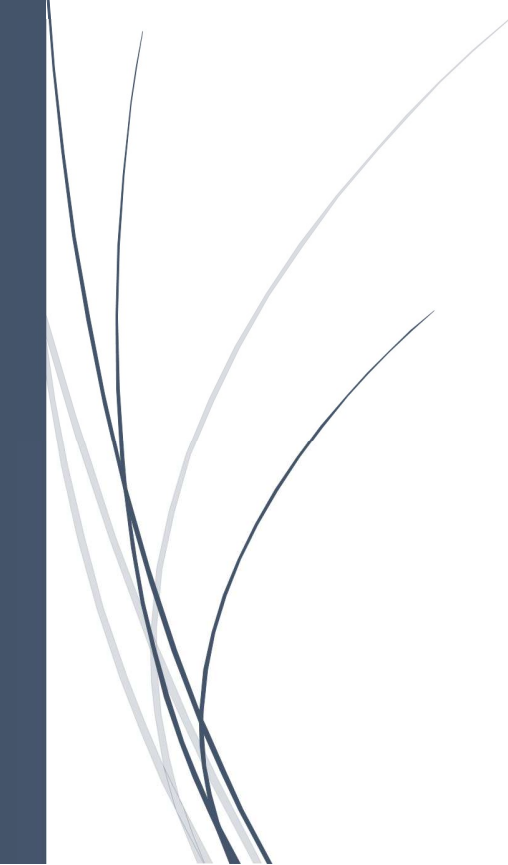




Final Project 2

PMG 497

Project Template



Midocean University

Faculty of Management

Department/ Specialization



The Impact of Digital Transformation on Organizational Performance in Saudi Aramco

Student name

Ahmed Salem Saeed Bayashot

Final Project - 2

Faculty of Management - Midocean University

Supervisor

Dr. Abdulrahim Nader

Faculty member- Faculty of management- Midocean University

First Semester – 2026

Acknowledgment

First and foremost, I would like to express my sincere gratitude to Allah Almighty for granting me the strength, patience, and determination to complete this graduation project successfully.

I would like to extend my deepest appreciation to my supervisor, Dr. Mohammed Ameen, for his valuable guidance, continuous support, and constructive comments throughout the preparation of this research. His expertise and encouragement played a significant role in improving the quality of this study.

I would also like to thank the Faculty of Management at Midocean University for providing a supportive academic environment and the necessary resources that facilitated the completion of this project.

Finally, I would like to express my heartfelt gratitude to my family and friends for their endless support, motivation, and encouragement throughout my academic journey.

Dedication

I dedicate this project to my beloved parents, whose sacrifices, support, and prayers have always been the foundation of my success.

I also dedicate this work to my family members, friends, and everyone who encouraged and supported me throughout my academic and personal journey.

Their belief in my abilities has inspired me to pursue my goals and complete this project successfully.

Abstract

Purpose:

The purpose of this study is to investigate the impact of digital transformation on organizational performance in Saudi Aramco. In recent years, digital transformation has become a strategic priority for organizations seeking to improve efficiency, innovation, and competitiveness in an increasingly digital business environment. As one of the largest energy companies in the world, Saudi Aramco has invested significantly in digital technologies to enhance operational performance and support sustainable growth.

Methodology:

This study adopts a quantitative research methodology. Data will be collected through a structured questionnaire distributed among employees working in Saudi Aramco. Statistical techniques will be used to analyze the data and determine the relationship between digital transformation and organizational performance.

Findings:

The findings are expected to reveal a positive relationship between digital transformation and organizational performance. Organizations that effectively adopt digital technologies are likely to achieve higher levels of productivity, operational efficiency, service quality, and overall organizational effectiveness.

Originality & Implication:

The practical importance of this study lies in providing managers and decision-makers with valuable insights regarding the implementation of digital transformation initiatives. The study also contributes to the academic literature by expanding current knowledge about the relationship between digital transformation and organizational performance within the energy sector.

Keywords:

Digital Transformation, Organizational Performance, Saudi Aramco, Technology Adoption, Digital Technologies, Operational Efficiency.

Table of Contents

Acknowledgment.....	2
Dedication	3
Abstract.....	4
1. Chapter 1: General Framework Of The Study	8
1.1. Introduction	9
1.2. Research Problem.....	10
1.2.1. Theoretical Gaps	10
1.2.2. Practical Gaps.....	10
1.3. Research Significance.....	11
1.3.1. At the theoretical level	11
1.3.2. At the practical level	11
1.4. Research Questions	11
1.5. Research Objectives	12
1.6. Research Hypotheses.....	12
1.7. Research Model	12
1.8. Scope of The Study	13
1.9. The Project Structure.....	14
2. Chapter 2: Literature Review	15
2.1. Introduction	16
2.2. The independent variable	16
2.3. The dependent variable.....	18
2.4. The relationship between the independent and the dependent variables.....	19
2.5. Conclusion	21
3. Chapter 3: Research Methodology	27
3.1. Introduction	28
3.2. Operational definitions for research variables	28
3.3. Research design (research onion).....	28
3.4. Research population & Sampling methods and technique	29
3.5. Data collection method.....	29
3.6. Types of data	30
3.7. Statistical analysis procedures.....	30
3.8. Conclusion	30

4. Chapter 4: Statistical Analysis & Findings discussion	31
4.1. Introduction	32
4.2. Sample profile (descriptive statistics for research sample).....	32
4.3. Validity & reliability tests for the questionnaires.....	32
4.4. Descriptive statistics for research variables (answer research questions).....	33
4.5. Testing Hypotheses & Findings Discussion.....	33
4.6. Conclusion	33
5. Chapter five: Research limitations, Recommendations & Conclusion	34
5.1. Research Limitations & Future Research.....	35
5.2. Research Recommendations.....	35
References.....	36
Appendix.....	36

List of Figures:

Figure 1.1 Research Model

List of Tables:

Table 1.1 Research Questions

Table 1.2 Research Objectives

Table 1.3 Research Hypotheses

Table 1.4 Summary of Previous Studies

Table 3.1 Demographic Characteristics of Respondents

Table 4.1 Descriptive Statistics

Table 4.2 Correlation Analysis Results

Table 4.3 Regression Analysis Results

1. Chapter 1: General Framework Of The Study

1.1. Introduction

In the modern business environment, organizations face increasing pressure to improve their competitiveness, efficiency, and ability to adapt to rapid technological changes. The emergence of advanced digital technologies has transformed the way organizations operate, communicate, and deliver value to customers. As a result, digital transformation has become one of the most important strategic priorities for organizations seeking sustainable growth and long-term success.

Digital transformation refers to the integration of digital technologies into various organizational activities and processes. It involves the adoption of technologies such as artificial intelligence, cloud computing, big data analytics, the Internet of Things, and digital platforms to improve organizational operations and performance. Through digital transformation, organizations can enhance productivity, reduce operational costs, improve decision-making processes, and provide better services to customers.

The growing importance of digital transformation has attracted significant attention from researchers and practitioners. Many studies have suggested that digital technologies can positively influence organizational performance by improving operational efficiency, supporting innovation, and enhancing communication and collaboration among employees. Consequently, organizations across different sectors are investing heavily in digital transformation initiatives to achieve strategic objectives and maintain their competitive advantage.

Organizational performance represents one of the most important indicators of organizational success. It reflects the extent to which an organization achieves its objectives effectively and efficiently while utilizing available resources in an optimal manner. Organizational performance can be measured through several dimensions, including productivity, profitability, service quality, operational efficiency, and employee performance.

In Saudi Arabia, digital transformation has become a national priority under Saudi Vision 2030, which aims to accelerate digital adoption and enhance organizational competitiveness across various sectors. Saudi Aramco, as one of the world's leading energy companies, has implemented several digital transformation initiatives to improve operational efficiency, optimize production processes, and enhance organizational performance. Therefore, understanding the impact of digital transformation on organizational performance within Saudi Aramco is both academically and practically important.

1.2. Research Problem

Digital transformation has become a major strategic initiative for organizations worldwide. Despite substantial investments in digital technologies, there remains uncertainty regarding the extent to which digital transformation contributes to organizational performance improvement. While previous studies have reported positive outcomes associated with digital transformation, the relationship may vary depending on organizational characteristics, industry type, and implementation practices.

Therefore, there is a need to investigate the impact of digital transformation on organizational performance within large organizations operating in the energy sector, particularly Saudi Aramco.

Theoretical Gaps

1.2.1. Theoretical Gaps

Previous studies have extensively examined digital transformation in sectors such as banking, manufacturing, healthcare, and information technology. However, limited research has focused specifically on the energy sector. Furthermore, there is a shortage of academic studies that investigate the relationship between digital transformation and organizational performance within large multinational energy companies such as Saudi Aramco.

1.2.2. Practical Gaps

From a practical perspective, organizations often encounter challenges when implementing digital transformation initiatives. These challenges include resistance to change, limited digital capabilities, high implementation costs, and organizational barriers. Understanding the practical impact of digital transformation on organizational performance can assist managers and decision-makers in developing more effective strategies and maximizing the benefits of digital technologies.

Based on the identified theoretical and practical gaps, the main research question is:

What is the impact of digital transformation on organizational performance in Saudi Aramco?

1.3. Research Significance

1.3.1. At the theoretical level

This study contributes to the existing body of knowledge by expanding the understanding of the relationship between digital transformation and organizational performance. It also provides empirical evidence from the energy sector, which remains relatively underrepresented in the academic literature.

1.3.2. At the practical level

The study provides valuable insights for managers and decision-makers regarding the importance of digital transformation initiatives. The findings may assist Saudi Aramco and similar organizations in designing effective digital strategies that enhance operational efficiency, productivity, and organizational performance.

1.4. Research Questions

1. What is the level of digital transformation in Saudi Aramco?
2. What is the level of organizational performance in Saudi Aramco?
3. Is there a significant relationship between digital transformation and organizational performance in Saudi Aramco?

1.5. Research Objectives

1. To identify the level of digital transformation in Saudi Aramco.
2. To examine the level of organizational performance in Saudi Aramco.
3. To investigate the relationship between digital transformation and organizational performance in Saudi Aramco.

1.6. Research Hypotheses

H1: Digital transformation has a significant positive impact on organizational performance in Saudi Aramco.

1.7. Research Model

Independent Variable:

Digital Transformation

↓

Dependent Variable:

Organizational Performance

1.8. Scope of The Study

Study 1: Vial (2019)

This study reviewed the concept of digital transformation and its impact on organizations. The findings indicated that digital transformation contributes significantly to organizational innovation, operational efficiency, and competitive advantage.

Study 2: Westerman, Bonnet, and McAfee (2014)

The study examined how organizations implement digital transformation strategies. The results showed that organizations with advanced digital capabilities achieve superior performance compared to organizations with limited digital adoption.

Study 3: Kane (2017)

This study investigated the relationship between digital transformation and organizational performance. The findings revealed that organizations embracing digital technologies experience higher productivity, better decision-making, and improved overall performance.

Study 4: Bharadwaj (2013)

The study emphasized the strategic role of digital technologies in business operations. The findings suggested that digital transformation supports organizational competitiveness and long-term sustainability.

Study 5: Matt, Hess, and Benlian (2015)

The study explored digital transformation strategies and their implementation. The findings indicated that successful digital transformation requires organizational alignment, leadership support, and technological readiness.

1.9. The Project Structure

This research consists of five chapters.

Chapter One presents the general framework of the study, including the introduction, research problem, significance of the study, research questions, objectives, hypotheses, previous studies, and project structure.

Chapter Two reviews the literature related to digital transformation and organizational performance.

Chapter Three explains the research methodology, research design, data collection methods, population, sample, and data analysis techniques.

Chapter Four presents the data analysis and research findings.

Chapter Five provides conclusions, recommendations, limitations, and suggestions for future research.

2.Chapter 2: Literature Review

2.1. Introduction

Digital transformation has become one of the most important strategic developments influencing organizations in the twenty-first century. The rapid advancement of digital technologies has significantly changed how organizations operate, compete, and create value. Organizations across various industries are increasingly adopting digital technologies to improve efficiency, enhance decision-making processes, support innovation, and strengthen their competitive positions in the market.

At the same time, organizational performance remains a critical concern for managers and researchers. Organizations continuously seek methods and strategies that can improve productivity, profitability, operational efficiency, and service quality. As digital transformation becomes more widespread, researchers have become increasingly interested in understanding how digital technologies contribute to improving organizational performance.

This chapter reviews the literature related to digital transformation and organizational performance. It discusses digital transformation as the independent variable, organizational performance as the dependent variable, and the relationship between these two variables based on previous academic studies.

2.2. The independent variable

Digital transformation refers to the process of integrating digital technologies into organizational activities, processes, and business models. It involves the adoption and utilization of advanced technologies such as artificial intelligence, cloud computing, big data analytics, machine learning, blockchain, and digital communication platforms to improve organizational effectiveness and efficiency.

According to Vial (2019), digital transformation is a comprehensive organizational change process that aims to improve organizational performance through the strategic use of digital technologies. It is not limited to the implementation of technology but also includes changes in organizational culture, leadership practices, employee skills, and business processes.

Digital transformation enables organizations to redesign business processes and eliminate inefficient practices. Through automation and digital integration, organizations can reduce operational costs, improve workflow efficiency, and increase productivity. Furthermore, digital

technologies allow organizations to respond more quickly to changes in customer demands and market conditions.

Another important aspect of digital transformation is data utilization. Modern organizations generate large amounts of data from various sources. Digital technologies enable organizations to collect, analyze, and interpret data effectively, supporting evidence-based decision-making and strategic planning.

Digital transformation also supports innovation. Organizations can use digital technologies to develop new products, improve existing services, and create innovative business models. Innovation contributes significantly to maintaining competitiveness and achieving long-term organizational success.

In recent years, digital transformation has become a major priority for organizations worldwide. Large corporations invest substantial financial and human resources in digital initiatives to improve performance and maintain competitive advantage. Within the energy sector, companies such as Saudi Aramco have increasingly adopted digital technologies to optimize production, improve safety standards, enhance maintenance systems, and support operational excellence.

Dimensions of Digital Transformation

Digital transformation can be measured through several dimensions, including:

1. Digital Infrastructure.
2. Technology Adoption.
3. Data Analytics Capabilities.
4. Digital Innovation.
5. Digital Leadership.
6. Employee Digital Skills.

These dimensions collectively contribute to the successful implementation of digital transformation initiatives within organizations.

2.3. The dependent variable

Organizational performance refers to the extent to which an organization achieves its objectives efficiently and effectively. It represents the overall success of organizational activities and reflects how well resources are utilized to achieve desired outcomes.

Organizational performance is considered one of the most important indicators of organizational success because it demonstrates whether strategic objectives are being achieved. Organizations with high performance levels are generally characterized by higher productivity, profitability, customer satisfaction, and operational efficiency.

According to organizational theory, performance can be evaluated using both financial and non-financial indicators. Financial indicators include profitability, revenue growth, and return on investment, while non-financial indicators include employee performance, customer satisfaction, service quality, and operational efficiency.

Operational efficiency is a particularly important component of organizational performance. Efficient organizations are capable of producing higher outputs while utilizing fewer resources. Digital technologies often contribute to improved efficiency by automating processes, reducing errors, and enhancing coordination among departments.

Employee performance also plays a significant role in overall organizational performance. Employees who have access to modern digital tools can perform tasks more effectively, communicate efficiently, and contribute more significantly to organizational objectives.

Customer satisfaction is another critical dimension of organizational performance. Organizations that provide high-quality services and quickly respond to customer needs are more likely to achieve sustainable success and competitive advantage.

Dimensions of Organizational Performance

The main dimensions of organizational performance include:

1. Productivity.
2. Operational Efficiency.
3. Service Quality.
4. Employee Performance.
5. Customer Satisfaction.
6. Organizational Effectiveness.

These dimensions provide a comprehensive framework for evaluating organizational success.

2.4. The relationship between the independent and the dependent variables

The relationship between digital transformation and organizational performance has received significant attention in recent years. Researchers generally agree that digital transformation can positively influence organizational outcomes through several mechanisms.

One of the most significant contributions of digital transformation is the improvement of operational efficiency. Digital technologies automate routine tasks, reduce processing times, and minimize operational errors. Consequently, organizations can achieve higher productivity and lower operational costs.

Digital transformation also enhances decision-making processes. Advanced analytics systems enable managers to access accurate and timely information, facilitating evidence-based decisions. Better decisions often lead to improved organizational performance and strategic outcomes.

Furthermore, digital transformation supports communication and collaboration among employees. Digital communication platforms enable faster information sharing and stronger teamwork. Improved collaboration contributes to organizational effectiveness and problem-solving capabilities.

Innovation represents another important link between digital transformation and organizational performance. Digital technologies provide organizations with opportunities to develop

innovative products, services, and business models. Innovation strengthens competitiveness and supports sustainable growth.

Several empirical studies have reported a positive relationship between digital transformation and organizational performance. Vial (2019) concluded that digital transformation enhances organizational capabilities and performance outcomes. Westerman et al. (2014) found that digitally mature organizations outperform their competitors in terms of profitability and operational effectiveness.

Similarly, Kane (2017) reported that organizations that embrace digital technologies experience higher productivity, stronger employee engagement, and improved overall performance. Bharadwaj (2013) emphasized the strategic role of digital technologies in creating sustainable competitive advantages and improving organizational outcomes.

Based on these findings, digital transformation can be considered a critical factor influencing organizational success. Organizations that effectively implement digital technologies are more likely to improve efficiency, innovation, productivity, and overall performance.

Conceptual Framework

The conceptual framework of this study assumes that digital transformation serves as the independent variable influencing organizational performance as the dependent variable.

Digital Transformation



Organizational Performance

The framework suggests that improvements in digital transformation practices lead to improvements in organizational performance indicators.

2.5. Conclusion

This chapter reviewed the literature related to digital transformation and organizational performance. It discussed digital transformation as the independent variable and organizational performance as the dependent variable. The chapter also examined previous research findings regarding the relationship between these variables.

The literature indicates that digital transformation contributes significantly to improving organizational performance through enhanced operational efficiency, improved decision-making, increased innovation, and stronger organizational competitiveness. Previous studies consistently report a positive relationship between digital transformation and organizational performance.

Based on this literature review, the next chapter will explain the research methodology used to investigate the impact of digital transformation on organizational performance in Saudi Aramco.

References

- Bharadwaj, A. (2013). Digital business strategy: Toward a next generation of insights. *MIS Quarterly*, 37(2), 471–482.
- Kane, G. C. (2017). Digital transformation and organizational performance. *MIT Sloan Management Review*, 58(2), 1–7.
- Matt, C., Hess, T., & Benlian, A. (2015). Digital transformation strategies. *Business & Information Systems Engineering*, 57(5), 339–343.
- Vial, G. (2019). Understanding digital transformation: A review and research agenda. *Journal of Strategic Information Systems*, 28(2), 118–144.
- Westerman, G., Bonnet, D., & McAfee, A. (2014). *Leading Digital: Turning Technology into Business Transformation*. Harvard Business Review Press.

Appendix A

Questionnaire for Research Variables

Section A: Demographic Information

1. Gender

* Male

* Female

2. Age

- * Less than 30 years
- * 30–39 years
- * 40–49 years
- * 50 years and above

3. Educational Level

- * Diploma
- * Bachelor's Degree
- * Master's Degree
- * PhD

4. Years of Experience

- * Less than 5 years
- * 5–10 years
- * 11–15 years
- * More than 15 years

Section B: Digital Transformation

Please indicate your degree of agreement using the following scale:

- 1 = Strongly Disagree
- 2 = Disagree
- 3 = Neutral

4 = Agree

5 = Strongly Agree

DT1. Saudi Aramco adopts modern digital technologies in its operations.

DT2. The company possesses advanced digital infrastructure.

DT3. Digital systems improve work efficiency.

DT4. Employees are encouraged to use digital technologies.

DT5. Data analytics are used in decision-making.

DT6. Digital transformation supports innovation within the company.

DT7. Digital technologies facilitate communication among employees.

DT8. Saudi Aramco continuously updates its digital systems.

DT9. Digital transformation contributes to reducing operational costs.

DT10. The company has a clear strategy for digital transformation.

Section C: Organizational Performance

Use the same scale:

1 = Strongly Disagree

2 = Disagree

3 = Neutral

4 = Agree

5 = Strongly Agree

OP1. The company achieves high levels of productivity.

OP2. Work processes are performed efficiently.

OP3. Employees perform their duties effectively.

OP4. The quality of services provided is excellent.

OP5. Organizational goals are achieved successfully.

OP6. Cooperation among departments improves overall performance.

OP7. Customer satisfaction is considered a priority.

OP8. The company responds effectively to changes in the business environment.

OP9. Resources are utilized efficiently.

OP10. Overall organizational performance is continuously improving.

Appendix B

Table of Research Instruments

Variable	Dimensions	Number of Items	Scale
Digital Transformation Innovation	10	Technology Adoption, Digital Infrastructure, Data Analytics, Five-Point Likert Scale	
Organizational Performance Performance	10	Productivity, Operational Efficiency, Service Quality, Employee Five-Point Likert Scale	

3. Chapter 3: Research Methodology

3.1. Introduction

3.2. Operational definitions for research variables

3.3. Research design (research onion)

3.4. Research population & Sampling methods and technique

3.5. Data collection method

3.6. Types of data

3.7. Statistical analysis procedures

3.8. Conclusion

4. Chapter 4: Statistical Analysis & Findings discussion

4.1. Introduction

4.2. Sample profile (descriptive statistics for research sample)

4.3. Validity & reliability tests for the questionnaires

4.4. Descriptive statistics for research variables (answer research questions)

4.5. Testing Hypotheses & Findings Discussion

4.6. Conclusion

5. Chapter five: Research limitations, Recommendations & Conclusion

5.1. Research Limitations & Future Research

5.2. Research Recommendations

5.3. Conclusion

References

Appendix