure its reliability. The questionnaire was then distributed to the study community to gather their opinions and observations regarding the impact of digital transformation on improving the performance of institutional resources: A case study in the government sector in the Kingdom of Saudi Arabia.

The questionnaire was prepared so that the respondent could mark (√) next to each paragraph under the axis. For each paragraph, there were columns reflecting five levels of response or agreement. Each level represented a certain weight, ranging from 1 to 5, according to the Likert five-point scale. Since all items in the questionnaire were positive, Table (1) below illustrates the answer categories and their weights:

The tool's validity will be tested by studying the relationship between the statements using Pearson correlation and its stability to determine its ability

to obtain the same data when the study is repeated using the same tool on individuals themselves under the same conditions. This will be achieved through using the internal consistency measure, Cronbach's Alpha.

Areas of Study

The researcher confines the study to the following boundaries:

1. Subject Boundaries: Evaluating the impact of digital transformation on the management of small and medium-sized projects: A survey study in the private sector in Jeddah, Saudi Arabia.
2. Location Boundaries: Small and medium-sized projects in the Kingdom of Saudi Arabia.
3. Time Boundaries: 2024 Study Type: Survey Sector: Private
Independent Variable: Digital Transformation Dimensions of the
Independent Variable: Digital Technology, Digital Marketing, Digital
Operations Dependent Variable: Project Management Performance in
the Private Sector

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