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Assessing the Impact of Digital Transformation on Project Success: Evidence from Saudi Organizations

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4 Chapter 4: Statistical Analysis and Findings

4.1 Introduction

In this chapter, the statistical analysis and findings of the study Assessing the Impact of Digital Transformation on Project Success: Evidence from Saudi Organizations are presented. The main objective of this chapter is to make the analysis of the data gathered from the respondents and find out if the objectives and hypotheses set in Chapter 1 and 3 are corroborated by empirical evidence. The analysis of the relationship between digital transformation, project success and the moderating effect of management support in the Saudi organizations was statistically analyzed.

The responses from the structured questionnaire were analysed using the relevant statistical methods. To gain a full picture of the data collected, both descriptive and inferential statistical techniques were used. Demographic data for the respondents was summarized using descriptive statistics and the distribution of respondents' answers for each research variable was described. Inferential statistical techniques then were used to examine the relationships between variables and to test the research hypotheses.

The chapter starts with the demographic profile of the respondents, their gender, age, educational qualification, job role, years of professional experience, type of organization, and size of the organization. It is important to explore these characteristics of the demographic so that an understanding of the composition of the research sample is gained and so that the respondents who participated in this study would be deemed to be representative of the target population.

After the demographic analysis, research instruments are assessed for validity and reliability. The assessment is conducted to confirm that the questionnaire is able to measure the intended constructs of the research, and the reliability analysis is performed to determine the level of internal consistency of the measurement items by using the Cronbach's Alpha coefficient. Validity and reliability are both necessary conditions to guarantee the accuracy, dependability and appropriateness of the study findings for further statistical analysis.

Then the descriptive statistics for the principal research variables, Digital Transformation, Project Success, Management Support, are presented. The mean, standard deviation, minimum and maximum values are used as descriptive measures of respondents' perceptions of each construct. The descriptive results give a general overview of the digital transformation

practices conducted by Saudi organizations and their perceptions of the success of the projects and management support provided in their organizations.

The relationships among the variables of the study and the test of the hypotheses formulated in Chapter One are then analyzed using a series of inferential statistical tests. The strength and direction of the relationships between Digital Transformation, Project Success, and Management Support is determined by performing a correlation analysis. A regression analysis is then used to assess both the effect of DT on Project Success and the role played by Management Support in the relationship between DT and Project Success. Each hypothesis is evaluated statistically at suitable significance levels which lead to empirical evidence on the proposed research model.

The results of statistical analysis are explained in light of the research purpose and are contrasted with the theories and research mentioned in Chapter Two. Special attention is paid to whether the results corroborate previous research on digital transformation, organizational performance, project management, and technology use in organizational contexts. The similarities and differences between the present study and previous studies are discussed to gain more insight into the phenomenon in the context of the Saudi organization.

This chapter as a whole could be used as the empirical basis of the study as it converts the collected survey data into meaningful statistical evidence. The findings from this chapter serve as the answers to the research questions, test of the proposed hypotheses, and the conclusions and recommendations presented in Chapter Five.

4.2 Sample profile

This section provides demographic information on the 100 respondents of the study, such as gender, age, level of education, job role, years of service experience, organization type and size.

Gender

Gender	Frequency	Percent	Cumulative Percent
Female	72	72.0	72.0

Gender	Frequency	Percent	Cumulative Percent
Male	28	28.0	100.0
Total	100	100.0	

Table 4.1: Gender Distribution of Respondents

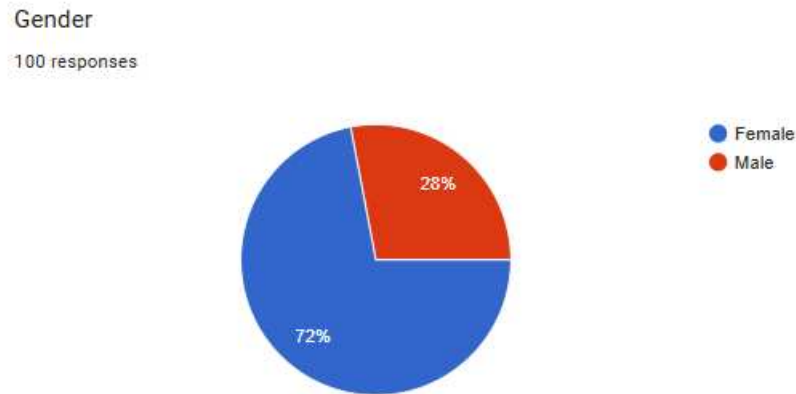


Figure 1: Gender distribution of Respondents

Table 4.1 and Figure 4.1 show the gender distribution of the respondents. The results show that most respondents is female with 72 respondents (72.0%) and the male respondents 28 (28.0%). It means that majority of the sample was composed of female professionals, who are involved in project related activities within Saudi organizations.

Age:

Age Group	Frequency	Percent	Cumulative Percent
20–30 years	36	36.0	36.0
31–40 years	33	33.0	69.0
41–50 years	23	23.0	92.0
Above 50 years	8	8.0	100.0
Total	100	100.0	

Table 4.2: Age Distribution of Respondents

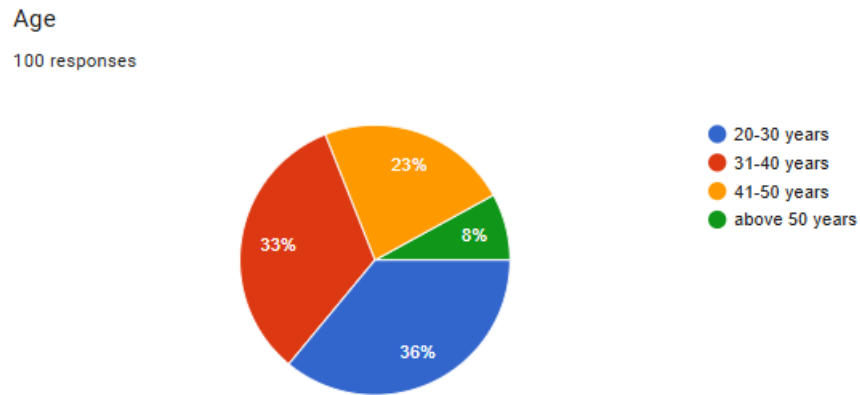


Figure 2: : Age Distribution of Respondents

The age distribution of the respondents can be seen in Table 4.2 and Figure 4.2. The age group with the highest proportion of respondents was 20-30 years (36 respondents; 36.0%) and the 31–40-year age group was almost as high (33 respondents; 33.0%). A majority of respondents, 23 (23.0%) were aged 41 to 50 years and just 8 (8.0%) were over 50 years old. The percentages totalled up to 68.9% suggesting that the majority of the respondents were relatively young to mid-career individuals aged 40 years or below.

Highest Educational Qualification

Education Level	Frequency	Percent	Cumulative Percent
Diploma	10	10.0	10.0
Bachelor's Degree	27	27.0	37.0
Master's Degree	39	39.0	76.0
Doctorate (PhD)	16	16.0	92.0
Other	8	8.0	100.0
Total	100	100.0	

Table 4.3: Educational Qualification of Respondents

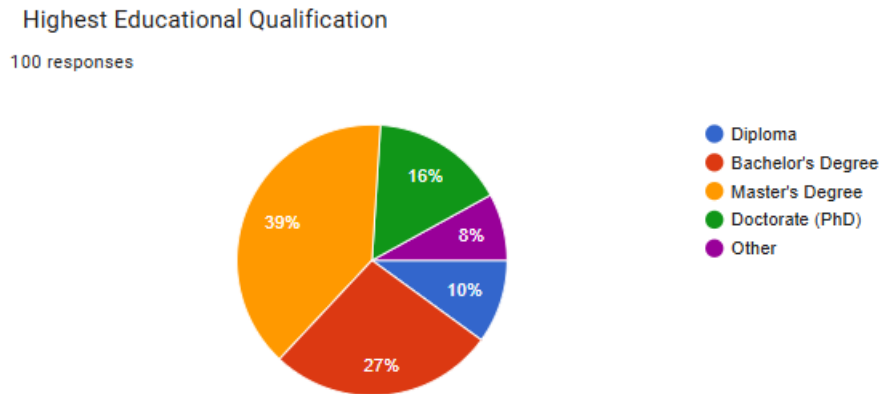


Figure 3: Educational Qualification of Respondents

The educational qualifications of the respondents are given in Table 4.3 and Figure 4.3. The results also showed that the most advanced educational level of the respondents was master's which was found by 39 respondents (39.0%) while 27 respondents (27.0%) had Bachelor's degree. Of those that responded 16 (16.0%) had a Doctorate (PhD) qualification, 10 (10.0%) had a Diploma and 8 (8.0%) had other qualifications. The accumulative percentages suggest that the sample had a relatively high level of education (92.0% or more have completed a Diploma or above) which may increase the reliability of the responses and improve the depth of the answers provided by the respondents on the digital transformation and project management practices.

Current Job Position

Job Position	Frequency	Percent	Cumulative Percent
Project Manager	12	12.0	12.0
IT Manager	21	21.0	33.0
Team Leader	18	18.0	51.0
Project Team Member	18	18.0	69.0
Engineer	11	11.0	80.0
Executive/Director	11	11.0	91.0
Other	9	9.0	100.0

Job Position	Frequency	Percent	Cumulative Percent
Total	100	100.0	

Table 4.4: Current Job Position of Respondents

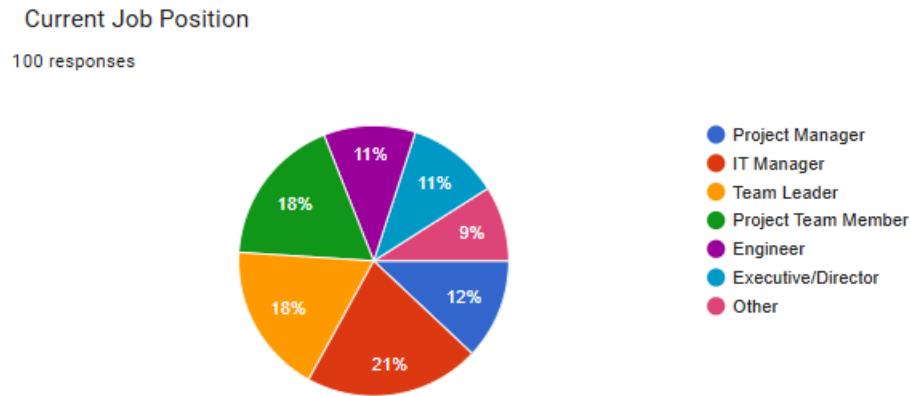


Figure 4: Current Job Position of Respondents

Table 4.4 and Figure 4.4 provide information on the distribution of respondents by their current job position. The highest number of respondents, 21 (21.0%), were IT Managers followed by Team Leaders and Project Team Members with 18 (18.0%) respondents each. There were 12 project managers (12.0%), 11 engineers (11.0%) and 11 executives/directors (11.0%). Other job positions (9.0%) were reported by the remaining 9 respondents. The distribution shows that the sample had a wide range of professionals engaged at various stages of project execution and management, enhancing the significance of their responses to the study.

Years of Professional Experience

Years of Experience	Frequency	Percent	Cumulative Percent
Less than 5 years	29	29.0	29.0
5–10 years	35	35.0	64.0
11–15 years	20	20.0	84.0
More than 15 years	16	16.0	100.0
Total	100	100.0	

Table 4.5: Years of Professional Experience

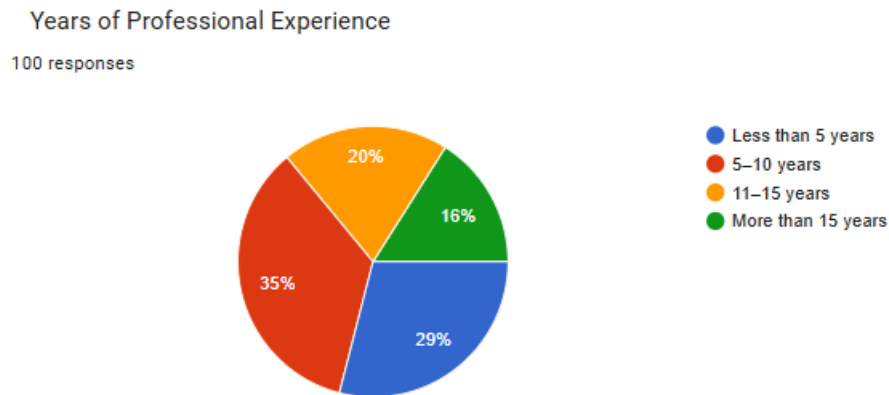


Figure 5: Years of Professional Experience

The years of professional experience of respondents is shown in Table 4.5 and Figure 4.5. Most of them had 5-10 years of experience (35.0%) and less than 5 years of experience (29.0%). One-fifth (20.0%) of the respondents had 11-15 years of experience and one-sixteenth (16.0%) of the respondents had more than 15 years of experience. This distribution shows that the majority have moderate and high levels of professional experience, and thus their beliefs have credibility regarding the digital transformation and project results.

Organization Type

Organization Type	Frequency	Percent	Cumulative Percent
Private Sector	56	56.0	56.0
Public Sector	44	44.0	100.0
Total	100	100.0	

Table 4.6: Organization Type

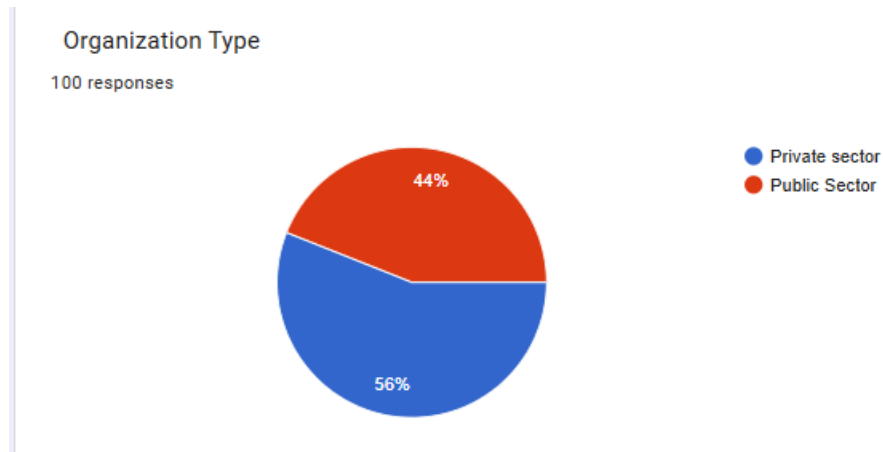


Figure 6: Organization Type

Table 4.6 and Figure 4.6 show the distribution by type of organization. Five-sixths of respondents worked in the private sector (56 respondents; 56.0%) and one-fourth of respondents worked in the public sector (44 respondents; 44.0%). This means that the sample used to draw conclusions is balanced between the two sectors, and the findings are deemed to represent the practices of digital transformation in the various contexts of organizations in Saudi Arabia.

Organization Size

Organization Size	Frequency	Percent	Cumulative Percent
Less than 100 employees	40	40.0	40.0
100–249 employees	22	22.0	62.0
250–499 employees	23	23.0	85.0
500 or more employees	15	15.0	100.0
Total	100	100.0	

Table 4.7: Organization Size

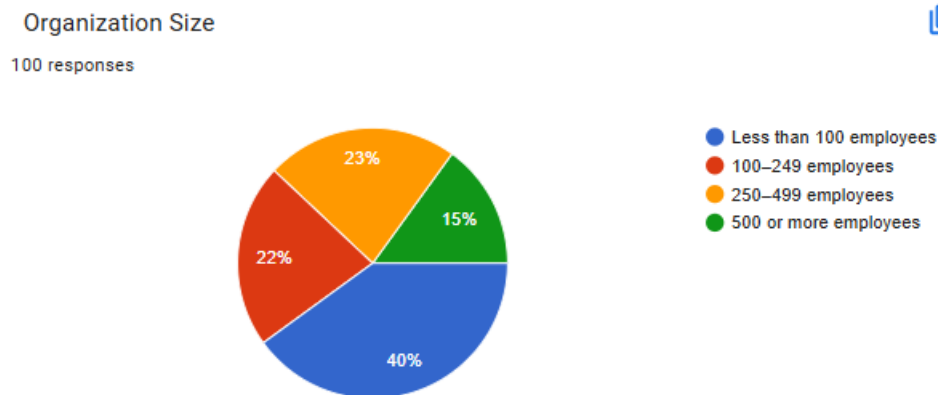


Figure 7: Organization size

The distribution of respondents based on the size of their organization is provided in Table 4.7 and Figure 4.7. The highest number of respondents (40) worked in organizations with fewer than 100 employees, followed by those working in organizations with 250-499 employees (23). Twelve of the respondents (12.0%) were from organizations that have 10-49 employees and 15 of the respondents (15.0%) were from organizations with 500+ employees. The distribution shows that the sample included both small/medium and large organizations, thus providing a greater level of generalizability of the results across organizational size.

4.3 Validity & reliability tests for the questionnaires.

4.3.1 Validity of the Questionnaire

Validity is the degree to which the questionnaire is measuring what it is supposed to measure. For this study, the content validity of the questions used in the questionnaire was ensured by developing the questions based on a comprehensive literature review on digital transformation, project success and management support and also on previously validated instruments used in similar studies. The first draft of the questionnaire was examined to determine the clarity, relevance and sufficiency of the items to the research goals and the theoretical approach discussed in Chapter Two.

To validate the construct of the study, the consistency between the questionnaire items with the three constructs of the Digital Transformation (IV), Project Success (DV), and Management Support (MV) was examined, which is known as construct validity. Eight items

were used to measure each construct and the response patterns and logical relationships observed among items suggested that the questionnaire was sufficiently able to measure the intended constructs.

4.3.2 Reliability of the Questionnaire

Reliability is a measure of consistency and internal stability of the measurement instrument. Internal consistency of each construct was determined by Cronbach's Alpha coefficient, which is common to check the reliability of multi item Likert scale instruments. The reliability of the social science and management research items is considered adequate when the Cronbach's Alpha value is greater than or equal to 0.7 (Taber, 2018).

Construct	No. of Items	Cronbach's Alpha	Reliability Level
Digital Transformation (DT)	8	0.771	Acceptable
Project Success (PS)	8	0.835	Good
Management Support (MS)	8	0.832	Good
Overall Questionnaire	24	0.912	Excellent

Table 4.8: Reliability Statistics (Cronbach's Alpha)

The Cronbach's Alpha for the Digital Transformation construct was 0.771, Project Success was 0.835 and Management Support was 0.832, which were all greater than the commonly accepted value of 0.70. The overall questionnaire (total score of all 24 items) had an excellent score of 0.912 for reliability. The findings support the reliability and stability of the questionnaire in this study as an effective and consistent measurement tool for respondents' perceptions of digital transformation, project success and management support.

4.4 Descriptive Statistics for Research Variables

The descriptive statistics (min, max, mean, and std) are shown for each individual item that measures the three research variables: Digital Transformation, Project Success and Management Support. The answers were rated on a 5-point scale from 1 = strong disagree to 5 = strong agree.

4.4.1 Digital Transformation (Independent Variable)

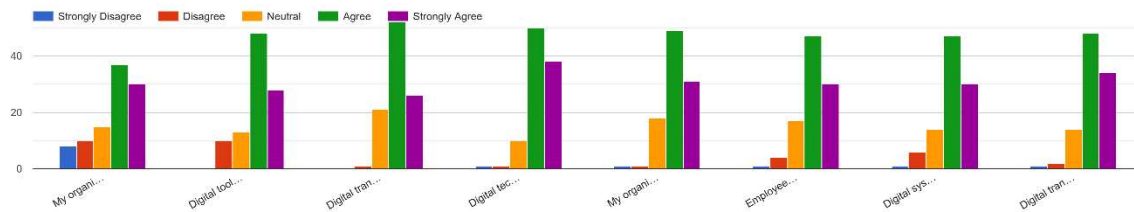
Statement	N	Min	Max	Mean	SD
DT1: Organization has adopted digital technologies to improve project management processes.	100	1	5	3.72	1.22
DT2: Digital tools enable more effective communication among project team members.	100	2	5	3.95	0.90
DT3: Digital transformation has improved project planning and scheduling.	100	2	5	4.02	0.71
DT4: Digital technologies have enhanced collaboration between departments.	100	1	5	4.23	0.75
DT5: Organization regularly invests in new digital technologies.	100	1	5	4.09	0.78
DT6: Employees receive adequate training to use digital technologies.	100	1	5	4.02	0.85
DT7: Digital systems improve access to project information.	100	1	5	4.02	0.88
DT8: Digital transformation has increased operational efficiency.	100	1	5	4.13	0.80
Overall Digital Transformation (composite)	100	2.50	5.00	4.02	0.54

Table 4.9: Descriptive Statistics for Digital Transformation Items

Table 4.9 shows the descriptive statistics for the Digital Transformation construct. The overall composite mean score was 4.02 (SD = 0.54), representing a fairly high level of agreement amongst the respondents of the adoption and impact of digital transformation in their organisation. The most highly rated was DT4 ‘Digital technologies have enhanced collaboration between departments’ (M = 4.23) which showed that cross departmental collaboration was one of the most highly rated advantages of going digital. The lowest ratings and the greatest variability were for DT1 “Organization has adopted digital technologies to improve project management processes” (M = 3.72, SD = 1.22), which suggests that the adoption of digital technologies in project management processes varies widely between

organizations.

Please indicate your level of agreement with the following statements.



4.4.2 Project Success (Dependent Variable)

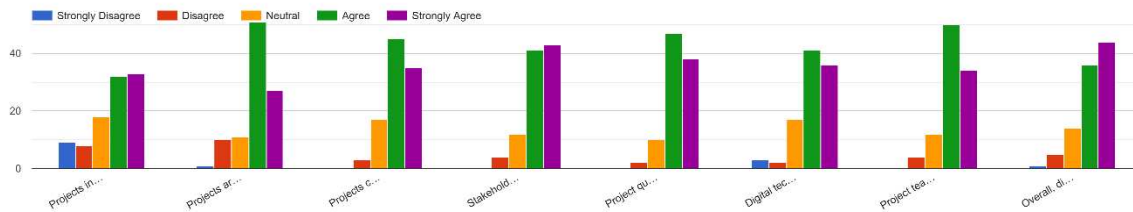
Statement	N	Min	Max	Mean	SD
PS1: Projects are usually completed within the planned schedule.	100	1	5	3.72	1.26
PS2: Projects are generally completed within the approved budget.	100	1	5	3.94	0.93
PS3: Projects consistently achieve their intended objectives.	100	2	5	4.12	0.79
PS4: Stakeholders are satisfied with project outcomes.	100	2	5	4.24	0.81
PS5: Project quality meets organizational expectations.	100	2	5	4.23	0.71
PS6: Digital technologies have improved overall project performance.	100	1	5	4.07	0.93
PS7: Project teams respond effectively to unexpected challenges.	100	2	5	4.14	0.78
PS8: Overall, digital transformation has contributed to project success.	100	2	5	4.20	0.86
Overall Project Success (composite)	100	2.13	5.00	4.08	0.61

Table 4.10: Descriptive Statistics for Project Success Items

The overall composite mean of Project Success was 4.08 (SD = 0.61) which represents a positive overall perception of project outcomes among respondents. The most highly rated was PS4 “Stakeholders are satisfied with project outcomes” (M = 4.24) followed closely by

PS5 “Project quality meets organizational expectations” ($M = 4.23$). This finding had the lowest score for PS1 "Projects are usually completed on time" ($M = 3.72$, $SD = 1.26$) and the highest variance, suggesting that “on time” project delivery is not as consistent across the organizations surveyed as adherence to budget, quality, and stakeholder satisfaction.

Please indicate your level of agreement with the following statements.



4.4.3 Management Support (Moderating Variable)

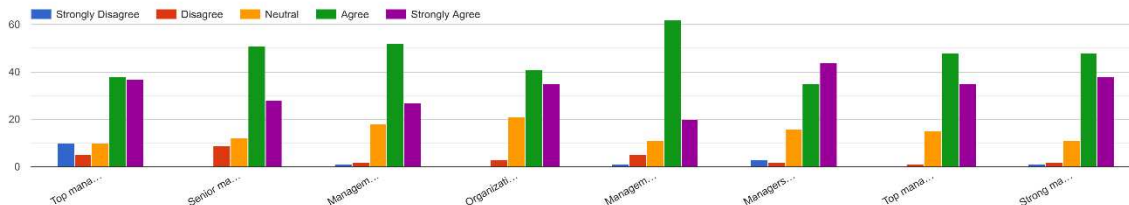
Statement	N	Min	Max	Mean	SD
MS1: Top management actively supports digital transformation initiatives.	100	1	5	3.87	1.25
MS2: Senior management provides sufficient financial resources.	100	2	5	3.98	0.88
MS3: Management encourages employees to adopt new digital technologies.	100	1	5	4.03	0.78
MS4: Organizational leaders communicate a clear vision for digital transformation.	100	2	5	4.08	0.82
MS5: Management provides adequate training for digital transformation.	100	1	5	3.95	0.77
MS6: Managers encourage innovation and continuous improvement.	100	1	5	4.15	0.97
MS7: Top management actively resolves digital transformation challenges.	100	2	5	4.18	0.72
MS8: Strong management support improves success of digitally enabled projects.	100	1	5	4.20	0.79

Statement	N	Min	Max	Mean	SD
Overall Management Support (composite)	100	1.88	5.00	4.06	0.60

Table 4.11: Descriptive Statistics for Management Support Items

The overall composite mean of Management Support was 4.06 (SD = 0.60); this result suggested that the organization's management was generally supportive of the digital transformation activities of the respondents. The most highly rated were MS8 "Strong management support leads to the success of digitally enabled projects" and MS7 "Top management takes active action to overcome challenges in digital transformation" (M = 4.20 and 4.18, respectively). The lowest mean was on MS1 "Top management actively supports digital transformation initiatives" (M = 3.87, SD = 1.25), and the highest variability was on this dimension of management support, indicating that the perception of how visible and consistent top management's active sponsorship on digital initiatives is, differs more across organizations than other dimensions.

Please indicate your level of agreement with the following statements.



4.5 Correlation Analysis

Before testing the research hypotheses, a Pearson correlation analysis was conducted to examine the strength and direction of the relationships among the three composite research variables: Digital Transformation, Project Success, and Management Support.

Variable	Digital Transformation	Project Success	Management Support
Digital Transformation	1.000	0.640**	0.554**
Project Success	0.640**	1.000	0.705**
Management Support	0.554**	0.705**	1.000

Table 4.12: Pearson Correlation Matrix (** $p < .001$, two-tailed, $N = 100$)

Digital Transformation was significantly and positively correlated with Project Success ($r = 0.640$, $p < .001$), suggesting that there was a strong positive correlation between the two variables. Digital Transformation was also positively correlated with Management Support ($r = 0.554$, $p < .001$) and Management Support was most strongly correlated with Project Success ($r = 0.705$, $p < .001$). The results give some initial validation of the hypothesized relationships and are sufficient to continue with regression-based hypothesis testing.

4.6 Hypothesis Testing

The findings of the hypothesis testing performed to test the hypotheses that were assumed in the research model are presented in this section. Simple linear regression, correlation and moderated multiple regression analysis were used to test four hypotheses.

H2: How digital transformation contributes to project success.

H1: concludes that digital transformation has a positive and significant impact on the success of projects in Saudi organizations. A simple linear regression was performed, using Digital Transformation as an independent variable and Project Success as a dependent variable..

Model	B	SE	β (standardized)	t	
Constant	1.177	0.355	—	3.313	
Digital Transformation	0.722	0.088	0.640	8.256	

Table 4.13: Regression Results for H1 ($R^2 = 0.410$, Adjusted $R^2 = 0.404$, $F(1,98) = 68.16$, $p < .001$)

Digital Transformation was deemed as one of the significant and positive predictors for Project Success ($\beta = 0.640$, $t = 8.256$ and $p < .001$) as shown in Table 4.13. The overall model was significant ($F(1,98) = 68.16$, $p < .001$) and accounted for 41.0% of the variance within the Project Success ($R^2 = 0.410$). The outcomes of these results are strong substantiation of H1 which indicates that the more digitally transformed the organization, the higher the project success.

H2: Digital Transformation and Project Efficiency and Effectiveness

H2 believes that digital technologies can significantly improve the efficiency and effectiveness of projects. To validate this, a Pearson correlation analysis was performed

between Digital Transformation and a composite efficiency/effectiveness sub-scale of the Project Success items related to adherence to the project schedule (PS1), budget control (PS2), overall project performance (PS6), and responsiveness to project challenges (PS7).

Relationship	R	p-value	N	Result
Digital Transformation ↔ Project Efficiency/Effectiveness	0.649	< 0.001	100	Supported

Table 4.14: Correlation Results for H2

The results of Table 4.14 show a strong, positive and statistically significant correlation between Digital Transformation and project efficiency and effectiveness ($r = 0.649$; $p < .001$). This result aligns with H2 and indicates that the more advanced the use of digital technologies in an organisation, the better and faster projects are likely to be implemented, especially when it comes to keeping to the schedule, budget and adapting to unforeseen challenges within the project team.

H3: Digital Transformation, Communication/Collaboration, and Project Success

H3 suggests that digital transformation can help the project participants to communicate and collaborate, which can increase the success rate of the project. This hypothesis was put to the test by correlating the two items of Digital Transformation that are most directly matched with communication and collaboration (DT2: effective communication, DT4: enhanced inter-departmental collaboration) with the two items related to Project Success (PS4: stakeholder satisfaction; PS8: overall contribution of Digital Transformation to project success).

Relationship	r	p-value	N	Result
DT Communication/Collaboration ↔ PS Outcomes	0.431	< 0.001	100	Supported

Table 4.15: Correlation Results for H3

As shown in Table 4.15, the correlation was found to be moderate ($r = 0.431$), and statistically significant ($p < .001$). This finding lends some support to H3 which states that the communication and collaboration aspects of DT are meaningfully related to improved

stakeholder satisfaction and project success, albeit the overall relationship between DT and Project Success tested under H1 is stronger.

H4: Moderating Role of Management Support

H4 proposes that management support positively moderates the relationship between digital transformation and project success. A moderated multiple regression (MMR) analysis was performed with the mean-centered variables of Digital Transformation (DT) and Management Support (MS) and an interaction term (Digital Transformation $\times$ Management Support) added to the regression model predicting Project Success.

Predictor	B	SE	t	p-value
Constant	4.082	0.044	92.076	< 0.001
Digital Transformation (centered)	0.407	0.089	4.576	< 0.001
Management Support (centered)	0.514	0.082	6.265	< 0.001
DT $\times$ MS (interaction)	0.001	0.108	0.013	0.989

Table 4.16: Moderated Regression Results for H4 ($R^2 = 0.587$, Adjusted $R^2 = 0.574$, $F(3,96) = 45.50$, $p < .001$)

Table 4.16 shows that both Digital Transformation ($B = 0.407$, $p < .001$) and Management Support ($B = 0.514$, $p < .001$) were significant independent predictors of Project Success and accounted for 58.7% of the variance ($R^2 = 0.587$). The interaction effect (Digital Transformation $\times$ Management Support), however, was not statistically significant ($B = 0.001$, $t = 0.013$, $p = 0.989$). This means that Management Support has a strong additive effect on Project Success and has a strong additive effect on Digital Transformation–Project Success relationship, but it does not significantly moderate (interact) with Digital Transformation–Project Success. H4 is therefore not included in this sample, but the direct effect of Management Support is still a significant result.

4.6.1 Summary of Hypothesis Testing

Hypothesis	Statement	Statistical Test	Result
H1	Digital transformation positively and significantly impacts project success.	Simple Regression	Supported

Hypothesis	Statement	Statistical Test	Result
H2	Digital transformation enhances project efficiency and effectiveness.	Pearson Correlation	Supported
H3	Digital transformation supports communication/collaboration and boosts project success.	Pearson Correlation	Supported
H4	Management support positively moderates the DT–Project Success relationship.	Moderated Regression	Not Supported

Table 4.17: Summary of Hypothesis Testing Results

4.7 Discussion of Findings

Based on the results obtained in this study, it can be ascertained that the digital transformation has a significant and positive impact on project success in the Saudi organizations which is consistent with H1, H2 and H3. The results support Westerman, Bonnet, and McAfee (2014), who claim that companies that make a conscious effort to leverage digital technologies are more likely to excel in their efficiency, communication, and business performance. The findings for the strong relationship between Digital Transformation and project efficiency/effectiveness ($r = 0.649$) corroborate findings from Nwankpa and Roumani (2016) which concluded that IT capability has a positive relationship with firm performance through process efficiency.

The level of support for H3 - digital tools improve communication and inter-departmental collaboration, which leads to better satisfaction of stakeholders and overall project success - is consistent with Sebastian et al. (2017) who argued that coordination mechanisms enabled through digital tools are key to successful project and organizational transformation in large organizations. The findings are also in line with the concept of the Technology–Organization–Environment (TOE) Framework (Tornatzky & Fleischer, 1990) as explained in Chapter Two, which states that the successful integration of technology in an organizational environment will yield measurable benefits to the organization and project level.

In terms of the Resource-Based View (RBV) (Barney, 1991), the present results indicate that the adoption of digital technologies can be viewed as an organizational resource that is valuable and hard to imitate, and this can directly impact on project performance, as seen in

the high overall regression between DT and project success ($R^2 = 0.410$). This is in line with the findings of Al-Ayed et al. (2023), which revealed that digital transformation is a positive influence on organizational performance, in a part mediated by digital innovation capability. The lack of a significant interaction effect for H4 contrasts with the moderation hypothesis presented in Chapter One and with the findings of some previous theories on management support as a contingency factor. This should be taken with a grain of salt, however, because Management Support was one of the most positive and significant direct predictors of Project Success in this study ($B = 0.514$, $p < .001$), and also the most strongly correlated predictor of

Project Success overall ($r = 0.705$). This implies that the concept of management support does not specifically have a heightened impact on digital transformation success or failure, but rather it exists as an independent success factor, as emphasized by Davenport and Westerman (2018) in their study of DT success and failure, which pointed to leadership commitment as one of the key success factors. It is similar to Dynamic Capabilities Theory (DCT) (Teece, Pisano, & Shuen, 1997), which emphasizes management support and adaptive organizational practices as concurrent, not necessarily conditional, forces that affect dynamic environments. There is a possibility of a smaller interaction effect, if one exists, that would be detected with greater statistical power in future studies with larger and more heterogeneous samples.

In general, the findings discussion confirms that this study's empirical findings are compatible with the theoretical framework and previous literature discussed in Chapter Two and uncovers an intriguing aspect of the exact influence management support has on the Saudi organizational context.

4.8 Summary

The statistical analysis of the data was conducted on 100 respondents from Saudi organizations in this chapter to analyze the effect of digital transformation on the success of a project and the moderating effect of management support. The demographic profile indicated that most of the respondents were females (72.0%), age group 20-40 years (69.0%), having a Bachelor's degree or above (92.0%) and working as an IT management staff, team leader or

project team member (83.0%). The sample included balanced numbers of organizations from both the private and public sectors, as well as a mix in size.

All the constructs of the questionnaire were found to have acceptable to good internal consistency (Cronbach's Alpha from 0.771 to 0.835) and the overall reliability of the questionnaire was excellent (Cronbach's Alpha = 0.912). The descriptive statistics indicated that the agreements were generally high for the three constructs with all having a mean greater than 4.00 (on a 5-point scale).

The digital transformation aspects strongly and positively predicted the project success (H1: $\beta = 0.640$, $p < .001$), digital transformation adoption was strongly related to project efficiency and effectiveness (H2: $r = 0.649$, $p < .001$), and digital communication and collaboration tools were strongly related to improved project outcomes (H3: $r = 0.431$, $p < .001$). Although Management Support was an independent predictor of Project Success and one of the strongest predictors, the moderated regression analysis did not support the moderating role of Management Support on the Digital Transformation–Project Success relationship (H4: interaction $\beta = 0.001$, $p = 0.989$).

The results of this study are aligned with the theoretical concepts of the Technology–Organization–Environment (TOE) Framework, Resource-Based View (RBV), and Dynamic Capabilities Theory (DCT), which supports the importance of digital transformation as a key factor in the success of projects in Saudi organizations. In Chapter Five, the findings from the study are presented along with the conclusions, theoretical and practical implications of the study, limitations and recommendations.

4.9 References

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Survey Link:

https://docs.google.com/forms/d/1KhomeS-UoSZ6sqM8obqr9FEb26VAaR_Fa69QnG56T4/edit#responses

- **Section A: Demographic Information**

Q1. Gender

- Male
- Female
- Prefer not to say

Q2. Age

- 20–30 years
- 31–40 years
- 41–50 years
- Above 50 years

Q3. Highest Educational Qualification

- Diploma
- Bachelor's Degree
- Master's Degree
- Doctorate (PhD)
- Other

Q4. Current Job Position

- Project Manager
- IT Manager
- Team Leader
- Project Team Member

- Engineer
- Executive/Director
- Other

Q5. Years of Professional Experience

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

Q6. Organization Type

- Public Sector
- Private Sector

Q7. Organization Size

- Less than 100 employees
- 100–249 employees
- 250–499 employees
- 500 or more employees

• **Section B: Digital Transformation (Independent Variable)**

Please indicate your level of agreement with the following statements.

No.	Statement
DT1	My organization has adopted digital technologies to improve project management processes.
DT2	Digital tools enable more effective communication among project team members.
DT3	Digital transformation has improved project planning and scheduling within my organization.

No.	Statement
DT4	Digital technologies have enhanced collaboration between different departments involved in projects.
DT5	My organization regularly invests in new digital technologies to improve project performance.
DT6	Employees receive adequate training to effectively use digital technologies.
DT7	Digital systems improve access to project information and documentation.
DT8	Digital transformation has increased operational efficiency in project execution.

- **Section C: Project Success (Dependent Variable)**

Please indicate your level of agreement with the following statements.

No.	Statement
PS1	Projects in my organization are usually completed within the planned schedule.
PS2	Projects are generally completed within the approved budget.
PS3	Projects consistently achieve their intended objectives.
PS4	Stakeholders are satisfied with project outcomes.
PS5	Project quality meets organizational expectations.
PS6	Digital technologies have improved overall project performance.
PS7	Project teams respond effectively to unexpected project challenges.
PS8	Overall, digital transformation has contributed to project success in my organization.

- **Section D: Management Support (Moderating Variable)**

Please indicate your level of agreement with the following statements.

No.	Statement
MS1	Top management actively supports digital transformation initiatives.
MS2	Senior management provides sufficient financial resources for digital transformation.

No.	Statement
MS3	Management encourages employees to adopt new digital technologies.
MS4	Organizational leaders communicate a clear vision for digital transformation.
MS5	Management provides adequate training for digital transformation initiatives.
MS6	Managers encourage innovation and continuous improvement in project work.
MS7	Top management actively resolves challenges related to digital transformation.
MS8	Strong management support improves the success of digitally enabled projects.