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The Impact of Digital Transformation on the Efficiency of Administrative Performance

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Abstract: The study aimed to identify the impact of digital transformation "as an independent variable", represented by dimensions (after infrastructure and information technology, after organizational culture (human resources), after digital vision and strategy, after automating administrative processes). The "dependent variable" is the efficiency of administrative performance, represented by the dimensions (administrative efficiency, administrative effectiveness). The study sample consisted of (130), Individuals working in the units of (Hilla Municipality), and to achieve the research objectives, the descriptive analytical approach was followed, and to obtain the necessary data, a special questionnaire was designed for this purpose that includes the two research areas, and for the purpose of analyzing and processing the data, statistical programs for the social sciences (SPSS) were used After analyzing the practical aspect, it was concluded that there is a relationship between (digital transformation), and its connection to (administrative performance efficiency) is increasing, and that there is a significant direct effect of the variable (digital transformation) on the dependent variable. Digital transformation represents an effective element for bringing about development in the organization by changing business performance efficiently and effectively, Based on changing environmental developments, especially when making decisions at work. Therefore, the research recommends paying attention to "digital transformation: as an effective element for creating efficiency in organizational administrative performance, identifying challenges to digital transformation: and knowing the difficulties facing the organization in measuring its efficiency and effectiveness effectively and in a manner consistent with the requirements of sustainable development.

Keywords: Digital transformation, administrative performance efficiency, Organizational Efficiency, Information Technology, Sustainable Development.



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Introduction

The world has recently witnessed an unprecedented digital transformation that affects all sectors, especially in administrative performance, improving organizational processes, and using digital technology such as the use of digital systems and smart software to improve administrative performance, increase the effectiveness of the organization, and speed up decision-making [1]. This transformation includes simplifying traditional procedures, improving the performance of working individuals, and increasing their administrative efficiency, This requires adopting effective strategies to ensure the success of these transformations in the organization's work environment [2]. This study aims to shed light on digital

transformation and the efficiency of administrative performance, analyze how each variable affects the other, and identify the strengths, weaknesses, and challenges facing management in adopting digital technologies and how to overcome them to achieve the best results.

Research methodology: It included the following axes:

The research problem: The changes that organizations have witnessed in the past decades have a significant impact on their success, as the business environment has become more dynamic and complex today at the local and global levels. No matter how much organizations control their plans and are aware of environmental changes, the organization faces major challenges facing competing organizations that live in this environment in order to be able to continue and succeed. And confronting internal and external developments and challenges to its survival and continuity in this environment, which requires increasing cognitive and field analysis [2]. Because the importance of administrative work increases the acceleration of growth and confronting contemporary challenges such as globalization, the acceleration of technological and information development, and other factors that organizations have faced [3]. Through this, the research problem can be represented by the following question:

- 1- What is the perception of individuals working (research sample) in the organization about the concept of digital transformation on the efficiency of administrative performance?
- 2- Does the organization apply the concepts of digital transformation and its impact on the efficiency of administrative performance, and to what extent?
- 3- What is the nature of (the relationship of connection and influence), and does the impact of digital transformation contribute to the efficiency of administrative performance in organizations?

The importance of the research: It can be determined through the variables (digital transformation in the efficiency of administrative performance) that it addresses, which are embodied in the following:

- 1- Providing libraries with a simple scientific effort to address basic and important issues for management because they are characterized by modernity.
- 2- Intellectual and cognitive enrichment, and deepening the process of understanding and comprehending research variables through theoretical framing of the importance of variables (digital transformation in the efficiency of administrative performance), and organizing them with previous research and studies.
- 3- Submitting proposals to maximize the extent to which digital transformation can be used to increase its competitiveness, raise its efficiency, and play an effective role in the progress process.
- 4- A guide and mentor to the researched organization at all levels, to serve as an effective and important database in the researched organization that helps guide administrative work.

Research objectives: This study works to achieve the following objectives:

- 1- Presenting theoretical factors related to research variables (digital transformation in administrative performance efficiency) and clarifying their concepts.
- 2- To determine the extent to which the researched organization (Hilla Municipality) is adopting digital transformation, and to employ it in its readiness and contribution to enhancing the efficiency of its administrative performance.
- 3- Study and test the nature of the "correlation relationship" and the impact of the two variables, and reach a set of conclusions and recommendations supported by mechanisms that can raise the administrative and cognitive level.
- 4- Providing senior management in the organization under study with a scientific vision through which the administrative methods adopted by it can be developed to develop the organization's expertise, skills and capabilities.

Research hypotheses: In line with the research problem and its objectives, two main hypotheses were adopted:

- 1- The first main hypothesis: (There is a statistically significant correlation between digital transformation and the efficiency of administrative performance in the researched organization).
- 2- The second main hypothesis: (There is an impact relationship with significant statistical significance

between digital transformation and the efficiency of administrative performance in the researched organization):

The research methodology and its sample: (Al-Hillah Municipality) in Babylon was chosen as a community for the study due to the importance of the service role it plays. A sample of (130) was chosen, focusing on workers in administrative units.

The theoretical framework of research variables:

The concept of digital transformation: It is the process of integrating modern digital technologies in to all aspects of administrative performance within organizations. It includes the use of digital tools, software, and applications to improve and evaluate performance and retain employees in light of the rapid technological revolution that the world is witnessing today to confront changing businesses and competition in the labor market, [3]. Digital transformation does not mean merely introducing modern devices and software, but rather includes redesigning organizational processes and organizational culture using advanced technologies, and replacing traditional manual processes with an automated system that uses digital data and artificial intelligence to improve efficiency and achieve the best results in management, The Organization Accordingly, (digital transformation) is meant as a strategic process that organizations rely on at the present time as a result of the rapid digital technical changes in all administrative activities, the speed of completing work and enhancing the efficiency of their operational performance and completing their administrative operations, and facing the sudden dynamic environment, as a result of the rapid technological change, so that leaders become capable To change the previously drawn up plan and find the best solution according to their capabilities, abilities, creative behavior, and continued competition, in addition to being able to adapt to current and future circumstances.

Dimensions of digital transformation: The focus will be on studying the dimensions of technological transformation through researchers: [4]–[7]

- 1- After infrastructure and information technology: - A set of technical tools and resources containing an information base that includes devices and systems connected to the Internet and mobile phones, working to develop technical factors, and providing specialized devices and programs to improve the organization's administrative processes.
- 2- After organizational culture (human resources): There is a strong connection between technological transformation and resource recruitment because they emphasize speed of implementation. Resolving threats facing leaders with available resources depends on the experience and skills of leaders: that is, the capabilities individuals possess to use digital technology to perform their administrative tasks.
- 3- After the digital vision and strategy: It is the organization's ability to plan all the activities necessary to define its mission, goals and resources and formulate a strategic plan for them
- 4- After completing administrative processes: It works to reduce costs due to reduced time in operations, helps improve administrative efficiency, and works to take advantage of available opportunities, provide new products, and confront rapid environmental changes.

Efficiency of administrative performance: defined it as the evaluation performance and judgment of positive and negative performance behaviors by the organization's leaders in order to achieve organizational goals, and the link between the internal environment and the organization's organizational capacity to achieve its goals [8], [9]. in an efficient and effective manner for administrative performance by combining two elements, the first of which is how the organization's resources available to it are used and the results achieved, The second is the capabilities and capacities of leaders to achieve the set goals through achieving efficiency and effectiveness[10]. Therefore, it is defined as a set of internal factors of the organization in terms of the availability of material and moral capabilities and available resources in order to achieve two basic factors: effectiveness and efficiency.

Dimensions of administrative performance efficiency: Researchers focused on the following:

- 1- Administrative effectiveness: It is achieved through three criteria: the ability of organizations to adapt to their environment, continuity, survival, and the ability to grow. However, (as organizations that seek to achieve profit, they must pay attention to achieving effectiveness in

their operations by satisfying and satisfying customers with their products, focusing on reducing costs and speeding up completion [11]- [12].

- 2- Administrative efficiency: It is the ability to use the "human, material, financial and information resources" available to the organization. They emphasize that "efficiency and effectiveness" are two factors that are linked to each other and achieve the success of the organization, but the difference is related to the time period specified for each of them. Efficiency is linked to the success of the organization within a short period of time by achieving profits Effectiveness is linked to the organization's long-term success through its ability to survive and continue in the environment in which it works to achieve goals [13]- [15].

Results of field analysis

This paragraph deals with the presentation and analysis of the data shown by the questionnaire forms by analyzing the opinions and responses of the sample members to the study variables. For this purpose, the five-point (Likert) scale was used to test the correlation and influence relationship between the independent variable (apical shift) and the dependent variable (administrative performance efficiency), represented by frequency distributions, percentages, arithmetic means, standard deviations, variance and coefficient of variation using the appropriate statistical program (SSPS) as follows:

Analyzing the opinions and responses of sample members regarding the research variables:

Table 1. Sample individuals' responses to the independent variable digital transformation.

Dimensions		arithmetic mean	standard deviation	Percentage weight%	Contrast	Coefficient of variation%
Infrastructure and information technology	X1	3.67	1.19	72.33	2.11	79.11
	X2	4.22	0.77	86.44	2.29	73.15
	X3	4.36	0.63	89.11	2.15	72.13
Overall index		4.36	0.71	89.51	2.18	74.80
Organizational culture human resources	X4	3.68	1.16	75.56	2.13	70.15
	X5	3.80	1.17	78.00	2.22	69.11
	X6	4.12	0.78	84.44	2.44	71.22
Overall index		3.87	1.01	79.33	2.26	70.16
Digital vision and strategy	X7	4.07	0.96	83.33	2.30	73.18
	X8	3.89	0.88	79.78	2.09	70.22
	X9	3.98	1.14	75.56	2.77	68.15
Overall index		3.79	0.99	79.56	2.39	70.52
Automated administrative processes	X10	3.71	0.47	87.31	2.26	77.18
	X11	3.68	1.48	83.64	2.20	76.14
	X12	3.66	1.49	82.99	2.14	70.11
Overall index		3.68	1.15	84.65	2.20	74.48
Overall indicator of digital transformation		3.79	0.79	83.26	2.26	72.49

Results computer

Table (1) shows the arithmetic mean, percentage weight, variance, standard deviation, and coefficient of variation for each paragraph of the questionnaire form for the independent variable (digital transformation). In the first dimension (infrastructure and information technology), the results of the general index of the arithmetic mean were (4.36), percentage weight for all paragraphs of the first dimension (89.51%), and standard deviation (0.71). The coefficient of variation (74.80%), while the general indicator for the second dimension (organizational culture: human resources) achieved an arithmetic mean of (3.87), percentage weight (84.44%), standard deviation (1.01) and coefficient of variation (70.16%), and the results of the general indicator for the third dimension (digital strategic vision), The arithmetic mean

(3.97), percentage weight (79.56%), standard deviation (0.99), and coefficient of variation (70.52%), while the general indicator of the arithmetic mean for the fourth dimension (automated by administrative processes), The arithmetic mean was (3.68), the percentage weight was (84.56%), the standard deviation was (1.15), and the coefficient of variation was (74.48%). As for the total indicator of the independent variable (digital transformation), it was The total arithmetic mean (3.97), the total percentage weight (83.26%), the standard deviation (0.97), and the coefficient of variation (72.49%). The evidence for this is that all the previous dimensions work as one tool and complement each other in order to complete administrative work and achieve efficiency and effectiveness of administrative performance, The actual driver of the success of human resources and enhancing their culture with the importance of technology and providing many alternatives to obtain technical tools to change the ideas of individuals working in the organization, and seeing the organization's message in which the organization seeks to achieve digital transformation and adopt automation to transform administrative processes in order to achieve efficient administrative performance.

Analyzing the opinions and responses of sample members regarding the efficiency of administrative performance:

Table 2. Responses of sample members regarding the variable dependent on the dimensions of administrative performance efficiency.

Dimensions	T	arithmetic mean	standard deviation	Percentage weight%	Contrast	Coefficient of variation%
Administrative effectiveness	X1	3.81	1.51	72.22	2.31	70.80
	X2	3.94	1.43	80.80	2.55	74.15
	X3	4.01	1.15	82.22	2.40	71.22
Overall index administrative efficiency		3.93	1.24	78.41	2.42	72.39
	X4	4.14	1.03	87.67	2.33	79.25
	X5	4.02	0.87	85.89	2.59	74.81
	X6	4.04	1.06	82.89	2.65	75.41
Overall index		3.06	0.99	85.48	2.52	75.82
Overall indicator of administrative performance efficiency	of	3.49	1.12	81.95	2.47	74.11

Results computer

Table (2) shows the arithmetic means, percentage weight, standard deviation, coefficient of variation and variance for each paragraph of the questionnaire form for the dependent variable. The first dimension (administrative effectiveness) in the form contained three paragraphs, and the general indicator of the arithmetic mean was (3.92), The standard deviation (1.24), the percentage weight (72.39%), the variance (2.92), and the coefficient of variation (72.39%). The second dimension (administrative efficiency) consists of three paragraphs: the general index of the arithmetic mean (3.06), the standard deviation (0.99), the percentage weight (85.48%), and the coefficient of variation (75.82%), so between the total index of the arithmetic mean of the dependent variable (3.49), the total index of the standard deviation (1.12), the total percentage weight (81.95%), and the total coefficient of variation (74.11%), the organization's dependence on its resources means an important pillar for the success of its management and the sustainability of its organization By employing administrative (efficiency, performance efficiency) as a condition for achieving the goals of "digital transformation", and despite achieving very good levels, it still needs more attention from the organization's management.

Analyzing and testing the correlation between research variables:

Table 3. Results of analyzing the relationship between digital transformation and administrative performance efficiency.

independent variable		Administrative performance efficiency				Degree of confidence	
		Calculated value R	Calculated (T) value	tabular (T) value			
Dependent Variable				5%	1% 5%		
Infrastructure and information technology		0.90	5.94	2.353	4.541	99% %95	1% %5
Organizational culture and human resources		0.87	6.90				
Digital vision and strategy		0.89	9.75				
Automated administrative processes		0.91	8.87				
Digital transformation (total index)		0.89	7.87				
Decision (result)		The correlation between variables is positive, strong and significant					

Results compute

It is clear from the table above that there is a direct (positive) and strong correlation between digital transformation and administrative performance efficiency, which is statistically significant at a significant level of (5%). The simple correlation coefficient between them was (0.89), and this result indicates the strength of the relationship between them, which is supported by the calculated value of ((T) of (7.87), which is greater than the value of ((Table T) of (2.353), at a significant level of (5%) and degree Confidence (95%), from the above, previous results can be explained that prove the existence of a correlation between the two variables "technological transformation and administrative performance efficiency", meaning the more the administration is able to continuously develop its management and provide an internal work environment capable of facing competitors and its ability to employ resources Available to it to complete its activities with high accuracy and provide all the requirements for its success whenever its administrative efficiency is achieved. Therefore, accept the first main hypothesis.

Testing the impact hypotheses between the study variables: This paragraph includes a test of the second main hypothesis, which is: There is a statistically significant effect between digital transformation and administrative performance efficiency:

Table 4. Results of estimating the simple linear regression model between digital transformation and administrative performance efficiency.

independent Variable		Administrative performance efficiency					
Dependent Variable		R2) (Coefficient interpretation %	(F) Calculated value	) F(Tabular value		Degree of confidence	
Infrastructure and information technology		93.98	13.12	10.1	%5	%99	%5
				4.541	%1	%95	%1
Organizational culture		82.28	15.05				

human resources		
Digital vision and strategy	90.23	12.87
Automated administrative processes	87.16	16.33
Digital transformation (total index)	88.41	14.34
Decision (result)	The effect between variables is positive, strong and moral	

Results computer

It is clear from Table (4), the final results, that the calculated value of (F) for digital transformation (14.34) is greater than the tabular value of (F) (10.1), at a significant level of (0.05), meaning that there is a statistically significant effect between "digital transformation and administrative performance efficiency", and with a degree of confidence (95%), the coefficient shows Interpretation (R²), by (88.41%), is that digital transformation is able to explain a percentage (88.41%) of the variables that affect the efficiency of administrative performance, while the remaining percentage (11.59%) is attributed to the contribution of other variables not included in the current research, and the organization can accurately monitor its performance High and the use of automation and digital transformation to complete administrative work with high efficiency and effectiveness, and he must accept the second hypothesis (the existence of a moral impact between digital transformation and the efficiency of administrative performance).

Results and Recommendations

Results

- 1- The results of the study indicated that all computational media for the study sample's responses were higher than the hypothetical media (3). This indicates the importance of digital transformation in achieving efficient administrative performance, and the existence of agreement on the necessity of using digital transformation in completing administrative work, with agreement (86.4%) and through automating administrative processes
- 2- The sample members agreed on the necessity of using digital transformation to reduce manual errors in completing administrative work, and interest in digital transformation and developing administrative performance has increased recently.
- 3- The correlational relationships of the two variables were strong, positive, and statistically significant, as the strength of the correlation between them reached (83.26%), carrying logical deliberations and capable of efficient administrative performance
- 4- The existence of an impact relationship between the two variables, digital transformation and its ability to enhance its administrative efficiency, is evidence of the speed of completing administrative work, developing human skills, and dealing with modern technologies.

Recommendation

- 1- The necessity of developing infrastructure and information technology in line with technological developments and administrative performance
- 2- Holding continuous training courses for employees in order to learn about the latest technological developments, increase their skills, and spread the culture of organizational change towards modern technologies.
- 3- Redesigning administrative processes in a way that contributes to reducing routine work and transforming it into digital procedures to ensure efficiency and effectiveness for the organization.
- 4- The necessity of building an accurate administrative database (information) capable of obtaining outputs that achieve proactive decisions that serve the goals of the researched organization and ensuring its preservation.

The need to benefit from digital transformation in a flexible manner and develop its cadres and

systems to keep pace with environmental changes on an ongoing basis.

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