

**THE IMPACT OF DIGITAL TRANSFORMATION OF PUBLIC ADMINISTRATION
ON ENHANCING JOB PERFORMANCE: AN ANALYTICAL STUDY OF THE
OPINIONS OF A SAMPLE OF EMPLOYEES AT THE AL-HILLAH MUNICIPALITY
DIRECTORATE**

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ABSTRACT

This research aims to investigate the impact of digital transformation in public administration on enhancing job performance, through an analysis of the opinions of a sample of employees at the Al-Hillah Municipality Directorate. Driven by the challenges imposed by the contemporary environment, digital transformation has become a strategic necessity for developing administrative work and enhancing its efficiency, particularly in public institutions that constitute the backbone of service delivery. This study sought to determine the level of impact of adopting modern technologies and digital systems on the various dimensions of job performance, such as efficiency, productivity, transparency, speed of accomplishment, and job satisfaction. To achieve the research objectives, the descriptive-analytical methodology was employed, and a questionnaire was utilized as the primary tool for data collection from a random sample of employees. The findings revealed a statistically significant positive correlation between the level of implemented digital transformation and improved job performance. Digitalization was found to contribute to expediting procedures, reducing errors, increasing transparency, and fostering a team spirit. The results also highlighted challenges facing digital transformation, including resistance to change, inadequate infrastructure, and a lack of digital skills among some employees. Accordingly, the study recommends the formulation of ambitious strategic plans for digital transformation, coupled with investment in training and qualification, development of infrastructure, and promotion of a culture of innovation, to ensure maximum benefit from modern technologies in improving institutional performance.

Keywords: Digital Transformation, Public Administration, Job Performance, Technology, Al-Hillah Municipality.

1. INTRODUCTION

The world is currently experiencing a comprehensive digital transformation that has pervaded various sectors, and the public sector has not been immune to this accelerating technological wave. Digital transformation in public administration has become an inescapable imperative to keep pace with global developments, improve the quality of services provided to citizens, and enhance institutional performance efficiency. The significance of this topic lies in its representation of a qualitative shift in administrative work methods, contributing to streamlining procedures, reducing time and effort, increasing transparency, and curbing administrative corruption.

This research investigates the impact of digital transformation in public administration on enhancing job performance, through an analysis of the opinions of a sample of employees at the Al-Hillah Municipality Directorate. The research aims to identify the employees' level of awareness regarding the concept of digital transformation and its various dimensions, measure their level of job performance, and explore the nature of the relationship between these two variables within the municipal work context, which represents the direct link between the state and the citizen.

2. THEORETICAL FRAMEWORK

Introduction

Today, digital transformation constitutes a central pillar in the strategies of organizations seeking to enhance their competitive capabilities and achieve institutional excellence. However, this transformation is not limited merely to technology adoption; it extends to encompass fundamental changes in organizational culture, structures, and human capabilities. This chapter addresses the theoretical framework of digital transformation by reviewing its concept, importance, primary dimensions, theoretical models explaining the relationship between digital transformation and job performance, the mechanisms of this relationship, and the role of human resources in this context, in addition to the challenges facing digital transformation in the public sector, drawing upon recent sources and studies in this field.

First: The Concept of Digital Transformation

The concept of digital transformation transcends the notion of mere process automation or digitization; it represents a qualitative leap that reshapes how organizations operate and interact with technology. Researchers define digital transformation as "a process aimed at improving an entity by bringing about significant changes in its characteristics through the combination of information, computing, communication, and connectivity technologies" (Lusha, 2025: 4). Consequently, digital transformation is a qualitative shift that reshapes the way organizations operate and interact with technology, affecting their culture, organizational structure, and human capabilities (Lusha, 2025: 7). This definition implies that digital transformation is not merely a technical upgrade but a reimagining of entire organizational processes and strategies.

In a similar context, digital transformation refers to the reimagining of operational models and administrative processes through the integration of digital technologies into all aspects of work, leading to a radical change in how services are delivered and value is created for beneficiaries. This concept is not confined to the private sector but extends to the public sector and educational institutions, where it contributes to improving performance and enhancing the efficiency of services provided (Khatir & Madani, 2024: 1825).

Recent studies indicate that digital transformation is a continuous process, not a singular event, as it requires constant adaptation to technological variables and the development of digital strategies in line with the demands of the era (Khatir & Madani, 2024: 1830). This renders digital transformation a dynamic journey in which human, technical, and organizational elements interact to achieve the organization's objectives.

One study defines digital transformation as "a fundamental process of change, enabled by the innovative use of digital technologies, accompanied by the strategic leverage of key resources and capabilities, with the aim of radically improving the entity and redefining the value proposition for stakeholders." This definition emphasizes that digital transformation requires more than just

technology; it demands a clear strategy and qualified human resources.

Second: The Importance of Digital Transformation

The importance of digital transformation is evident in its role as a primary driver of development and innovation in organizations, and it represents a fundamental pillar for achieving competitive advantages and ensuring sustainability in a changing business environment. This importance has become particularly prominent amid the rapid transformations witnessed globally. Recent meta-analyses have highlighted the importance of digital transformation by synthesizing the results of 74 studies, confirming that digital transformation is influenced by technological, organizational, and environmental factors and that it plays a crucial role in improving organizational efficiency and performance. The most prominent aspects of the importance of digital transformation include:

1. **Improving Operational Efficiency and Productivity:** Digital transformation contributes to streamlining procedures and reducing the time and effort expended in task completion, which positively impacts productivity and work quality (Valencia-Julca et al., 2025: 15). A recent study confirms that digital transformation enhances organizational productivity by improving processes and enabling data-driven decision-making.
2. **Enhancing Innovation Capability and Organizational Agility:** Digital technologies provide new opportunities for developing products and services and innovating business models that better meet the needs of beneficiaries (Khatir & Madani, 2024: 1826). Research indicates that digital transformation significantly contributes to enhancing institutional flexibility and their ability to adapt to rapid changes in the external environment.
3. **Supporting Decision-Making:** Digital transformation systems provide accurate data and advanced analytics that help leadership make strategic decisions based on objective information (Lusha, 2025: 9). A recent study shows that digital transformation strategy, when integrated with data-driven decisions (DDM), leads to notable improvements in organizational performance, especially in highly competitive and hostile environments.
4. **Empowering Human Resources and Developing Competencies:** Investing in developing employees' digital skills is a critical element for the success of digital transformation, as Nawawi et al. (2026: 80) and Ingsih et al. (2024: 104) indicate that possessing digital competencies is a prerequisite for benefiting from this transformation and improving performance.
5. **Enhancing Organizational Resilience in the Face of Crises:** The digital infrastructure enables organizations to adapt quickly to external changes, such as crises or market shifts, thereby enhancing their capacity for continuity and growth (Zhou et al., 2025: 3).

Third: Dimensions of Digital Transformation (The SPPT Model)

Digital transformation refers to a multi-dimensional process that is not limited to the technical aspect but extends to include organizational, human, cultural, and strategic dimensions. In contemporary literature, several fundamental dimensions of digital transformation emerge, which can be summarized in the Strategy-People-Processes-Technologies (SPPT) model proposed by a recent study:

1. **Strategic Dimension (Strategy) / Leadership and Vision:** This dimension relates to the role of leadership in guiding the digital transformation process, setting the necessary vision and strategies, and supporting employees through the phases of change. Vural's study (2025: 41) emphasizes the role of digital leadership in guiding and supporting employees during the transformation process, which positively reflects on their performance, as the results showed

that digital leadership has a positive and significant impact on both job performance and its sub-dimensions (task performance and contextual performance). In this framework, the need for digital leaders with a forward-looking vision, familiarity with new technologies, and the ability to motivate and lead their teams towards adopting digital technology emerges (Khatir & Madani, 2024: 1832). Research emphasizes that successful digital transformation requires aligning digital initiatives with organizational goals and the institution's vision. The meta-analysis results also indicated that organizational factors, such as leadership support, are key drivers of digital transformation.

2. **Human Dimension (People) / Human Resources and Digital Capabilities:** This dimension focuses on qualifying and empowering human cadres to possess the necessary digital skills and competencies for interacting with modern technologies. Numerous studies confirm that the success of digital transformation depends significantly on employee readiness and their ability to adapt to technological changes. In this context, the concept of "digital competence" emerges as a critical factor in improving job performance, as Nawawi et al. (2026: 84) found that digital competence positively affects job performance both directly and indirectly through improving smart digital services. Other studies also confirm that employees with a motivation to learn and digital competencies are more capable of adapting to the demands of digital transformation (Zhou et al., 2025: 6). A recent study indicates that empowering employees in the digital transformation process passes through three stages: the IT application stage (where training on technical skills and changing mindsets is reinforced), the smart manufacturing stage (where performance is developed through data-driven practices), and the comprehensive digital transformation stage (where employees are required to innovate and collaborate sustainably).
3. **Process Dimension (Process) / Procedural Dimension:** This dimension encompasses the transformation of operational processes and workflows through agile and data-driven methodologies. It is associated with the "procedural dimension" addressed in the current study. Sources indicate that digital transformation requires re-engineering, simplifying, and automating administrative procedures, with a focus on integration across different departments.
4. **Technical Dimension (Technology) / Digital Infrastructure:** This dimension represents the physical and technical foundation of digital transformation, including hardware, networks, databases, cloud systems, and artificial intelligence technologies (Khatir & Madani, 2024: 1829). Meta-analyses have shown that the use of digital technology and dynamic capabilities are key enabling factors for digital transformation. Sources confirm that a robust infrastructure is the cornerstone that enables organizations to operate digital services with high efficiency (Simuchimba & Mpundu, 2025: 2725).
5. **Cultural and Organizational Dimension:** This dimension involves changing organizational values, beliefs, and behaviors to support the digital orientation. It means transforming the organizational culture into a digital culture that encourages innovation, experimentation, and continuous learning. Vural's study (2025: 39) highlighted the importance of integrating digital orientation as part of the organizational culture to ensure the success of digital transformation and its impact on employee performance. Some researchers also point out that cultural change is one of the most prominent challenges of digital transformation, as it requires a shift in entrenched mindsets and behaviors (Lusha, 2025: 11).

Fourth: The Relationship between Digital Transformation and Job Performance

Contemporary literature indicates a positive relationship between digital transformation and job performance, manifested through multiple mechanisms. In this context, this relationship can be detailed according to the following axes:

1. **The Concept of Job Performance in the Context of Digital Transformation:** Job performance is defined as the efficiency with which employees perform their assigned tasks, contributing to the achievement of organizational goals. This includes task accomplishment, productivity, and service quality (Valencia-Julca et al., 2025: 12). Some researchers have divided job performance into two main dimensions: "task performance," related to the primary responsibilities of the job, and "contextual performance," which includes behaviors supporting the organizational environment, such as cooperation and initiative (Vural, 2025: 40). In the context of digital transformation, job performance becomes increasingly dependent on the ability of employees to manage digital tools and information under increasing work pressure (Zhou et al., 2025: 5).
2. **Mechanisms of Digital Transformation's Impact on Job Performance:** The mechanisms through which digital transformation affects job performance are numerous and can be summarized as follows:

a. **Digital Competence as a Prerequisite:** Multiple studies indicate that possessing digital skills and competencies is a fundamental prerequisite for benefiting from digital transformation and improving performance. Nawawi et al. (2026: 85) found that digital competence has a significant positive impact on job performance, both directly and indirectly, through smart digital services acting as a partial mediator in this relationship. This underscores that enhancing employees' digital skills constitutes a strategic investment for improving performance (Ingsih et al., 2024: 106).

b. **The Ability-Motivation-Opportunity (AMO) Framework:** The Ability-Motivation-Opportunity (AMO) model provides an integrated framework for understanding how digital transformation impacts job performance. According to this model, job performance is determined by three main components: competence (Ability), motivation to learn (Motivation), and autonomy in work (Opportunity). A study conducted on 265 employees across six companies showed that digital transformation enhances job performance by strengthening these three components, leading to improved employee ability to adapt to digital changes (Zhou et al., 2025: 7). The results indicate that employees with high competencies, motivation to learn, and work autonomy are most capable of "learning" (i.e., unlearning old practices and adopting new ones), positively reflecting on their performance (Zhou et al., 2025: 11).

c. **The Role of Digital Leadership:** Vural's study (2025: 45) confirms the pivotal role of digital leadership in improving job performance. The results showed that digital leadership has a positive and significant impact on job performance across its various dimensions (task and contextual performance). This is attributed to the ability of digital leaders to guide, support, and motivate employees during the adoption of new technologies, thereby enhancing their performance and efficiency (Vural, 2025: 48).

d. **Motivation as a Mediating Variable:** A recent study suggests that digital transformation may enhance job performance by increasing employee motivation. The adoption of new digital technologies generates a sense of empowerment and competence among employees, raising

their achievement motivation and consequently improving their performance (Zhou et al., 2025: 9). This aligns with the Self-Determination Theory's assertion that satisfying basic psychological needs (autonomy, competence, and relatedness) enhances self-determined motivation and, subsequently, performance.

e. Organizational Support as a Reinforcing Factor: Perceived organizational support is an important factor that strengthens the positive impact of digital transformation on job performance. A recent study showed that organizational support acts as a moderator, strengthening the relationship between technostress and job performance, helping employees transform the pressures of digital transformation into a driving force for improved performance (Zhou et al., 2025: 12). This means that organizations that support their employees during the digital transformation journey contribute to mitigating the negative effects of pressures and enhancing positive outcomes.

f. Organizational and Individual Flexibility: A recent study indicates that digital transformation strategies enhance job performance by improving both organizational flexibility and organizational responsiveness. The results also emphasize the crucial role of personal adaptability and organizational support as boundary conditions that strengthen the relationship between digital transformation and job performance (Zhou et al., 2025: 13). This implies that the success of digital transformation in improving performance depends on the organization's ability to respond rapidly to changes, the employees' capacity for personal adaptation to these changes, in addition to the availability of a supportive environment.

Fifth: Theoretical Models Explaining the Relationship between Digital Transformation and Job Performance

The relationship between digital transformation and job performance is grounded in a set of theoretical models that help understand the mechanisms of this relationship. The most prominent of these include:

1. **The Ability-Motivation-Opportunity (AMO) Model:** This model provides a comprehensive framework for understanding how digital transformation affects job performance through three primary pathways: enhancing employee competence (Ability), raising their motivation to learn (Motivation), and granting them greater work autonomy (Opportunity). Recent studies have proven the validity of this model in the context of digital transformation (Zhou et al., 2025: 4). This study applies the model in the public sector context, where research shows that digital transformation in human resource management enhances employee productivity and job satisfaction by strengthening their capabilities and work opportunities.
2. **The Dynamic Resources and Capabilities Model:** This model explains how organizations leverage their resources (such as technology and human resources) to develop dynamic capabilities that enable them to achieve superior performance in the digital environment. A recent study indicates that digital transformation strategy, through business analytics capabilities and organizational agility, enables data-driven decision-making, leading to improved organizational performance.
3. **The Job Demands-Resources (JD-R) Model:** This model explains how digital work demands (such as digital overload and digital monitoring) affect employee performance by inducing technostress, and how job resources (such as organizational support) can mitigate this impact (Simuchimba & Mpundu, 2025: 2727). This model has been successfully applied in a study on the impact of digital transformation in the banking sector.

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4. **The Technology Acceptance Model (TAM):** This theory focuses on two main factors influencing employees' acceptance of digital technologies: "perceived usefulness" and "perceived ease of use" (Lusha, 2025: 6). This theory helps in understanding employees' motivations for adopting digital transformation, which is reflected in their performance.
 5. **The Self-Determination Theory (SDT):** This theory emphasizes the importance of satisfying basic psychological needs (autonomy, competence, and relatedness) in enhancing self-determined motivation to engage with digital technologies, thereby improving job performance (Zhou et al., 2025: 8). A recent study shows that digital transformation in human resource management enhances the satisfaction of these needs, increasing employee engagement and productivity.
 6. **The Theory of Planned Behavior:** This theory is used to understand how digital transformation influences employee behavior toward change. It explains how employees' behavioral intentions (their attitudes toward technology, subjective norms, and perceived behavioral control) shape their readiness to adopt digital transformation, reflecting on their performance.
 7. **The Socio-Technical Systems Theory:** This theory suggests that effective digital transformation requires the joint optimization of social systems (people and culture) and technical systems (technology and processes). Sources confirm that digital transformation will not succeed if it focuses only on the technical aspect and ignores human and organizational factors; rather, it requires an integrated approach that considers employee needs and the institution's culture.

Sixth: Challenges of Digital Transformation in the Public Sector

Despite the immense potential of digital transformation, organizations, especially in the public sector, face significant challenges that hinder its success. Contemporary literature has identified these challenges, which can be summarized in six major structural faults impeding government digital transformation:

1. **Lack of Clear Political Intent:** Digital transformation projects in the public sector are often disconnected from the government's overall reform objectives, making them aim for limited procedural improvements rather than achieving a strategic impact on citizens' lives.
2. **Inadequate Funding Structure:** Digital transformation in many governments is funded similarly to infrastructure projects (like bridges), with large capital allocation for the "build" phase, then shifting resources to a much smaller maintenance and operations line. However, software is not like bridges; it requires continuous investment and ongoing maintenance to adapt to user needs and security risks.
3. **Overlapping Mandates and Responsibilities:** Responsibilities are distributed across multiple ministries and departments, making it difficult for a single entity to own the end-user (citizen) experience, leading to weak coordination and duplication of efforts.
4. **Data as Fiefdoms:** Each ministry treats the data it collects as its own private property, hindering information sharing and service integration, despite the availability of technical tools for interoperability.
5. **Lack of Digital Talent:** Governments face difficulty in attracting and retaining digital talent (engineers, product designers, data scientists) due to competitive salaries and professional development paths in the private sector.

6. **Procurement Based on Risk Aversion Rather Than Uncertainty:** Government procurement systems rely on specifying exact requirements upfront, whereas software projects require agile methodologies that adapt to what is discovered during the development process, leading to contract rigidity and poor outcomes.

Seventh: The Role of Human Resources in Enhancing the Impact of Digital Transformation
Contemporary literature indicates that the human element is the most influential factor in the success of digital transformation. This role is manifested through several aspects:

1. **Empowerment:** Empowering employees with the skills, knowledge, and ability to participate in the digital transformation process is crucial. Studies have shown that empowerment must evolve across the different stages of transformation, from training on basic skills to enabling innovation and initiative.
2. **Change Management:** Digital transformation is a radical change in work culture, requiring effective change management to deal with employee resistance. A recent study indicates that employee change management plays a crucial mediating role between digitalization and organizational productivity.
3. **Developing Digital Competencies:** Investing in upgrading employees' digital skills is a prerequisite for the success of digital transformation and the improvement of job performance (Nawawi et al., 2026; Ingsih et al., 2024).
4. **Changing Institutional Culture:** Digital transformation requires transforming the organizational culture into a digital culture that encourages innovation, experimentation, and continuous learning. Vural's study (2025: 39) highlighted the importance of integrating digital orientation as part of the organizational culture to ensure the success of digital transformation and its impact on employee performance.

Conclusion of the Theoretical Framework

This theoretical framework provides an integrated understanding of the concept of digital transformation, its multiple dimensions, and its relationship with job performance, drawing upon the most recent sources and studies (2024-2026). The theoretical review demonstrates that digital transformation is not merely a technical upgrade but a comprehensive process encompassing technical, human, cultural, and strategic dimensions. It is also evident that the relationship between digital transformation and job performance is multifaceted, mediated by factors such as digital competence, motivation, digital leadership, organizational support, and organizational and individual flexibility. The reviewed theoretical models (e.g., AMO, Dynamic Capabilities, JD-R, TAM, SDT, Socio-Technical Systems) provide in-depth explanatory frameworks for this relationship. The structural challenges facing digital transformation in the public sector and the role of human resources in enhancing its impact on job performance were also highlighted. This theoretical framework paves the way for conducting an empirical study to test the validity of the hypotheses in the context of the Iraqi public sector.

3. PREVIOUS STUDIES

The review of previous studies addressed the topic of digital transformation and its impact on job performance from three integrated perspectives: the first addressed the concept and dimensions of digital transformation, the second focused on the direct relationship between digital transformation and job performance, while the third analyzed the mediating and moderating variables in this

relationship.

First: Concept and Dimensions of Digital Transformation:

Recent studies have focused on defining the dimensions of digital transformation. The study by Khatir & Madani (2024) analyzed the impact of digital transformation on outstanding performance in educational administration through three main dimensions: digital infrastructure, human resources, and organizational culture, proving the effectiveness of these dimensions collectively, provided they are integrated. Meanwhile, Lusha (2025) provided a comprehensive review affirming that technology alone is insufficient; rather, true improvement depends on the integration of technical design, organizational context, and individual employee readiness, establishing the idea that digital transformation is an integrated socio-technical project.

Second: The Direct Relationship between Digital Transformation and Job Performance:

Studies in this area confirmed a positive relationship between digital transformation and performance. In the Arab context, the study by Jaafar and Al-Kadhimi (2024) found a significant correlational relationship between the dimensions of digital transformation and achieving high performance in the Iraqi public sector, recommending investment in infrastructure and the qualification of human cadres. Valencia-Julca et al. (2025) reviewed the impact of modernizing public administration through digital technologies and talent management, indicating that integrating technologies with talent strategies has a critical impact on productivity and quality, emphasizing the need for an integrated approach between efficiency, ethics, and participation. Vural (2025) focused on the role of digital leadership, demonstrating its positive and significant impact on task performance and contextual performance, suggesting that leadership orientation towards digitalization directly reflects on employee efficiency and productivity.

Third: Mediating and Moderating Variables:

Other studies have focused on analyzing the mechanisms of influence. The study by Nawawi et al. (2026) demonstrated that digital competence has a direct and indirect positive impact (via smart digital services) on job performance, highlighting it as a prerequisite for the success of digital transformation. This aligns with Ingsih et al. (2024), who added the service quality dimension as an additional explanatory mechanism. Furthermore, a study from Pakistan (2025) showed that digital transformation significantly enhances organizational performance, and this is partially mediated by employee motivation, where technology adoption generates a sense of empowerment that raises achievement motivation.

Summary of Previous Studies and Research Gap:

Previous studies collectively confirm a positive relationship between digital transformation and job performance, with multiple mechanisms of influence (digital competence, supportive leadership, motivation). However, most of them (especially Arabic studies) focused on the direct relationship or only a single mediating role. The gap addressed by this research lies in its integration of several explanatory mechanisms into a single model (digital competence, leadership, and motivation) while testing the moderating role of organizational support, within the context of the Arab public sector, which lacks comprehensive empirical studies in this area.

4. STUDY HYPOTHESES AND HYPOTHETICAL MODEL

Based on the theoretical framework and previous studies, including Vural's study (2025: 48), which demonstrated the impact of digital leadership on job performance, Nawawi et al.'s study (2026, Abstract), which confirmed the impact of digital competence on performance, and Lusha's

study (2025, pp. 2-3), which discussed the mechanisms of digital transformation's impact, the following hypotheses were formulated:

- **Main Hypothesis One:** There is a statistically significant correlational relationship between digital transformation (as a whole) and the job performance of employees at the Al-Hillah Municipality Directorate.
- **Main Hypothesis Two:** There is a statistically significant impact of digital transformation (in its dimensions) on job performance.
- **Sub-Hypotheses:** Branching from the second main hypothesis are five sub-hypotheses, each stating that there is a statistically significant impact for each dimension of digital transformation (strategic, cultural, human, procedural, technical) on job performance.
- **Hypothesis Three:** There are statistically significant differences in employee assessments of the impact of digital transformation attributable to their demographic variables.

5. STUDY METHODOLOGY (FIELD PROCEDURES)

First: Study Problem

The study problem is defined by the following main question: What is the impact of digital transformation in public administration on enhancing the job performance of employees at the Al-Hillah Municipality Directorate? This main question branches into a set of sub-questions:

1. What is the level of implementation of the dimensions of digital transformation (strategic, cultural, human, procedural, technical) at the Al-Hillah Municipality Directorate from the employees' perspective?
2. What is the level of job performance of employees at the Directorate from their perspective?
3. Is there a statistically significant correlational relationship between digital transformation and its dimensions and job performance?
4. What is the impact of each dimension of digital transformation on job performance?
5. Are there statistically significant differences in employee assessments of the impact of digital transformation attributable to their demographic variables (gender, age, educational qualification, years of service)?

Second: Study Objectives

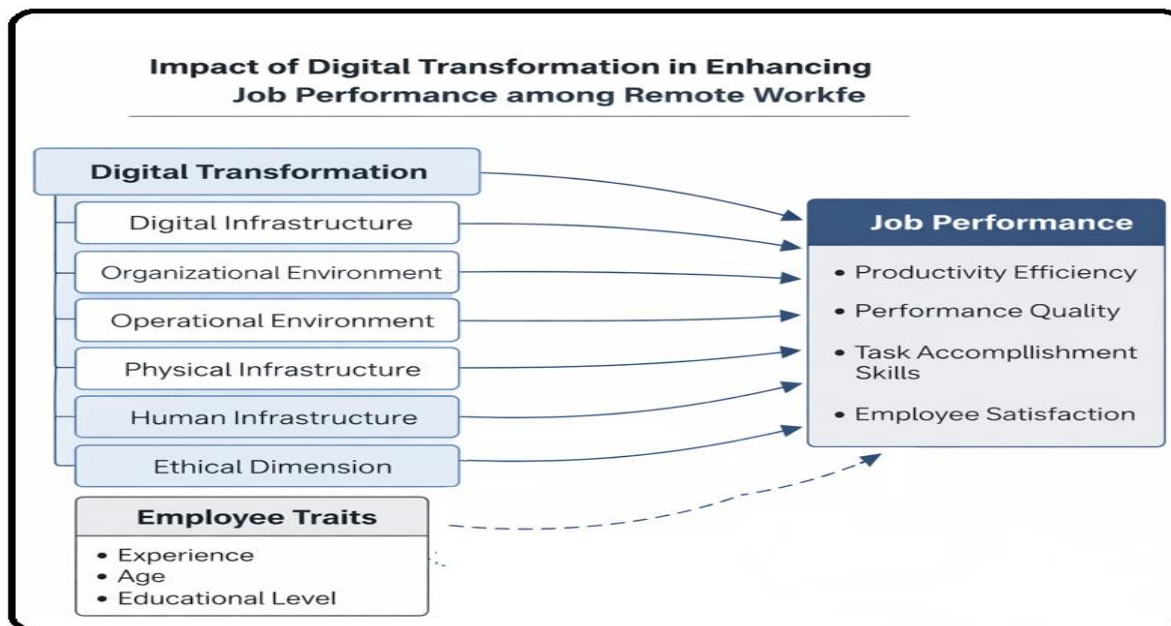
This study seeks to achieve a set of interrelated objectives, starting from the theoretical framework and culminating in practical recommendations, detailed as follows:

1. **Grounding Theoretical Concepts:** To identify the concept of digital transformation in public administration and its various dimensions (strategic, cultural, human, procedural, technical), and to review the nature of its relationship with job performance, based on contemporary administrative literature and theoretical models explaining this relationship.
2. **Field Diagnosis of Reality:** To measure the level of implementation of digital transformation dimensions at the Al-Hillah Municipality Directorate, alongside measuring the level of job performance of its employees, by surveying their opinions and self-assessments.
3. **Analyzing Relationships and Impact:** To analyze the nature of the correlational relationship between digital transformation (in its five dimensions) and job performance (with its indicators), and then test the impact of each dimension of digital transformation on job performance separately, to identify the most influential dimensions.
4. **Formulating Strategic Recommendations:** To present a set of applicable practical recommendations and proposals, aimed at enhancing the positive impact of digital

transformation on improving job performance, not only at the Al-Hillah Municipality Directorate but also in Iraqi public sector institutions in general, with a focus on bridging the gaps revealed by the study results.

Third: Study Model

The research relies on a model illustrating the relationship between the variables, where digital transformation (with its five dimensions) represents the independent variable, and job performance (with its indicators) represents the dependent variable.



Fourth: Study Population and Sample

The study population consists of all employees working at the Al-Hillah Municipality Directorate, affiliated with the Babil Governorate / Republic of Iraq, totaling approximately (350) male and female employees, distributed across various administrative and technical departments and divisions.

A stratified random sample was selected to ensure representation of various job categories and administrative levels, as follows:

Stratum	Total Number	Sample Percentage	Number of Sample Members
Top Management (Director General, Deputies, Department Heads)	25	80%	20
Middle Management (Division Heads, Unit Managers)	75	70%	53
Executive Employees (Administrative and Technical Staff)	250	40%	100

Stratum	Total Number	Sample Percentage	Number of Sample Members
Total	350	—	173

Thus, the sample size is (173) employees, which aligns with the appropriate sample size according to the Krejcie and Morgan table for a population of 350 and a 95% confidence level, representing (49.4%) of the total study population. A total of (173) questionnaires were distributed, and (158) valid questionnaires were retrieved for statistical analysis, representing a response rate of (91.3%).

Fifth: Study Instrument (The Questionnaire)

The questionnaire was designed based on validated scales from previous studies referenced in the theoretical framework, adapted to suit the nature of work at the Al-Hillah Municipality Directorate and the Iraqi environment. The questionnaire consisted of three main sections:

Section One: Demographic Data

Contained (4) items measuring: gender, age, educational qualification, and years of service.

Section Two: Digital Transformation Axis (Independent Variable)

This section contained (25) items distributed across five dimensions, with (5) items per dimension, as follows:

Dimension	Number of Items	Adopted Source
Strategic Dimension	5	(Khatir & Madani, 2024, Abstract)
Cultural Dimension	5	(Lusha, 2025: 3)
Human Dimension	5	(Nawawi et al., 2026, Abstract; Ingsih et al., 2024: e3)
Procedural Dimension	5	(Valencia-Julca et al., 2025: 70)
Technical Dimension	5	(Khatir & Madani, 2024, Abstract)

Section Three: Job Performance Axis (Dependent Variable)

This section contained (20) items distributed across five indicators, with (4) items per indicator: Quality of Performance, Quantity of Performance, Speed of Accomplishment, Creativity and Innovation, and Organizational Commitment, based on the study by Vural (2025, pp. 41-43) and Valencia-Julca et al. (2025: 75).

A five-point Likert Scale was used to respond to the questionnaire items, as follows:

(1) = Strongly Disagree	(2) = Disagree	(3) = Neutral	(4) = Agree	(5) = Strongly Agree
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Sixth: Validity and Reliability of the Study Instrument

1. Validity:

- **Face Validity:** The questionnaire, in its initial form, was presented to a panel of (7) experts specialized in public administration and information technology from Iraqi university

professors, to provide their opinions on the clarity of the items, their belonging to the specified dimensions, and their suitability for the Iraqi environment. Their observations were incorporated, and the necessary modifications were made.

- **Construct Validity:** Correlation coefficients were calculated between each item's score and the total score of the dimension it belongs to. The correlation coefficients ranged between (0.53 – 0.84), all statistically significant at the (0.01) significance level, confirming the construct validity of the study instrument.

2. **Reliability:**

Cronbach's Alpha coefficient was calculated for the questionnaire's axes, with the following results:

Axis / Dimension	Cronbach's Alpha Coefficient
Digital Transformation (Overall)	0.92
Strategic Dimension	0.85
Cultural Dimension	0.83
Human Dimension	0.89
Procedural Dimension	0.81
Technical Dimension	0.87
Job Performance (Overall)	0.91

These values indicate a high level of reliability, as all exceed the acceptable threshold of (0.70), according to Nunnally's (1978) criterion, confirming that the study instrument possesses a high degree of internal consistency and reliability.

Seventh: Statistical Methods Used

The Statistical Package for Social Sciences (SPSS) version (26) and Smart PLS version (4) were used for data analysis, and the following statistical methods were applied:

1. **Descriptive Statistics:** Means and Standard Deviations were used to describe the characteristics of the study sample and assess the level of the main variables and their dimensions.
2. **Pearson Correlation Coefficient:** To test the strength and direction of the relationship between digital transformation and its dimensions and job performance (testing the first hypothesis).
3. **Multiple Regression Analysis:** Using the Stepwise method to measure the impact of each dimension of digital transformation on job performance (testing the second hypothesis and sub-hypotheses).
4. **T-Test and One-Way ANOVA:** To test differences in the responses of sample members based on their demographic variables (testing the third hypothesis).

5. **Coefficient of Determination (R^2):** To calculate the proportion of variance in job performance explained by the dimensions of digital transformation.

6. RESULTS ANALYSIS AND DISCUSSION

First: Characteristics of the Study Sample
Statistical results showed the distribution of the sample members as follows:

Variable	Category	Frequency	Percentage %
Gender	Male	102	64.6
	Female	56	35.4
Age	Less than 30 years	28	17.7
	30 – 40 years	62	39.2
	41 – 50 years	45	28.5
	More than 50 years	23	14.6
Educational Qualification	Diploma or below	25	15.8
	Bachelor's Degree	98	62.0
	Postgraduate Studies	35	22.2
Years of Service	Less than 5 years	22	13.9
	5 – 10 years	41	25.9
	11 – 20 years	56	35.5
	More than 20 years	39	24.7

These results indicate that the majority of the sample members are male (64.6%), with the most represented age group being (30-40 years) at 39.2%. Additionally, (62%) hold a Bachelor's degree, and (35.5%) have practical experience ranging between 11 and 20 years, providing them with sufficient background to evaluate the reality of digital transformation and its impact on their job performance.

Second: Description and Assessment of the Study Variables' Levels

1. Level of Digital Transformation (Independent Variable)

To identify the level of digital transformation implementation at the Al-Hillah Municipality Directorate from the employees' perspective, means and standard deviations for the five digital transformation dimensions were calculated, as shown in the following table:

Dimension	Mean	Standard Deviation	Implementation Level
Strategic Dimension	2.84	0.91	Low
Cultural Dimension	2.96	0.88	Low
Human Dimension	3.42	0.79	Medium
Procedural Dimension	3.51	0.74	Medium
Technical Dimension	3.63	0.72	Medium
Digital Transformation (Overall)	3.27	0.68	Medium

(The following criterion was adopted for level assessment: Low from 1 – 2.33, Medium from 2.34 – 3.67, High from 3.68 – 5).

The results show that the overall level of digital transformation at the Al-Hillah Municipality Directorate was medium, with a total mean of (3.27 out of 5). The levels of dimensions varied, with the Technical Dimension ranking first with a mean of (3.63), followed by the Procedural Dimension (3.51), then the Human Dimension (3.42), while the Cultural and Strategic Dimensions came last with means of (2.96) and (2.84) respectively, both at a low level. This disparity reflects that the Directorate has achieved progress in technical and procedural aspects, perhaps due to the acquisition of some hardware and software. However, it still suffers from weaknesses in strategic planning for digital transformation and a lack of an organizational culture supportive of digital change, which aligns with the findings of Lusha (2025: 3), who confirmed that a supportive organizational culture is one of the critical factors for the success of digital transformation.

2. Level of Job Performance (Dependent Variable)

To identify the level of job performance of employees at the Al-Hillah Municipality Directorate from their perspective, means and standard deviations for the job performance indicators were calculated, as shown in the following table:

Indicator	Mean	Standard Deviation	Level
Quality of Performance	3.88	0.67	High

Indicator	Mean	Standard Deviation	Level
Quantity of Performance	3.65	0.72	Medium
Speed of Accomplishment	3.52	0.78	Medium
Creativity and Innovation	3.21	0.85	Medium
Organizational Commitment	3.72	0.69	High
Job Performance (Overall)	3.60	0.64	Medium

The overall mean for job performance was (3.60 out of 5), a medium level tending towards high, indicating that employees are making noticeable efforts in performing their tasks. The Quality of Performance indicator scored the highest mean (3.88), followed by Organizational Commitment (3.72), both at a high level, reflecting employees' dedication to their work and their affiliation with their institution. Conversely, the Creativity and Innovation indicator received the lowest rating with a mean of (3.21), which is consistent with the routine nature of work in governmental institutions and confirms the observation by Valencia-Julca et al. (2025: 75) that job performance in the context of digital transformation requires new skills such as creativity and analysis, which need to be developed.

Third: Testing the Correlational Relationship (Hypothesis One)

To test the first main hypothesis, which states that "there is a statistically significant correlational relationship between digital transformation and job performance," the Pearson Correlation Coefficient was calculated between the two variables, with the following results:

Variables	Correlation Coefficient (r)	Significance Level (Sig.)	Relationship Strength
Digital Transformation → Job Performance	0.73	0.000	Strong

The results indicated a positive and strong correlational relationship between digital transformation as a whole and job performance ($r = 0.73$), statistically significant at the ($\alpha = 0.01$) level. This means that as the implementation of digital transformation in the Directorate increases, the level of employee job performance also increases, and vice versa. This result aligns with the findings of Vural (2025: 48), who demonstrated a positive relationship between digital leadership and job performance, and also with the University of Punjab study (2025: 1465), which confirmed a relationship between digital transformation and organizational performance.

Correlation coefficients between each dimension of digital transformation and job performance were also calculated, with the following results:

Dimension	Correlation Coefficient (r)	Significance Level
Strategic Dimension	0.51**	0.000
Cultural Dimension	0.48**	0.000
Human Dimension	0.69**	0.000
Procedural Dimension	0.55**	0.000
Technical Dimension	0.62**	0.000

**** Significant at the 0.01 level**

It is evident that all dimensions of digital transformation correlate positively and statistically significantly with job performance. The Human Dimension had the highest correlation coefficient ($r = 0.69$), followed by the Technical Dimension ($r = 0.62$), indicating that focusing on human resource development and providing technical infrastructure are the most influential factors on employee performance from their perspective.

Fourth: Testing the Impact of Digital Transformation Dimensions on Job Performance (Hypothesis Two)

To test the second main hypothesis and its related sub-hypotheses, which state that there is a statistically significant impact of digital transformation dimensions on job performance, Multiple Regression Analysis using the Stepwise method was conducted. The results were as follows:

Dimension	Regression Coefficient (B)	Standardized Coefficient (Beta)	t-value	Significance Level (Sig.)
(Constant)	0.87	—	4.21	0.000
Human Dimension	0.38	0.41	6.84	0.000
Technical Dimension	0.25	0.28	4.73	0.000
Cultural Dimension	0.12	0.15	2.56	0.012
Procedural Dimension	0.09	0.11	1.87	0.063*

Dimension	Regression Coefficient (B)	Standardized Coefficient (Beta)	t-value	Significance Level (Sig.)
Strategic Dimension	0.06	0.08	1.35	0.179*

- *Not statistically significant (Sig. value > 0.05)*

$R^2 = 0.53$ (i.e., the dimensions of digital transformation explain 53% of the variance in job performance)

Adjusted $R^2 = 0.51$

F-value = 34.62, significant at the (0.001) level

Interpretation of Regression Results:

- **Human Dimension:** It had the most significant impact on job performance, with a regression coefficient ($B = 0.38$) and a Beta coefficient ($Beta = 0.41$), statistically significant at the (0.001) level. This means that a one-unit increase in attention to the Human Dimension (training, digital skills development, qualification) leads to a (0.38) unit increase in job performance. This finding corroborates the results of Nawawi et al. (2026, Abstract) and Ingsih et al. (2024: e3), who found that employee digital competence is the primary driver of performance improvement.
- **Technical Dimension:** Ranked second in terms of impact ($Beta = 0.28$) and was statistically significant, confirming the importance of infrastructure and technical equipment as a supporting factor for performance improvement, consistent with the study by Khatir & Madani (2024, Abstract).
- **Cultural Dimension:** Showed a weak but statistically significant impact ($Beta = 0.15$), indicating that an organizational culture supportive of change has begun to show its effects, but is still in its early stages.
- **Procedural and Strategic Dimensions:** Did not show a statistically significant impact at the (0.05) level. This might be attributed to the fact that re-engineering procedures and strategic planning are still in early stages or not sufficiently implemented in the Directorate, or that employees do not adequately perceive these aspects. The R^2 value of (0.53) indicates that the dimensions of digital transformation together explain more than half of the variance in job performance. This is a strong indicator of the significant importance of digital transformation in improving performance and aligns with the study by Valencia-Julca et al. (2025: 70), which affirmed that digital transformation explains a substantial portion of job performance improvement.

Fifth: Testing Differences According to Demographic Variables (Hypothesis Three)

To test the third hypothesis, which states that there are statistically significant differences in employee assessments attributable to their demographic variables, a T-Test was used for gender, and One-Way ANOVA for the other variables. The results were as follows:

Demographic Variable	Test Value	Significance (Sig.)	Level	Differences Exist
Gender (T-Test)	0.89	0.375		No differences

Demographic Variable	Test Value	Significance (Sig.)	Level	Differences Exist
Age (ANOVA)	3.45	0.018		Differences exist
Educational Qualification (ANOVA)	5.82	0.004		Differences exist
Years of Service (ANOVA)	4.73	0.003		Differences exist

Interpretation of Differences Results:

1. **Gender:** The results did not show statistically significant differences between males and females in their assessment of the impact of digital transformation, indicating parity in perspectives between genders on this topic.
2. **Age:** The results showed statistically significant differences, where assessments from younger age groups (less than 30 years, and 30-40 years) were higher than those from older groups (more than 50 years). This reflects the younger generations' better ability to handle technology and their openness to change.
3. **Educational Qualification:** Employees with postgraduate studies had higher assessments of the impact of digital transformation compared to those with lower qualifications, suggesting that a higher educational level enhances awareness of the importance of technology and its role in performance development.
4. **Years of Service:** Results indicated that less experienced employees (less than 5 years and 5-10 years) had higher assessments than more experienced employees (more than 20 years). This reflects a "resistance to change" phenomenon among veteran employees accustomed to traditional work methods, which aligns with Lusha's (2025: 3) observation that the biggest challenge in digital transformation relates more to the cultural and human dimensions than the technical one.

7. SUMMARY OF KEY FINDINGS

1. The overall level of digital transformation at the Al-Hillah Municipality Directorate was medium (3.27 out of 5), with notable weakness in the strategic and cultural dimensions.
2. The level of job performance among employees was medium, tending towards high (3.60 out of 5), with excellence in quality of performance and organizational commitment, and weakness in creativity and innovation.
3. There is a positive and strong correlational relationship between digital transformation and job performance ($r = 0.73$), which is statistically significant.
4. There is a statistically significant impact of digital transformation dimensions on job performance, with its dimensions collectively explaining (53%) of the variance in performance. The Human Dimension was the most influential, followed by the Technical Dimension.
5. There are differences in employee assessments attributable to age, educational qualification, and years of service, where younger, more educated, and less experienced employees were more optimistic and receptive to digital transformation.

8. DISCUSSION OF RESULTS

The results of this study indicate a significant agreement with the findings of previous studies. The study by Jaafar and Al-Kadhimi (2024) confirmed a significant impact of digital transformation on achieving high performance in public sector organizations in Iraq. This underscores that digital transformation represents a pivotal factor for developing governmental work in Iraq. The weak impact of some dimensions (such as the strategic and procedural ones) can be explained by the fact that digital transformation in the Directorate is still in its early stages, focusing more on technical and procedural aspects than on strategic and cultural dimensions, which require more time and intensive efforts to become entrenched in the institution. As for the superior impact of the Human Dimension, it reflects the reality that the success of any digital transformation is significantly linked to individuals, their capacities, skills, and readiness for change. Investing in human resource development is the fundamental pillar for the success of digital transformation. Moreover, enhancing employee competence and satisfaction directly reflects on their job performance.

9. RECOMMENDATIONS

Based on the study's findings, the following recommendations can be made:

1. **Formulating a Clear Strategy for Digital Transformation:** The Al-Hillah Municipality management should develop a comprehensive strategic plan for digital transformation, encompassing a clear vision and mission, measurable goals, an implementation timeline, and adequate financial allocations.
2. **Promoting Digital Culture:** Work towards changing the institution's and individuals' culture towards technology through workshops, awareness seminars, incentive campaigns, and rewarding innovators and pioneers in digitalization.
3. **Investing in Human Resources:** Intensify training and qualification programs for employees on digital skills, and develop their capabilities in using modern systems and applications, with a focus on older employees to overcome their resistance to change.
4. **Developing Technical Infrastructure:** Work on upgrading communication and network infrastructure, provide necessary hardware and software, and enhance cybersecurity systems to protect data and information.
5. **Re-engineering Procedures:** Simplify and automate administrative procedures, eliminate complexities and routines, and electronically link different departments to achieve integration and efficiency.
6. **Developing Performance Evaluation Systems:** Design clear and objective digital performance indicators based on available data and information, and evaluate employee performance based on results rather than just effort expended.

10. CONCLUSION

This study concluded that digital transformation in public administration has a positive and significant impact on enhancing the job performance of employees at the Al-Hillah Municipality Directorate, and that this impact varies depending on the dimensions of digital transformation. The Human Dimension was the most influential, followed by the Technical Dimension. The results also revealed shortcomings in the strategic and cultural aspects of digital transformation,

necessitating managerial intervention to formulate clear strategies and change the work culture towards digitalization and innovation. Ultimately, the success of digital transformation requires the concerted efforts of all parties, from top leadership to employees, with a focus on developing human skills as a fundamental prerequisite for maximizing the benefits of technology.

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