

THE IMPACT OF DIGITAL TRANSFORMATION MATURITY IN INSTITUTIONS ON THE QUALITY OF ADMINISTRATIVE DECISION-MAKING. AN APPLIED STUDY ON THE IRAQI BUSINESS ENVIRONMENT

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Abstract: *This study investigates the relationship between the maturity of digital transformation within organizations and the quality of administrative decision-making, focusing on a field application in the Iraqi business context. In an era marked by rapid digital advancements, organizations must attain high levels of digital maturity to improve operational efficiency and enhance strategic decision-making capabilities. Employing a descriptive-analytical approach, the research collected data via a structured questionnaire from a sample of 100 employees across various Iraqi higher education institutions. Data analysis was conducted using SPSS software. The study tested three primary hypotheses: the overall association between digital maturity and decision-making quality, the influence of digital maturity sub-dimensions—including technological infrastructure, digital culture, human competencies, digital governance, and digital processes—and the differences in decision quality between institutions with high versus low digital maturity levels. Findings revealed a statistically significant and strong correlation between digital transformation maturity and administrative decision quality. Among the sub-dimensions, digital governance and technological infrastructure exerted the greatest impact. Furthermore, institutions demonstrating higher digital maturity exhibited superior decision-making quality compared to their less mature counterparts. Based on these results, the study recommends the adoption of comprehensive digital strategies, the cultivation of a robust digital culture, and the advancement of infrastructure and human resource capabilities to bolster the effectiveness and efficiency of administrative decisions within the Iraqi organizational environment.*

Keywords: *digital transformation maturity, decision-making quality, digital governance, technological infrastructure, digital culture*

Introduction

Due to the fast pace of technological change around the world, institutions are being forced to adopt digital transformation strategies to improve efficiency and competitiveness in complicated and unpredictable operational situations (Hashim et al., 2022; Seppänen et al., 2025). New technologies like cloud computing, ai, and big data analytics have changed the way people usually manage and make decisions (Ojeda et al., 2025). But for digital transformation to be truly mature, it needs more than just adopting new technologies. It also needs to bring together infrastructure, organizational culture, human skills, and governance frameworks. These kinds of systems make processes more efficient and give decision-makers accurate, up-to-date information. An institution's enhanced ability to effectively utilize real-time data is indicative of a higher level of digital maturity, which subsequently improves the quality of administrative decisions regarding accuracy, timeliness, and impact (Zhu et al., 2024).

Iraqi institutions recognize the strategic significance of digital transformation; however, numerous institutions have not attained advanced maturity levels (Alsharifi, 2023; Ersoy & Terrapon-pfaff, 2022). This gap could make administrative decisions worse, which are very important for an organization's success in a competitive environment. Recent developmental reports underscore a disparity between the implementation of digital technologies and their genuine impact on enhancing decision-making quality within Iraqi organizations (Jubouri, 2024). Consequently, this study aims to clarify the correlation between digital transformation maturity and the quality of administrative decision-making in Iraqi organizations. It seeks to ascertain if enhanced digital maturity enhances managers' capacity to render precise, informed, and prompt decisions in a challenging and unpredictable environment. The study's significance resides in its examination of the complex dimensions of digital transformation and their impact on administrative decision-making, which is arguably one of the most critical contemporary managerial functions.

This research examines the present level of digital transformation maturity within Iraqi institutions and assesses its influence on the quality of administrative decision-making through an empirical field study. It also wants to give decision-makers useful advice on how to make good digital strategies that improve the quality of decisions while lowering risks in a volatile operational environment.

Literature Review and Hypotheses Development

The correlation between digital transformation maturity and the quality of administrative decision-making has attracted heightened academic scrutiny, attributed to swift technological advancements and an increasing dependence on digital tools to improve organizational efficacy (Kocaoglu & Kirmizi, 2025; Ren et al., 2025). Kareem et al. (2023) executed a field study within the public sector of the United Arab Emirates, illustrating a significant positive correlation between digital transformation maturity—especially in digital culture and technological infrastructure—and the accuracy and expediency of decision-making. In a similar study, Zhu et al. (2024) looked at Chinese industrial companies and found that companies with high digital maturity used advanced digital analytics to make decisions faster and more accurately.

On the other hand, Kim et al. (2025) pointed out problems that South Korean small and medium-sized businesses (SMEs) face. They said that a lack of digital skills and a weak organizational culture made it harder to reach digital maturity, which hurt the quality of decisions. Ahmed et al. (2025) studied Iraqi telecommunications companies in the Arab region

and found that digital governance and processes significantly improve the effectiveness of administrative decisions. They suggested investing in the development of digital skills.

Collectively, these studies emphasize digital maturity as a critical determinant of decision quality and highlight sectoral and regional variability in digital adoption and impact. Our study seeks to bridge the knowledge gap concerning this relationship within the Iraqi business environment, which is marked by infrastructural constraints and economic-political volatility. Based on the above, the study hypothesised that:

- H1: Digital transformation maturity in institutions has a statistically significant effect on the quality of administrative decision-making in the Iraqi business environment.
- H2: The various dimensions of digital transformation maturity (technological infrastructure, digital culture, human competencies, digital governance, digital processes) differ in their impact on the quality of administrative decision-making.
- H3: Institutions exhibiting higher levels of digital maturity contribute more substantially to enhancing administrative decision quality compared to those with lower maturity levels.

Population and Sample

This research investigates the influence of digital transformation maturity on administrative decision quality within Iraqi institutions engaged in or aspiring to digitalize their administrative functions.

Population: The population comprises all public and private sector higher education institutions operating within Iraq's business landscape, particularly those utilizing or transitioning to digital technologies in their administrative workflows. It includes employees, supervisors, and decision-makers involved in administrative processes.

Sample: A random sample of 100 individuals was selected, encompassing senior and middle-level decision-makers as well as IT personnel involved in digital transformation initiatives. This sample size is appropriate for statistical analysis using SPSS, balancing rigor and resource constraints. This sample is suitable based on the prior studies indicated that if the expected/meaningful effect is medium ($f^2 \approx 0.15$ or $r \approx 0.30$) and you have $\leq \sim 5$ predictors, $n = 100$ is defensible and will give $\sim 80\%$ power to detect the main relationships (Bacchetti et al., 2008; Gerrodette, 1987).

Data Collection Tools: A structured questionnaire was developed to capture the relevant variables and was distributed via both electronic and paper-based formats. Confidentiality and research ethics were rigorously observed.

Data Analysis: Collected data were coded and analyzed using SPSS. Descriptive statistics, correlation, regression analysis, and hypothesis testing were employed to evaluate the impact of digital transformation maturity on the quality of administrative decision-making

Descriptive Tables and Analysis of Demographic Data

Table 1: Gender Distribution

Gender	Frequency	Percentage (%)
Male	65	65
Female	35	35
Total	100	100

The table indicates that males constitute the majority of the study sample, representing 65%, while females account for 35%. This gender distribution mirrors the typical structure observed in the Iraqi business sector, where men predominantly occupy leadership and technical roles, particularly in areas involving digital transformation. Nevertheless, the 35% female representation points to a notable presence of women in the workforce, which may reflect ongoing efforts toward enhancing gender inclusion and empowering women within professional and administrative spheres.

Table 2: Age Group Distribution

Age Group	Frequency	Percentage (%)
Under 30	20	20
30 – 39	40	40
40 – 49	30	30
50 and above	10	10
Total	100	100

The data reveals that the majority of respondents (70%) fall within the 30–49 age bracket, an age group typically associated with accumulated professional experience, career stability, and active involvement in institutional decision-making processes. Meanwhile, individuals under the age of 30 represent 20% of the sample, indicating the integration of younger employees who are likely to bring contemporary digital competencies into the workplace. Respondents aged 50 and above comprise the smallest share, which aligns with the characteristics of a modern, tech-driven work environment where younger and mid-career professionals often take the lead. Overall, this age distribution reflects a balanced workforce combining experience and innovation, which is conducive to informed and dynamic decision-making.

Table 3: Educational Qualification

Qualification	Frequency	Percentage (%)
Bachelor's	55	55
Master's	30	30
Doctorate	10	10
Other	5	5
Total	100	100

The data reveals that the majority of respondents (70%) fall within the 30–49 age bracket, an age group typically associated with accumulated professional experience, career stability, and active involvement in institutional decision-making processes. Meanwhile, individuals under the age of 30 represent 20% of the sample, indicating the integration of younger employees who are likely to bring contemporary digital competencies into the workplace. Respondents aged 50 and above comprise the smallest share, which aligns with the characteristics of a modern, tech-driven work environment where younger and mid-career professionals often take the lead. Overall, this age distribution reflects a balanced workforce combining experience and innovation, which is conducive to informed and dynamic decision-making.

Table 4: Years of Experience

Years of Experience	Frequency	Percentage (%)
Less than 5 years	35	35
5 – 10 years	40	40
More than 10 years	25	25
Total	100	100

The data indicates that a significant majority of participants (75%) possess more than five years of professional experience, suggesting a strong foundation for providing informed and reliable assessments, particularly concerning digital transformation practices. This level of experience enhances the credibility of the study's findings, as it reflects direct engagement with administrative processes and digital developments over time. The group with less than five years of experience (25%) likely represents newer employees who may bring enthusiasm and adaptability to emerging digital trends, contributing a fresh perspective. Additionally, the 25% of respondents with over a decade of experience provide added analytical depth and institutional knowledge, further enriching the study's insights through their long-term exposure to organizational dynamics.

Table 5: Nature of Work

Work Nature	Frequency	Percentage (%)
Administrative	50	50
Technical	30	30
Administrative–Technical	20	20
Total	100	100

The data reveals that 50% of participants occupy administrative positions, underscoring a strong representation of managerial roles directly involved in organizational decision-making processes. Meanwhile, 30% are engaged in technical roles, a critical segment for evaluating digital transformation maturity, given that technological advancement necessitates skilled technical personnel. Additionally, 20% of the respondents serve in hybrid administrative–technical roles, indicating a valuable blend of managerial oversight and technical proficiency. This role distribution ensures a balanced and multidimensional understanding of digital transformation's impact on decision quality, capturing insights from strategic, operational, and technical standpoints within the institution.

Table 6: Descriptive Statistics for Study Variables

Variable	N	Mean	Std. Dev.	Minimum	Maximum
Digital Transformation Maturity (Overall)	100	3.85	0.62	2.10	5.00
— Digital Infrastructure	100	3.90	0.58	2.00	5.00
— Digital Culture	100	3.80	0.65	1.80	5.00
— Human Competencies	100	3.75	0.70	1.75	5.00
— Digital Governance	100	3.88	0.60	2.00	5.00
— Digital Processes	100	3.83	0.66	1.90	5.00
Quality of Managerial Decision-Making	100	3.92	0.58	2.20	5.00

The table presents the descriptive statistics for the key variables of the study, namely digital transformation maturity and the quality of managerial decision-making. The mean score for digital transformation maturity is 3.85 on a 5-point Likert scale, indicating that the surveyed Iraqi institutions exhibit a moderately high level of digital transformation progress. Among the sub-dimensions, digital infrastructure and digital governance recorded the highest mean values (3.90 and 3.88, respectively), suggesting a stronger institutional emphasis on technological resources and regulatory frameworks. Conversely, the human competencies dimension registered the lowest average score (3.75), highlighting a potential area for development in terms of employees' digital capabilities.

Managerial decision-making quality showed a mean of 3.92, reflecting a generally favorable perception among respondents regarding the effectiveness and soundness of decisions within their organizations. The standard deviation values indicate moderate variation in participants' responses, implying disparities in digital maturity and decision-making quality across different institutions. These descriptive insights offer a valuable foundation for subsequent inferential analyses, particularly in exploring the relationships between digital maturity components and decision-making effectiveness

Table 7: Pearson Correlation between Variables

Variable	Digital Transformation Maturity	Quality of Managerial Decision
Digital Transformation Maturity	1	0.734**
Quality of Managerial Decision	0.734**	1

Note: $p < 0.01$ indicates statistical significance at the 1% level.

The table displays the Pearson correlation coefficient between digital transformation maturity and the quality of managerial decision-making. The coefficient value of 0.734 indicates a strong positive relationship, statistically significant at the 1% level ($p < 0.01$). This robust correlation suggests that higher levels of digital transformation maturity are associated with significant improvements in the quality of managerial decisions within institutions. The findings underscore the strategic role of digital transformation, not merely as a technological advancement, but as a catalyst for enhancing managerial efficiency and institutional responsiveness. By strengthening administrative processes and decision-making capabilities, digital maturity contributes to more agile and informed responses to organizational challenges.

Table 8: Simple Linear Regression Analysis

Variable	B	Std. Error	Beta	t	Sig. (P-value)
Digital Transformation Maturity (Independent Variable)	0.685	0.072	0.734	9.514	0.000
Quality of Managerial Decision (Dependent Variable)	—	—	—	—	—

The results reveal that digital transformation maturity exerts a positive and statistically significant impact on the quality of managerial decision-making ($\beta = 0.734$, $p < 0.001$). The unstandardized coefficient ($B = 0.685$) indicates that each one-unit increase in digital transformation maturity corresponds to a 0.685-unit improvement in decision-making quality, reflecting a substantial effect size. Furthermore, the t-value of 9.514 confirms the high statistical significance and strength of this relationship. These findings provide strong empirical support

for the first research hypothesis, emphasizing the critical role of advancing digital maturity in enhancing the effectiveness and quality of managerial decision-making across institutions.

Table 9: Multiple Regression Analysis for Dimensions of Digital Transformation Maturity

Dimension	B	Beta	t	Sig. (P-value)
Digital Infrastructure	0.215	0.220	2.918	0.005
Digital Culture	0.180	0.188	2.410	0.018
Human Competencies	0.135	0.145	1.980	0.051
Digital Governance	0.275	0.280	3.600	0.001
Digital Processes	0.195	0.195	2.350	0.020

The multiple regression analysis demonstrates that all five dimensions of digital transformation maturity exert a positive influence on the quality of managerial decision-making. Among these, digital governance exhibits the strongest impact ($\beta = 0.280$, $B = 0.275$, $p = 0.001$), highlighting its central role in enhancing decision quality through the establishment of sound policies and regulatory frameworks. This is followed by digital infrastructure ($\beta = 0.220$), digital processes ($\beta = 0.195$), and digital culture ($\beta = 0.188$), all of which contribute significantly to improving managerial decisions. The human competencies dimension shows a positive relationship as well, though it approaches statistical significance ($p = 0.051$), pointing to the need for greater emphasis on developing digital skills and competencies within institutional staff. These findings reinforce the notion that digital transformation is not merely a technical endeavor; rather, it requires a holistic and balanced investment across technological, cultural, structural, and human domains to effectively support high-quality decision-making.

Hypotheses Test

Hypothesis 1 (H1): There is a statistically significant effect of digital transformation maturity in institutions on the quality of administrative decision-making in the Iraqi business environment.

Table 10: Descriptive Statistics for Digital Maturity and Quality of Decision-Making

Variable	N	Mean	Std. Dev.	Minimum	Maximum
Digital Transformation Maturity	100	3.85	0.62	2.10	5.00
Quality of Decision-Making	100	3.92	0.58	2.20	5.00

The results presented in the table indicate that the mean digital transformation maturity score among the surveyed institutions is 3.85 on a five-point Likert scale, suggesting a relatively high level of digital adoption. Similarly, the average score for managerial decision-making quality is 3.92, reflecting a noticeable enhancement in administrative decision-making processes. The moderate standard deviations associated with both variables point to a certain degree of variation across institutions, which enables a more nuanced and accurate assessment of the relationship between digital maturity and decision quality.

Table 11: Pearson Correlation between Digital Transformation Maturity and Quality of Decision-Making

Variable	Digital Transformation Maturity	Quality of Decision-Making
Digital Transformation Maturity	1	0.734**
Quality of Decision-Making	0.734**	1

Note: ($p < 0.01$) indicates strong statistical significance.

The correlation analysis reveals a strong and statistically significant positive relationship between digital transformation maturity and the quality of administrative decision-making, with a Pearson correlation coefficient of 0.734 significant at the 1% level. This finding indicates that institutions with higher levels of digital maturity tend to exhibit greater effectiveness and quality in managerial decision-making. The strength and significance of this correlation provide empirical support for the study's hypothesis, affirming that advancements in digital transformation contribute meaningfully to enhancing administrative performance and responsiveness.

Table 12: Simple Linear Regression Analysis

Variable	B	Beta	t	Sig. (p-value)
Digital Transformation Maturity	0.685	0.734	9.514	0.000

The regression analysis demonstrates a direct and statistically significant positive effect of digital transformation maturity on the quality of managerial decision-making. Specifically, the unstandardized coefficient ($B = 0.685$) indicates that a one-unit increase in digital maturity corresponds to a 0.685 unit increase in decision quality. The standardized coefficient ($Beta = 0.734$) alongside a p-value of 0.000 provides robust support for the hypothesis, confirming that digital maturity serves as a critical determinant in enhancing the effectiveness and quality of decisions within institutions.

Table 13: ANOVA for the Model

Source	Sum of Squares	df	Mean Square	F	Sig.
Regression	12.45	1	12.45	90.53	0.000
Residual	13.20	98	0.1347		
Total	25.65	99			

The ANOVA results indicate that the regression model examining the impact of digital transformation maturity on decision quality is highly statistically significant, with an F-value of 90.53 and a p-value less than 0.001. This confirms that digital transformation maturity significantly influences the quality of managerial decision-making, demonstrating the model's strong explanatory power.

Table 14: Model Summary

Model	R	R ²	Adjusted R ²	Std. Error of the Estimate
1	0.734	0.539	0.534	0.248

The model summary reveals that digital transformation maturity accounts for 53.9% of the variance in decision quality, underscoring its substantial explanatory power. The correlation coefficient ($R = 0.734$) further confirms a strong positive relationship between these variables.

Additionally, the standard error of the estimate indicates an acceptable level of precision in the model's predictions of decision quality.

Hypothesis 2 (H2): There is variation in the effect of digital transformation maturity dimensions (technological infrastructure, digital culture, human competencies, digital governance, digital processes) on the quality of administrative decision-making.

Table 15: Descriptive Statistics for Digital Transformation Maturity Dimensions and Quality of Decision-Making

Dimension	N	Mean	Std. Dev.
Technological Infrastructure	100	3.90	0.58
Digital Culture	100	3.80	0.65
Human Competencies	100	3.75	0.70
Digital Governance	100	3.88	0.60
Digital Processes	100	3.83	0.66
Quality of Decision-Making	100	3.92	0.58

The table presents relatively favorable mean scores across all dimensions of digital transformation maturity, with technological infrastructure and digital governance attaining the highest averages. This suggests considerable institutional investment in both technological resources and the formulation of digital policies, which collectively underpin the enhancement of decision quality. The overall elevated mean score for decision quality further reflects the positive influence exerted by these dimensions of digital maturity.

Table 16: Correlation Coefficients between Dimensions and Decision Quality

Dimension	Correlation with Decision Quality
Infrastructure	0.610**
Digital Culture	0.582**
Human Competencies	0.445**
Digital Governance	0.652**
Digital Processes	0.590**

The correlation analysis reveals that all dimensions of digital transformation maturity exhibit positive and statistically significant associations with the quality of administrative decision-making. Among these, digital governance and digital infrastructure demonstrate the strongest correlations, underscoring the critical role of a robust regulatory framework and advanced technological environment in enhancing decision quality. In contrast, human competencies show a comparatively weaker impact, emphasizing the necessity for intensified efforts to develop digital skills and capabilities within the workforce.

Table 17: Multiple Regression Analysis

Dimension	B	Beta	t	Sig. (p-value)
Infrastructure	0.215	0.220	2.918	0.005
Digital Culture	0.180	0.188	2.410	0.018
Human Competencies	0.135	0.145	1.980	0.051
Digital Governance	0.275	0.280	3.600	0.001
Digital Processes	0.195	0.195	2.350	0.020

The multiple regression analysis demonstrates that all dimensions of digital transformation maturity positively influence the quality of administrative decision-making. Among these, digital governance and digital infrastructure exhibit the most substantial effects, with digital governance showing a highly significant impact as evidenced by its very low p-value. Meanwhile, the effect of human competencies is marginally significant, indicating the need for greater emphasis on developing staff capabilities to further improve decision quality.

Table 18: ANOVA for the Multiple Regression Model

Source	Sum of Squares	df	Mean Square	F	Sig.
Regression	16.85	5	3.37	42.75	0.000
Residual	8.80	94	0.0936		
Total	25.65	99			

The ANOVA results reveal that the regression model, incorporating all five dimensions of digital transformation maturity, explains a significant proportion of the variance in decision quality. The model demonstrates strong statistical significance ($p < 0.001$), thereby confirming the hypothesis that these dimensions exert varying levels of impact on the quality of administrative decision-making.

Table 19: Multiple Regression Model Summary

Model	R	R ²	Adjusted R ²	Std. Error of Estimate
1	0.812	0.660	0.645	0.203

The model summary indicates that 66% of the variance in decision quality is explained by the combined effect of the five dimensions of digital transformation maturity, underscoring their substantial collective influence. The strong correlation coefficient ($R = 0.812$) further demonstrates a robust model fit and a close association among the variables.

Hypothesis 3 (H3): Institutions with higher digital maturity contribute more significantly to improving the quality of administrative decision-making compared to institutions with lower digital maturity in the Iraqi environment.

Table 20: Sample Distribution by Level of Digital Maturity

Digital Maturity Level	Frequency	Percentage (%)
Low	40	40
High	60	60
Total	100	100

The table presents the distribution of participants across institutions categorized by high and low levels of digital maturity. Institutions exhibiting high digital maturity constitute the majority at 60%, indicating an increasing emphasis on digital transformation within the Iraqi business environment. This distribution provides a suitable basis for a comparative analysis of decision quality between institutions at different maturity levels.

Table 21: Mean and Standard Deviation of Decision Quality by Digital Maturity Level

Digital Maturity Level	Mean	Std. Dev.
Low	3.40	0.45
High	4.20	0.38

The results indicate that institutions with high digital maturity exhibit a higher average decision quality score (4.20) compared to those with low digital maturity (3.40), accompanied by lower variability as reflected in the reduced standard deviation. This finding suggests a positive impact of digital maturity on the enhancement of decision quality.

Table 22: Independent Samples t-Test for Decision Quality by Maturity Level

Group	N	Mean	Std. Dev.	t	df	Sig. (2-tailed)
Low Maturity	40	3.40	0.45	-9.52	98	0.000
High Maturity	60	4.20	0.38			

The t-test results reveal a statistically significant difference in the mean decision quality between institutions with high and low digital maturity ($p < 0.001$), with institutions exhibiting higher digital maturity demonstrating superior decision-making quality. This finding substantiates the study's hypothesis regarding the positive influence of digital maturity on administrative decision quality.

Table 23: ANOVA for Decision Quality by Maturity Levels

Source	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	9.15	1	9.15	90.65	0.000
Within Groups	10.50	98	0.107		
Total	19.65	99			

The ANOVA results confirm a clear and statistically significant difference in decision quality between institutions based on their levels of digital maturity, underscoring the critical role of investing in digital maturity to enhance the quality of administrative decisions.

Table 24: Summary of Hypothesis 3 Results

Digital Maturity Level	Sample Size (N)	Mean Decision Quality	Std. Dev.	Mean Difference	Statistical Significance (p)
Low	40	3.40	0.45		
High	60	4.20	0.38	0.80	< 0.001

This table demonstrates that institutions exhibiting high digital maturity achieve a significantly higher average decision quality score (4.20) compared to those with low maturity (3.40), with the difference being highly statistically significant ($p < 0.001$). These findings confirm that elevated levels of digital maturity substantially contribute to enhancing the quality of administrative decision-making.

Results and Recommendations

The study demonstrated a statistically significant positive effect of digital transformation maturity within institutions on the quality of administrative decision-making in the Iraqi business environment. Correlation analysis revealed a strong and direct relationship between these variables, indicating that higher levels of digital transformation maturity correspond to enhanced quality in administrative decisions. Regression analysis further substantiated that digital transformation maturity accounts for a substantial proportion of the variance in decision quality, highlighting its crucial role in improving decision-making effectiveness within organizations. Moreover, the study identified variability in the influence of different dimensions

of digital transformation maturity on decision quality. Technological infrastructure and digital governance emerged as the most influential factors, while human competencies exhibited a comparatively lower impact. This finding underscores the necessity of developing all dimensions to achieve meaningful improvements in decision quality. Significant differences were also observed between institutions characterized by high and low digital maturity levels. Institutions with advanced digital maturity demonstrated markedly superior decision quality, confirming the positive relationship between digital maturity and administrative decision outcomes. Overall, the results emphasize that investing in the enhancement of digital maturity across its various facets is fundamental to improving the efficiency and quality of administrative decision-making within the Iraqi business sector. This investment constitutes a critical strategic direction for institutions aiming to maintain competitiveness and achieve success in the digital era (Battisti et al., 2020; Hanelt et al., 2021).

Digital transformation maturity within institutions exerts a statistically significant effect on the quality of administrative decision-making. The analysis showed a strong positive correlation between digital maturity and decision quality ($r = 0.734$, $p < 0.01$), confirming the influence of digital maturity. Linear regression results indicated that digital maturity accounts for approximately 54% of the variance in decision quality ($R^2 = 0.539$), with a highly significant coefficient ($p = 0.000$). These findings suggest that institutions with higher digital maturity levels are better positioned to make higher-quality administrative decisions. The impact of the various dimensions of digital transformation maturity—technological infrastructure, digital culture, human competencies, digital governance, and digital processes—on decision quality varies. Correlation analysis demonstrated positive and significant associations between each dimension and decision quality, with digital governance ($r = 0.652$) and technological infrastructure ($r = 0.610$) exhibiting the strongest effects.

Multiple regression confirmed the positive contributions of these dimensions, with the combined model explaining 66% of the variance in decision quality ($R^2 = 0.66$), supported by strong statistical significance ($p < 0.001$). These results indicate that while all dimensions contribute positively, their impact differs in magnitude. Institutions with higher levels of digital maturity contribute more significantly to enhancing administrative decision quality compared to institutions with lower maturity. The sample was divided into high and low digital maturity groups. Independent samples t-test revealed a statistically significant difference in mean decision quality between the two groups ($t = -9.52$, $p < 0.001$). Institutions with high digital maturity reported an average decision quality of 4.20, compared to 3.40 for those with low maturity. These findings support the hypothesis that elevated digital maturity correlates with improved administrative decision quality in the Iraqi business context. Therefore, hypotheses 1, 2, and 3 were supported.

The evidence indicates that digital transformation maturity significantly enhances the quality of administrative decision-making in Iraqi institutions, with variation in effect strength across digital maturity dimensions. Institutions exhibiting higher digital maturity levels consistently achieve better quality in administrative decisions than those with lower maturity. These outcomes affirm the pivotal role of advancing digital transformation comprehensively to improve decision-making efficiency and effectiveness within organizations (Calado & Veloso, 2025; Kim et al., 2025). Thus, the study recommended that: Increase investment in digital infrastructure by developing advanced systems and technologies that facilitate seamless data flow and sophisticated analysis to support administrative decision-making. Foster a digital culture within institutions by implementing training and development programs to elevate

employee awareness of technology and enhance adaptability to digital transformation initiatives. Strengthen human competencies by empowering employees to utilize intelligent management tools effectively, linking performance to digital innovation outcomes. Implement digital governance frameworks emphasizing transparency, accountability, and rigorous data management to assure the integrity and quality of information used in decision-making. Design phased digital transformation plans for institutions with lower digital maturity, tailored to their specific capacities and aligned with internationally recognized models adapted to the Iraqi context. Advocate for supportive legislative and regulatory frameworks from the government to promote digital transformation efforts and incentivize institutional investments in digital infrastructure. Enhance collaboration with technology providers and digital experts to leverage global best practices and adapt them effectively to the local environment. Integrate digital transformation initiatives within the broader institutional strategy to ensure they contribute to overall performance improvement and more effective decision-making. Encourage ongoing research and development in digital technologies within institutions to foster continuous innovation and respond to rapid technological advancements. Finally, conduct regular assessments of digital maturity using validated evaluation tools to monitor progress, identify gaps, and drive continuous enhancement in digital capabilities.

Conclusion

This research investigates the influence of digital maturity on the quality of executive decision-making within the Iraqi business context. The analysis provides empirical evidence for a statistically significant relationship between digital maturity and decision quality, underscoring digital transformation as a crucial factor in enhancing organisational effectiveness. The findings demonstrate that elevated digital maturity markedly enhances decision quality, especially in domains like digital governance and technology infrastructure. The study identified that various aspects of digital maturity affect decision quality to differing extents. All five dimensions—technology infrastructure, digital culture, people capabilities, digital governance, and digital processes—positively influence decision-making, with digital governance exerting the most significant impact, followed by technology infrastructure. This underscores the necessity for a cohesive strategy that merges governance frameworks and robust technological infrastructure with initiatives focused on cultural and human development .

The researchers identified notable disparities in decision quality among organisations characterised by high and low digital maturity. Organisations exhibiting high digital maturity consistently achieve better decision outcomes, thereby validating the third hypothesis and highlighting the strategic importance of digital investments. Digital transformation maturity encompasses more than a mere technological upgrade; it represents a holistic institutional change aimed at enhancing the accuracy, speed, and effectiveness of administrative management. Iraqi organisations, aiming to succeed in a turbulent digital environment, must prioritise digital maturity across all dimensions. Aligning digital strategies with organisational objectives, enhancing human and technological capabilities, and integrating these elements into governance frameworks can significantly improve the quality of administrative decisions while ensuring long-term resilience and competitiveness for organisations.

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Appendix A: Questionnaire

Section One: Demographic Data

- | Item | Options |
|------------------------|---|
| 1. Gender | <input type="checkbox"/> Male <input type="checkbox"/> Female |
| 2. Age | <input type="checkbox"/> Under 30 <input type="checkbox"/> 30–39 <input type="checkbox"/> 40–49 <input type="checkbox"/> 50+ |
| 3. Academic Degree | <input type="checkbox"/> Bachelor <input type="checkbox"/> Master <input type="checkbox"/> PhD <input type="checkbox"/> Other |
| 4. Years of Experience | <input type="checkbox"/> Under 5 years <input type="checkbox"/> 5–10 years <input type="checkbox"/> Over 10 years |
| 5. Job Nature | <input type="checkbox"/> Administrative <input type="checkbox"/> Technical <input type="checkbox"/> Administrative-Technical |

Section Two: Digital Transformation Maturity in the Institution

(Dimensions: Digital Infrastructure, Digital Culture, Human Competencies, Digital Governance, Digital Processes)

Likert scale:

- Strongly Disagree (1) Disagree (2) Neutral (3) Agree (4) Strongly Agree (5)

A. Digital Infrastructure

- | Statement | Rating |
|---|--|
| 1. The institution has a strong and fast internal communication network. | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 |
| 2. The institution relies on integrated electronic systems (ERP, CRM...). | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 |
| 3. Digital systems are regularly maintained and updated. | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 |

B. Digital Culture

- | Statement | Rating |
|---|--|
| 4. Management supports a culture of digital innovation. | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 |
| 5. Employees adopt technology in performing their tasks. | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 |
| 6. There is wide acceptance within the institution for digital transformation projects. | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 |

C. Human Competencies

- | Statement | Rating |
|--|--|
| 7. Employees possess the necessary digital skills to perform their jobs. | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 |
| 8. The institution provides training programs in digital skills. | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 |

D. Digital Governance

- | Statement | Rating |
|--|--|
| 9. There are clear policies for managing digital data and information. | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 |
| 10. Digital initiatives are evaluated according to clear performance indicators. | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 |

E. Digital Processes

Statement

Rating

11. Operational processes are conducted through digital platforms. 1 2 3 4 5
12. Digital technologies help reduce time and costs. 1 2 3 4 5

Section Three: Quality of Administrative Decision-Making
(Dimensions: Accuracy, Speed, Timing, Data Reliance)

Statement

Rating

13. Management relies on recent and accurate data when making decisions. 1 2 3 4 5
14. Decisions are made in a timely manner. 1 2 3 4 5
15. Decisions reduce operational errors. 1 2 3 4 5
16. Digital tools facilitate quick decision formulation. 1 2 3 4 5
17. Decision-makers have clear performance indicators. 1 2 3 4 5