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Research Article

Digital governance and its role in enhancing the effectiveness of public policy-making in Iraqi government institutions

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ABSTRACT

The research aims to analyze the impact of digital governance in enhancing the effectiveness of public policy-making within Iraqi government institutions, by explaining the nature of the relationship between the dimensions of digital governance and the level of efficiency of government performance and public decision-making. The research was based on the descriptive analytical approach by presenting theoretical concepts related to digital governance and public policies, analyzing the reality of digital transformation in Iraqi government institutions and the challenges facing the implementation of digital systems. The research found that digital governance contributes positively to improving the quality of government decisions, enhancing transparency and accountability, raising the efficiency of public services, as well as its role in accelerating information exchange and supporting public policy-making processes. The results also showed that Iraqi government institutions still face a number of obstacles, most notably the weak digital infrastructure, lack of technical competencies, weak electronic integration, as well as challenges related to cybersecurity and digital legislation. The research confirmed that the success of digital governance requires the development of technological infrastructure, the promotion of digital culture, the modernization of legislation related to digital transformation, in addition to supporting electronic integration between government institutions to improve government performance and achieve sustainable administrative development in Iraq.

Keywords: Digital governance, public policies, digital transformation, public administration, digital transparency, Iraqi government institutions, cybersecurity.

INTRODUCTION

RESEARCH METHODOLOGY AND GENERAL FRAMEWORK

The global administrative environment has witnessed fundamental transformations in recent years as a result of the accelerated development of information and communication technologies, which has led to the restructuring of the working methods of government institutions and the emergence of modern administrative trends that seek to raise the efficiency of government performance and improve the quality of public services. One of the most prominent of these trends is digital governance, which has become a modern entry point for managing government institutions based on modern digital technologies, which contributes to enhancing transparency and accountability, facilitating access to information and supporting decision-making processes. Public policies are one of the main pillars of the state's work, as they represent the set of decisions and procedures adopted by governments to address public issues and achieve development, economic and social goals. With the increasing complexity of administrative problems and the

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growing volume of data and information, the need has emerged to employ digital tools and modern technologies in supporting public policy-making processes in order to achieve speed, accuracy and the ability to respond to various environmental variables. In this context, digital governance contributes to the development of public policy-making mechanisms by providing advanced information systems, enhancing e-participation, improving communication channels between government institutions and citizens, as well as supporting planning, implementation, follow-up and evaluation processes. As for Iraq, despite the trend of government institutions towards digital transformation and the adoption of some e-government applications, this path still faces challenges related to technical infrastructure, weak digital integration and lack of specialized competencies. Hence the importance of research in studying the impact of digital governance in enhancing the effectiveness of public policy-making within Iraqi government institutions and its role in supporting administrative reform and digital transformation efforts.

RESEARCH PROBLEM

Iraqi government institutions are facing increasing challenges in the field of public policy-making as a result of accelerated technological developments, the complexity of the administrative environment and the high expectations of citizens regarding the quality of government services and transparency of institutional performance. Despite the government's orientation towards digital transformation and the implementation of some e-government programs, many institutions still suffer from the weak use of digital technologies in supporting public policy-making processes, which negatively affects the efficiency of government decisions and the speed of response to public problems. The limited digital integration between government institutions, the weak technical infrastructure and the lack of reliance on accurate digital data lead to a weakening of the effectiveness of planning and decision-making processes, as well as the persistence of some traditional management practices that limit the levels of transparency, accountability and electronic participation. Hence, the problem of research is the following main question: what is the impact of digital governance on enhancing the effectiveness of public policy making in Iraqi government institutions

There are a number of sub-questions arising from this question, including:

- What is the level of implementation of digital governance in Iraqi government institutions?
- How effective are the policy-making processes in these institutions.
- Is there a correlation and impact relationship between digital governance and effective public policy making?
- What are the main challenges facing the implementation of digital governance in Iraqi government institutions

THE IMPORTANCE OF RESEARCH

The importance of research is manifested in its scientific and practical dimensions related to the topic of digital governance and its role in enhancing the effectiveness of public policy-making, as it contributes scientifically to enrich the intellectual literature in the field of Public Administration and digital transformation by providing a theoretical framework that clarifies the nature of the relationship between digital governance and the efficiency of public policies, as well as highlighting one of the modern administrative topics. In practice, the research helps Iraqi government institutions to realize the importance of digital governance in developing institutional performance and improving the quality of government services, and also supports decision makers in adopting digital mechanisms and technologies that contribute to enhancing transparency and accountability and raising the efficiency of public policy-making processes to support administrative reform and digital transformation efforts in Iraq.

RESEARCH OBJECTIVES

The research seeks to achieve a set of goals, the most prominent of which are:

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- Identify the conceptual framework of digital governance by explaining its nature and main dimensions, as well as clarifying the concept of effective public policy-making and the factors influencing it within government institutions.
- Analyzing the reality of applying digital governance in Iraqi government institutions, and indicating the level of employing digital technologies in supporting administrative processes and public policy-making.
- Measuring the impact of digital governance in enhancing the effectiveness of public policy-making by studying its role in improving the quality of government decisions, raising the efficiency of institutional performance and responding to public problems.
- Identifying the most prominent challenges and obstacles facing the implementation of digital governance in Iraq, while providing a set of recommendations and proposals that contribute to supporting digital transformation and developing government performance.

RESEARCH HYPOTHESES

Based on the research problem and its objectives, a set of hypotheses has been formulated that aims to test the nature of the relationship and impact between digital governance and the effectiveness of public policy-making in Iraqi government institutions.

The main hypothesis: there is a significant impact relationship of digital governance in enhancing the effectiveness of public policy-making in Iraqi government institutions. The following sub-hypotheses branch off from it:

- There is a significant impact relationship of digital governance in its various dimensions in improving the quality of public policies and enhancing the efficiency of government decision-making.
- Digital transparency and e-participation have a positive impact on raising the level of efficiency and effectiveness of public policy-making processes within government institutions.
- Technological infrastructure and Information Security contribute to enhancing the speed of response to public problems and supporting the reliability of government decisions.
- Digital Accountability improves the efficiency of public policy implementation and enhances the effectiveness of government performance in Iraqi institutions.

RESEARCH APPROACH

The research was based on the descriptive analytical approach for its suitability to the nature of the subject, as this approach focuses on describing the phenomenon of digital governance and analyzing its impact on the effectiveness of public policy-making within Iraqi government institutions, through collecting data and information related to research variables and analyzing them to reach accurate scientific results. It is also possible to use appropriate statistical methods to analyze data and test research hypotheses if the field study is adopted using the questionnaire.

RESEARCH BOUNDARIES

The spatial boundaries of research in Iraqi government institutions that adopt digital transformation and e-governance applications are represented in their administrative activities, while the temporal boundaries include the period from 2020 to 2026 due to the expansion of government digital transformation programs in Iraq. As for the objective boundaries, it focuses on studying the impact of digital governance in its various dimensions in enhancing the effectiveness of public policy-making and improving the efficiency of government performance within Iraqi government institutions.

THE RESEARCH COMMUNITY IS REPRESENTED

By employees of Iraqi government institutions related to digital transformation and public policy-making, especially senior and middle departments and technical and administrative departments. As for the research sample, it can be selected randomly or intentionally depending on the nature of the study and the number of target institutions.

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PREVIOUS STUDIES

Many recent studies have dealt with the topic of digital governance and its role in developing government performance and enhancing the effectiveness of public policies. The Obaid study (2023) aimed to analyze the e-governance system in Iraqi local governments and the challenges facing its implementation, and the results showed that digital transformation contributes to improving the quality of government services despite the presence of technical and administrative obstacles. The Totonchi and Ahlan (2023) study also examined the challenges of e-government in Iraq, and found that poor infrastructure, legislation, and cybersecurity are among the most prominent obstacles to government digital transformation. The al-Taie study (2021) focused on public governance and sustainable development in Iraqi institutions, stressing the importance of digital management in raising the efficiency of public institutions and improving their ability to make decisions. While the study of Hassan et al. explained. (2021) regarding the evaluation of e-government services in the Kurdistan region that digital systems have contributed to improving user satisfaction and raising the efficiency of administrative performance. The Kareem study (2025) also discussed the impact of digital transformation in enhancing efficiency and transparency in Iraqi government institutions during the period (2020-2024), and showed that digital legislation contributed to the development of oversight and improving institutional performance. While the Noory (2025) study addressed digital governance as an input to strengthen good governance in Iraq, and confirmed that government digitization supports transparency and accountability and reduces administrative slack. At the international level, the aim of the study was Mahmood et al. (2025) to review global studies related to e-governance in public institutions, and noted that the success of digital governance depends on technical integration, managerial flexibility and Human Resource Development. As for the study of Abdali et al. (2024) it focused on the overall challenges of e-government in Iraq, indicating that political and legislative stability are crucial factors in the success of digital transformation. Tan and Taeiagh's (2020) study also addressed smart governance in developing countries, and stressed that the success of smart cities requires an organizational environment and digital infrastructure that supports community participation and effective decision-making. While the study focused on Siddiqui et al. (2024) on digital rights in the digital age, explaining the importance of data protection and transparency in enhancing trust in digital government institutions. Hashim's study (2022) also discussed the management of public policies in Iraq, and stressed the importance of modernizing administrative mechanisms and relying on information systems to support the efficiency of public policy-making. Most of the previous studies have found a positive relationship between digital governance and improving government performance and the effectiveness of public policy-making, but the current study is characterized by its focus on analyzing the impact of digital governance in its various dimensions in enhancing the effectiveness of public policy-making within Iraqi government institutions in a comprehensive and modern.

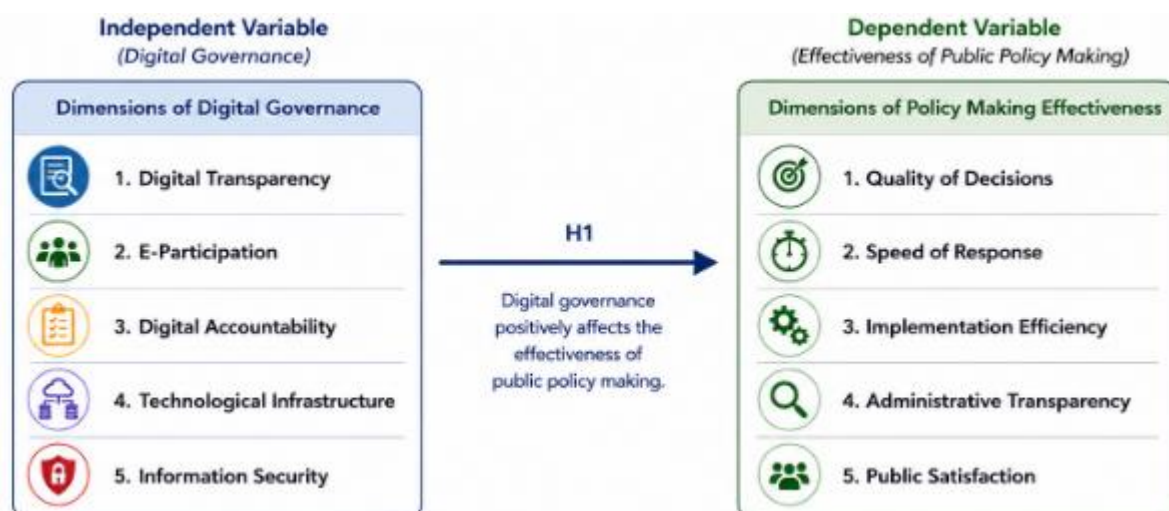


Figure 1. The hypothetical scheme of research

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Figure 1 illustrates the research hypothesis that shows the nature of the relationship between the two variables of the study, as digital governance represents the independent variable with its dimensions of digital transparency, e-participation, Digital Accountability, technological structure, and information security, while the effectiveness of public policy-making represents the dependent variable that is affected by the level of implementation of digital governance within government institutions. The figure reflects the existence of an impact relationship between the dimensions of digital governance and the level of efficiency of public policy-making and improving government performance.

THE THEORETICAL FRAMEWORK

Digital governance has become one of the modern topics that have received increasing attention in contemporary administrative thought, as a result of the accelerated developments in information and communication technologies and the trend of governments towards digital transformation in the management of their institutions and the provision of public services. This transformation has led to the reformulation of government management methods and public policy-making mechanisms in line with the requirements of the modern digital environment, which contributed to enhancing transparency and accountability and raising the efficiency of institutional performance. Public policies are one of the basic functions of the state, as they are related to the ability of governments to diagnose public problems and formulate appropriate decisions to address them and achieve development, economic and social goals. In light of the complexity of the administrative environment and the increasing volume of data and information, there is a need to adopt digital tools and technologies that contribute to supporting public policy-making processes and improving the quality of government decisions. Proceeding from this, this chapter deals with the theoretical framework of the research variables, by presenting the concept of digital governance, its dimensions and requirements, as well as clarifying the concept of public policies and the effectiveness of making them, and then explaining the nature of the relationship between digital governance and the effectiveness of public policy making within government institutions.

DIGITAL GOVERNANCE (CONCEPT-IMPORTANCE-OBJECTIVES)

The concept of digital governance has emerged as a result of the great technological development witnessed by government institutions during recent decades, as governments have tended to employ digital technologies in managing their businesses and improving the level of services provided to citizens. Digital governance is defined as the set of mechanisms, procedures and technologies adopted by government institutions in order to enhance transparency, accountability and efficiency through the use of information and communication technologies in the management of government processes and decision-making. (Nawafleh S., & Hatamleh, 2025, 1-5) It is also known as an administrative and technical framework aimed at developing the relationship between the government, citizens and various institutions through digital means, in a way that contributes to improving government performance, enhancing e-participation and supporting sustainable development. Digital governance is characterized by its ability to provide accurate and fast information, as well as facilitate communication and interaction between government agencies and society. The importance of digital governance: digital governance is gaining great importance in light of global digital transformations, as it contributes to the development of government performance and improving the quality of public services by reducing red tape and raising the level of efficiency and transparency. It also helps to enhance citizens' confidence in government institutions by providing information and services in an easy and fast electronic manner. (Hassan et al., 2025, 1-15). The importance of digital governance is also highlighted in supporting government decision-making processes by providing accurate databases and advanced information systems that help decision makers analyze public problems and make more effective decisions. It also contributes to reducing administrative corruption and enhancing accountability as a result of the adoption of electronic systems in the implementation of government operations. While the objectives of digital governance seek to achieve a set of goals, the most prominent of which are: (Grigalashvili, 2022)

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- Digital governance contributes to raising the efficiency of government performance through the development of administrative procedures and speeding up the completion of government transactions.
- Digital governance promotes the principles of transparency and accountability by making government information available and closely monitoring institutional performance.
- Help improve the quality of public services and facilitate citizens ' access to government data and services using modern digital means.
- Supports government decision-making processes by providing accurate databases and information systems that contribute to analyzing problems and making appropriate decisions.
- Contribute to enhancing e-participation, reducing administrative red tape, reducing corruption, as well as achieving digital integration between various government institutions.

DIMENSIONS OF DIGITAL GOVERNANCE

Digital governance is based on a set of basic dimensions that contribute to the development of government performance and enhance the efficiency of Public Administration, as these dimensions work in an integrated manner to support transparency and accountability, improve the quality of government services and enhance the effectiveness of decision-making and public policies. (Ali et al., 2026. 93-117).

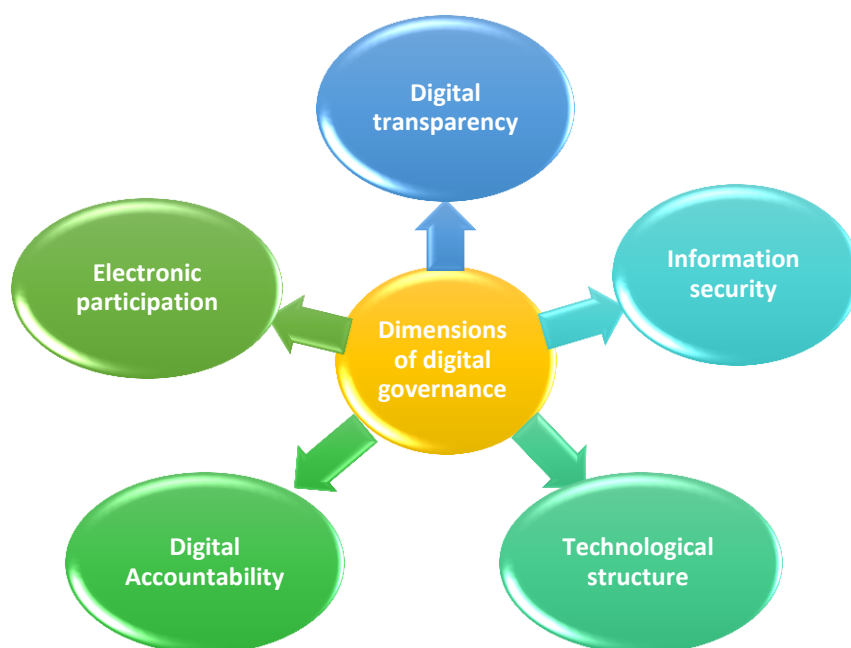


Figure 2. Dimensions of digital governance

The figure shows the main dimensions of digital governance that work in an interconnected manner to achieve efficient government performance and enhance the effectiveness of Public Administration. Digital transparency represents the availability of information and the enhancement of institutional clarity, while e-participation contributes to the involvement of citizens in decision-making processes. Digital Accountability also enhances administrative control and follow-up, while the technological structure provides the technical basis for the implementation of digital systems. Information security focuses on data protection and ensuring the confidentiality of government information, which supports the stability and efficiency of digital institutional work. Digital governance consists of a set of interrelated dimensions that contribute to the development of government performance and enhance the efficiency of Public Administration, as shown in Table 1.

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Table 1. Dimensions of digital governance and its indicators

No.	Dimension	The concept	Indicators
1	Digital transparency.	Making government information and data available through digital means.	Dissemination of information, clarity of procedures, ease of access to data.
2	Electronic participation.	Involve citizens in decision-making using digital technologies.	Electronic questionnaires, interactive platforms, digital communication.
3	Digital Accountability.	Follow-up of administrative and control performance using electronic systems.	Electronic control, performance reporting, digital assessment.
4	Technological structure.	Systems, devices and networks supporting digital transformation.	Internet, databases, technical systems.
5	Information security.	Protecting data and systems from hacking and risks	Confidentiality, electronic protection, cybersecurity.

Table 1 shows the basic dimensions of digital governance and the indicators associated with each dimension, as digital transparency is one of the important pillars that contribute to the availability of government information and enhance the clarity of procedures and easy access to data. E-participation also reflects the level of involvement of citizens in decision-making through digital means and interactive platforms. The table shows the role of digital accountability in monitoring administrative and control performance using modern electronic systems, as well as the importance of technological infrastructure as the technical basis supporting digital transformation processes. Information security focuses on protecting government data and systems from risks and breaches, ensuring the efficiency and continuity of digital work within government institutions.

REQUIREMENTS AND OBSTACLES TO THE APPLICATION OF DIGITAL GOVERNANCE

The application of digital governance requires the availability of a set of basic components, the most important of which are: (Makki & Alqahtani, 2022)

- Availability of modern technical infrastructure including communication networks and digital systems necessary to support digital transformation processes within government institutions.
- Providing human resources with technical skills and expertise capable of managing and operating digital systems with high efficiency.
- Supporting the senior management of digital transformation programs by adopting plans and strategies supporting the implementation of digital governance.
- The existence of a legal and legislative framework regulating digital work, as well as the promotion of Digital Culture and the provision of effective systems for the protection of data and government information.

Accordingly, the implementation of digital governance requires the availability of a set of organizational, technical and human components that support the success of digital transformation within government institutions, as shown in the following table:

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Table 2. Digital governance application requirements

No.	Requirements	Its purpose
1	Digital infrastructure	Support the application of electronic systems.
2	Qualified human resources	Operation and management of digital systems.
3	Financial support	Promote institutional digital transformation.
4	Digital legislation	Organization of electronic work.
5	Digital Culture	Enhanced interaction with modern technologies.
6	Information security	Data protection and government regulations.

Table 2 shows the most important prerequisites for the implementation of digital governance within government institutions, as the digital infrastructure represents the supporting basis for the operation of electronic systems and the development of government services. Qualified human resources are also an important element in the efficient management and operation of digital technologies, while financial support contributes to strengthening institutional digital transformation programs. The table also highlights the importance of digital legislation in regulating electronic work and ensuring the safety of digital procedures, as well as the role of Digital Culture in enhancing interaction with modern technologies. Information security is one of the main requirements for protecting data and government systems and ensuring the continuity of digital work efficiently and securely. While digital governance faces a number of challenges and obstacles, the most prominent of which are: (Harun, 2026, 1-17).

- Many government institutions suffer from weak technological infrastructure, which limits the efficiency of applying digital systems and e-transformation programs.
- Limited financial resources represent one of the most prominent challenges facing the implementation of digital governance projects and the development of modern technologies within government institutions.
- The lack of technical skills and experience of employees makes it difficult to use digital systems efficiently, as well as the resistance of some departments to change and transition to the digital environment.
- The low level of digital awareness contributes to slowing down the adoption of electronic applications and reducing the use of modern services and technologies.
- Digital governance faces security challenges represented by cyber threats and weak information protection, in addition to limited electronic integration between different government institutions.

CONCEPT AND STAGES OF PUBLIC POLICY MAKING

public policies are defined as the set of decisions, actions and plans adopted by the government to address public issues and problems and achieve economic, social and Development Goals. Public policies are the instrument of the state in directing resources and potential towards the realization of the public interest. It is also defined as a dynamic process that involves identifying and analyzing general problems, formulating appropriate alternatives, making decisions, implementing them and evaluating their results. As for the stages of public policy-making, where the public policy-making process goes through several interrelated stages, they are in the form of a series that can be represented as follows: (Banha et al., 2022, 539-556).

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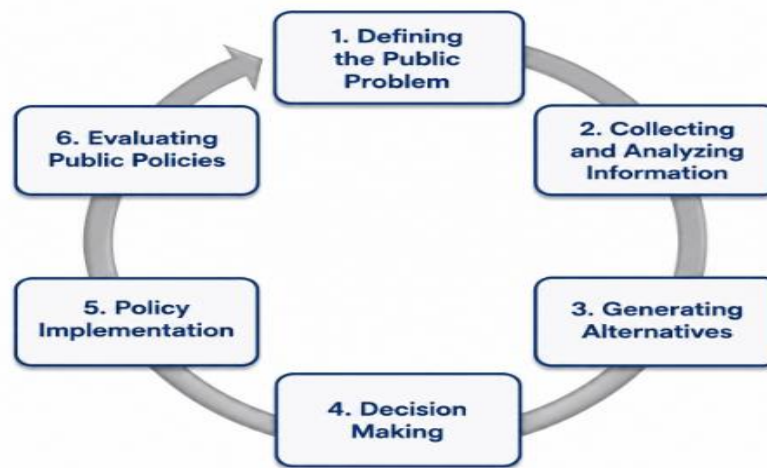


Figure 3. Stages of public policy making

Figure 3 shows the basic stages of the public policy-making process adopted by government institutions to address problems and achieve public goals in an orderly and coherent manner. The process begins with identifying and accurately diagnosing the general problem, then collecting and analyzing the information and data associated with it in order to understand its various causes and effects. After that, a set of proposed alternatives and policies is prepared and the most appropriate alternative is selected according to the government's capabilities and priorities. The process then moves to the stage of public policy implementation by transforming decisions into practical and applicable programs and procedures, and then comes the evaluation and follow-up stage, which aims to measure the success of public policy in achieving its goals and identify strengths and weaknesses in order to develop government performance and improve the policy-making process in the future.

THE CONCEPT AND CRITERIA OF EFFECTIVE PUBLIC POLICY MAKING

The effectiveness of public policy-making is defined as the ability of government institutions to prepare and formulate public policies and implement them in a way that achieves administrative efficiency and the ability to respond to various societal changes and needs. It also expresses the extent to which the government has succeeded in making rational decisions based on accurate information and data that contribute to addressing public problems and achieving development, economic and social goals. The effectiveness of public policies is linked to several basic concepts, most notably efficiency in the use of resources, flexibility in dealing with environmental challenges and variables, in addition to the quality of the decision-making process and mechanisms of implementation, follow-up and evaluation. Information systems and modern technologies also contribute to enhancing the effectiveness of policy-making by providing reliable data that supports the accuracy of government decisions and improving institutional performance. (Hendren et al., 2023, 468-485) The most important criteria for the effectiveness of public policies are:

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Figure 4. Criteria for the effectiveness of public policies

Figure 4 shows the basic criteria used in measuring the effectiveness of public policies and their success in achieving government and Development Goals. The quality of government decisions is one of the most prominent of these criteria because of its role in choosing the appropriate alternatives to address public problems, while the speed of response reflects the ability of government institutions to deal with variables and crises efficiently. The efficiency of policy implementation is also an indicator of the ability of government agencies to turn plans into practical results, while the accuracy of information and data contributes to supporting rational decisions and reducing errors. The citizens' satisfaction criterion is also highlighted as an indicator of the success of public policies in meeting the needs of society, as well as flexibility and efficient use of resources to achieve the best results at the lowest possible costs.

THE RELATIONSHIP BETWEEN DIGITAL GOVERNANCE AND EFFECTIVE PUBLIC POLICY-MAKING

Digital governance plays an important role in improving public policy-making processes by providing accurate and up-to-date information that helps decision makers analyze problems and make more efficient decisions. They also contribute to accelerating the processes of communication and data exchange between various government institutions. Digital governance also helps to enhance community participation through electronic platforms, which allows governments to better identify the needs and proposals of citizens. The impact of digital governance in improving government performance digital governance can contribute to raising the level of efficiency and transparency within government institutions by automating administrative procedures and reducing red tape, which leads to improving the quality of public services and reducing the chances of administrative corruption. Digital technologies also help to strengthen administrative control and provide accurate indicators to assess government performance, which positively reflects on the effectiveness of public policies. Modern technological developments have led to the emergence of the concept of smart government based on Big Data, Artificial Intelligence and digital applications in the management of government institutions and public decision-making. Digital governance is the foundation of smart government by providing the necessary technical and organizational structure for digital transformation. (Kassen, 2025, 95-121). In recent years, Iraq has witnessed an increasing trend towards the implementation of digital transformation and e-government programs, but this trend still faces multiple challenges related to the weakness of digital infrastructure, lack of technical competencies and weak electronic integration between government institutions. Despite these challenges, the implementation of digital governance represents an important opportunity to improve government performance, enhance the effectiveness of public policy-making, and support administrative reform efforts and sustainable development in Iraq. The dimensions of digital governance contribute to improving the efficiency and effectiveness of public policies

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through their direct impact on the quality of information and government decision-making, as shown in the following table:

Table 3. The relationship between digital governance and effective public policy making

No.	Dimensions of digital governance	Influencing the effectiveness of public policies
1	Digital transparency.	Improving the quality of government decisions.
2	Electronic participation.	Promote community interaction in decision-making.
3	Digital Accountability.	Raising the efficiency of follow-up and control.
4	Technological structure.	Accelerate information exchange and policy implementation
5	Information security.	Enhance the reliability of data and decisions.

Table 3 shows the nature of the relationship between the dimensions of digital governance and the effectiveness of public policy-making, as digital transparency contributes to improving the quality of government decisions by providing accurate and clear information. E-participation also enhances community interaction and citizen involvement in the decision-making process, while digital accountability contributes to raising the efficiency of follow-up and administrative control. The table also shows the importance of technological infrastructure in accelerating the exchange of information and the efficient implementation of public policies, as well as the role of information security in enhancing the reliability of data and government decisions and protecting digital systems from various risks.

APPLIED ASPECT: DESCRIPTIVE ANALYTICAL STUDY

The applied aspect is one of the basic stages in scientific research, as it aims to link the theoretical framework with practical reality by analyzing the nature of the relationship between digital governance and the effectiveness of public policy-making within Iraqi government institutions. In light of the increasing trend towards digital transformation and the adoption of modern technologies in government administration, there is a need to study the reality of digital governance and analyze its impact on improving the efficiency of government performance and enhancing the quality of public policies. This aspect relies on the descriptive analytical study as an appropriate approach to analyzing the reality of digital governance in Iraqi government institutions, by describing the phenomenon and analyzing its various dimensions based on official reports, recent studies and indicators related to digital transformation and e-government in Iraq.

THE REALITY OF DIGITAL GOVERNANCE IN IRAQI GOVERNMENT INSTITUTIONS

THE REALITY OF DIGITAL TRANSFORMATION IN IRAQ

In recent years, Iraq has witnessed an increasing interest in digital transformation and e-government programs in order to develop government performance and improve the quality of public services. The Iraqi government has sought to adopt a number of digital initiatives aimed at automating administrative procedures, developing technological infrastructure and promoting the use of electronic systems in government institutions. Despite these efforts, the level of digital transformation still faces many challenges related to technical infrastructure and weak digital integration between government institutions. (Aamer & Sami, 2025, 1-26).

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Table 4. The reality of digital transformation in Iraqi government institutions

No.	The field of digital transformation	Application level	Observations
1	Electronic services	Medium	Disparities between government institutions
2	Information systems	Medium	Poor digital integration.
3	Electronic payment	Relatively well	Gradual expansion of services.
4	Data management	Limited	Weak centralized databases.
5	Digital communication	Medium	The need for infrastructure development.

Table 4 shows the reality of digital transformation in Iraqi government institutions by indicating the level of application of a number of areas of digital transformation and related observations. It shows that electronic services and information systems are still at an average level due to the varying levels of application and weak digital integration between government institutions. The table also indicates that electronic payment services have witnessed relative development and gradual expansion over recent years. On the other hand, data management still suffers from obvious limitations due to the weakness of centralized databases, as well as the continued need to develop digital communications infrastructure to support the efficiency of government work and comprehensive digital transformation. The most prominent manifestations of digital transformation in Iraq are:

- Launch of electronic platforms to provide government services.
- Adoption of digital systems in some ministries and public institutions.
- Expansion of the use of electronic databases.
- Development of electronic payment systems and digital services.
- Attention to the construction of communications and information technology infrastructure.

Table 5. Indicators of digital transformation in Iraq for 2024

No.	The index	Estimated value	Authorized entity
1	Percentage of internet users	78.7% of the population	Data Reportal 2025.
2	Number of internet users	36.2 million users	Data Reportal 2025.
3	Percentage of smartphone usage	%71	International digital reports.
4	The level of e-government services	Medium	UN E-Government Survey 2024.
5	The level of electronic participation	Relatively limited	The United Nations.

Table 5 shows a set of digital indicators that reflect the reality of digital transformation in Iraq during 2024, as the data indicate a high percentage of internet and smartphone use, which enhances the opportunities for applying digital governance and e-government services. In contrast, the level of e-services and digital participation is still within the medium or relatively limited limits, which indicates the continued need to develop digital infrastructure and enhance the efficiency of e-government systems within public institutions.

THE REALITY OF IMPLEMENTING DIGITAL GOVERNANCE

Iraqi government institutions have begun to gradually apply some of the concepts of digital governance, especially in the areas related to electronic services, data management and digital communication. These applications have contributed to reducing red tape and improving the relative speed of completion of

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government transactions. Digital governance has also helped in: (Al-Halboosi & Al-Azzawi, 2025, 1241-1251)

- Enhancing transparency through electronic dissemination of information.
- Improve communication between government institutions and citizens.
- Support decision-making processes via digital systems.
- Raising the efficiency of government information and data management.
- Facilitate the follow-up of administrative and supervisory performance.

However, the implementation of digital governance in Iraq is still limited compared to developed countries, due to a number of technical, administrative and organizational obstacles.

DIGITAL GOVERNANCE INDICATORS IN IRAQ

Digital governance depends on a set of indicators that reflect the level of progress in the implementation of digital transformation within government institutions, which are described as follows:

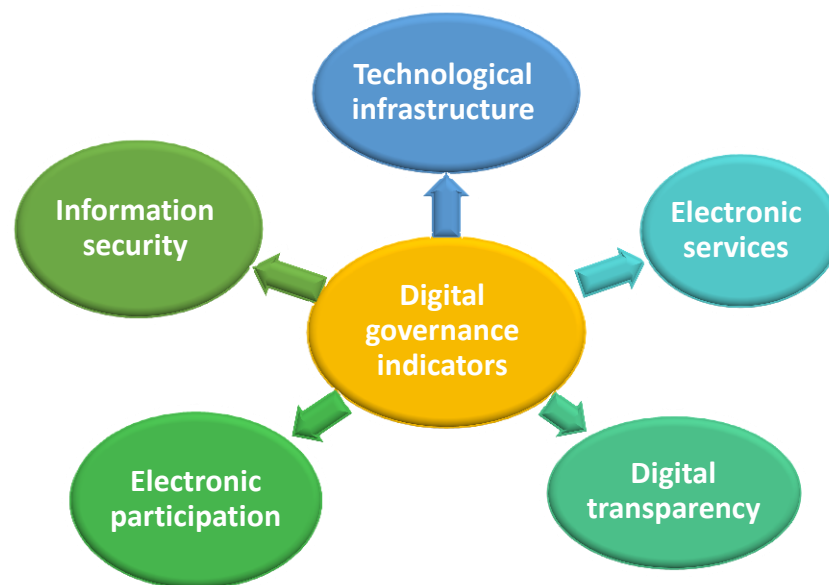


Figure 5. Digital governance indicators

Digital governance is measured through a set of indicators that reflect the level of efficiency of digital transformation within government institutions, as the Digital Infrastructure Index indicates the availability of communication networks and modern technical systems supporting digital government work, while the e-services index measures the level of providing government services electronically and ease of access to citizens. The digital transparency index also reflects the degree of availability of government information via digital platforms, while the e-participation index shows the level of interaction of citizens with government institutions using digital means. The Information Security Index is related to the ability of government institutions to protect data and information from electronic risks and breaches, as shown in Figure (4) above.

ANALYZING THE IMPACT OF DIGITAL GOVERNANCE ON THE EFFECTIVENESS OF PUBLIC POLICY MAKING

THE IMPACT OF DIGITAL TRANSPARENCY IN PUBLIC POLICY MAKING

Digital transparency is one of the important factors that contribute to enhancing the effectiveness of public policies, as it helps in providing clear and accurate information and data to decision makers and citizens alike. It also contributes to reducing administrative corruption and enhancing confidence in government institutions, which has a positive impact on the quality of public policies. (Jalout, A. J., & Al-Zeidi, 2024,

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86- 103). In Iraqi government institutions, some government agencies have begun to publish data and services electronically, but the level of digital transparency still needs to be further developed and expanded.

THE IMPACT OF E-PARTICIPATION IN GOVERNMENT DECISION-MAKING

E-participation contributes to the involvement of citizens and stakeholders in decision-making processes and the formulation of public policies, through the use of electronic platforms and digital means of communication. This participation helps to strengthen the interaction between the government and society and improve the ability of government institutions to diagnose public problems.

However, the weakness of the Digital Culture and the lack of community awareness of the use of electronic means are still factors that limit the effectiveness of e-participation in Iraq.

THE IMPACT OF THE TECHNOLOGICAL STRUCTURE ON THE EFFICIENCY OF PUBLIC POLICIES

The technological structure is the main basis for the application of digital governance, as government institutions rely on technical systems, communication networks and databases to manage their business and decision-making. The more developed the infrastructure, the greater the ability of government institutions to implement public policies efficiently and quickly. In Iraq, some government institutions still suffer from weak digital infrastructure, which affects the level of electronic integration and the speed of information exchange.

THE IMPACT OF INFORMATION SECURITY ON THE RELIABILITY OF GOVERNMENT DECISIONS

Information security is a prerequisite for the success of digital governance, due to its importance in protecting government data and ensuring the safety of digital systems. Information security contributes to enhancing confidence in electronic systems and reducing cyber risks that may affect the efficiency of government work. Attention to cybersecurity has become an urgent necessity in light of the expansion of the use of digital technologies within Iraqi government institutions.

Table 6. Impact of digital governance on improving government performance

No.	Sphere of influence	Positive reflections
1	Decision making	Increased accuracy and speed.
2	Electronic services	Improve quality and efficiency.
3	Transparency	Reduce administrative corruption.
4	Corporate communication	Facilitate the exchange of information.
5	Administrative control	Strengthen follow-up and evaluation.

Table 6 shows the impact of digital governance in improving government performance through a range of administrative and organizational areas that contribute to raising the efficiency of institutional work. Digital governance helps to develop the decision-making process by increasing the accuracy and speed of information processing, and contributes to improving the quality of electronic services and raising their efficiency. The table also shows the role of digital transparency in reducing administrative corruption, as well as enhancing institutional communication and facilitating the exchange of information between government institutions. Digital governance also contributes to the development of administrative control by

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enhancing monitoring and evaluation processes and improving the level of government performance in general.

CHALLENGES FACING DIGITAL GOVERNANCE IN IRAQ

- **Technical challenges:** represented by weak technological infrastructure, limited internet and communication services, lack of modern technical systems, as well as weak electronic integration between government institutions.
- **Administrative and organizational challenges:** these include resistance to administrative change, weak strategic planning for digital transformation, limited coordination between government institutions, as well as weak follow-up and evaluation systems.
- **Human challenges:** these include the weak digital skills of employees, the lack of specialized competencies in the technical field, the limited training and digital qualification programs, and the low level of Digital Culture.
- **Security and legislative challenges:** which are represented by cybersecurity risks, weak legislation regulating digital work, limited data protection systems, and finally weak policies related to information security.

Table 7. The most important challenges facing digital governance in Iraq

No.	Type of challenge	Sphere of influence	Reflections
1	Weak digital infrastructure	High	Slow digital transformation.
2	Poor technical skills	High	Reducer efficiency of systems.
3	Limited funding	Medium	Delays in digital projects are.
4	Weak digital legislation	Medium	Poor organization of electronic work.
5	Cybersecurity threats	High	Risk of data breach.

Table 7 shows the most prominent challenges facing the implementation of digital governance in Iraq, as the problems of digital infrastructure and poor technical skills are among the most influential challenges in the success of government digital transformation. Cyber threats are also an increasing challenge in light of the expanding use of electronic systems, as well as the impact of limited funding and weak digital legislation in slowing down the implementation of digital government projects.

PROSPECTS FOR THE DEVELOPMENT OF DIGITAL GOVERNANCE IN IRAQI GOVERNMENT INSTITUTIONS

- **Digital infrastructure development:** the success of digital governance requires the strengthening of communication networks, the development of technical systems and the provision of an integrated digital environment within government institutions.
- **Enhancing human competencies:** digital transformation requires the preparation of qualified human cadres through continuous training and the development of technical and managerial skills.
- **Supporting digital legislation and policies:** the implementation of digital governance requires the existence of laws and legislations that regulate electronic work and protect government data and information.
- **Promoting the culture of digital transformation:** spreading digital awareness among employees and citizens is one of the important factors for the success of digital governance programs and achieving interaction with electronic services.

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- Building an integrated digital system for public policy-making: Iraqi government institutions can develop digital systems based on databases and electronic analysis to support public policy-making processes and raise their efficiency and effectiveness.

Table 8. Proposals for the development of digital governance in Iraqi government institutions

No.	The proposal	Its purpose
1	Digital infrastructure development	Enhance the efficiency of electronic systems.
2	Human resources training	Raising technical skills.
3	Updating digital legislation	Organization of electronic work.
4	Enhancing cyber security	Government data protection.
5	Electronic integration support	Facilitate the exchange of information.

Table 8 shows the most prominent proposals needed to develop digital governance in Iraqi government institutions, as it focuses on strengthening the digital infrastructure and improving the efficiency of electronic systems to support digital transformation. He also points out the importance of training human resources to raise technical skills, as well as updating digital legislation to organize electronic work. The table also highlights the need to strengthen cybersecurity to protect government data, in addition to supporting electronic integration between institutions to facilitate the exchange of information and improve the efficiency of government performance and public policy-making.

DISCUSSION OF THE RESULTS

The results of the study showed that there is a clear significant impact relationship between digital governance and the effectiveness of public policy-making within Iraqi government institutions, which supports the main hypothesis of the research regarding the existence of a positive impact of the dimensions of digital governance in improving the efficiency of government performance and public decision-making. The results showed that digital transparency directly contributes to improving the quality of government decisions by making information and data available more clearly and accurately, which confirms the validity of the hypothesis that digital transparency has an impact on enhancing the quality of public policies. The study also revealed that e-participation plays an important role in enhancing community interaction and supporting the decision-making process, but the weakness of Digital Culture and limited technical awareness among some workers and citizens still limit the effectiveness of this participation, which explains the disparity in the level of application of e-interaction tools within Iraqi government institutions. The results also showed that the technological infrastructure is a key element in enhancing the speed of response to public problems and improving the implementation of government policies, which supports the hypothesis about the importance of digital infrastructure in raising the efficiency of public policies. However, the weak electronic integration between government institutions and insufficiently developed digital systems continue to negatively affect the speed of information exchange and the accuracy of decision-making. The results also confirmed the validity of the hypothesis related to information security, as it turned out that cybersecurity has become a necessary requirement to ensure the reliability of government data and protect digital systems from electronic risks and breaches, especially in light of the expansion using modern technologies within government institutions. The results generally indicate that the success of digital governance in Iraq does not depend on technology only, but requires a supportive regulatory and legislative environment, in addition to the Administrative will to adopt institutional change and digital transformation effectively. The results also reflect that the continuation of administrative red tape and weak institutional coordination are among the most prominent challenges that limit the effectiveness of digital governance implementation, which directly affects the quality of public policies and the efficiency of government

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performance. Based on this, it can be said that digital governance represents a real opportunity to develop public administration in Iraq and improve the efficiency of public policy-making, but achieving this requires addressing technical, human and legislative challenges in an integrated and sustainable manner.

CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

Digital governance is one of the modern pillars that contribute to the development of government performance and enhance the efficiency of Public Administration. The study has shown that there is an important role of digital governance in improving the effectiveness of public policy-making within Iraqi government institutions, despite the persistence of a number of technical, administrative and organizational challenges that affect the level of application and digital transformation.

- The study showed that digital governance directly contributes to improving the quality of government decisions by providing accurate information and data to support the public policy-making process.
- Digital transparency and e-participation have been shown to play an important role in enhancing interaction between government institutions and citizens and improving the level of trust in government performance.
- The study revealed the existence of a relative weakness in the digital infrastructure and electronic integration between Iraqi government institutions, which affects the efficiency of public policy implementation.
- The study found that information security is an essential element to ensure the reliability of data and digital systems and protect government institutions from cyber risks.
- The study showed that the success of digital governance requires the availability of modern digital legislation, qualified human resources and an organizational culture supportive of digital transformation within Iraqi government institutions.

RECOMMENDATIONS

In light of the findings of the study, there is a need to adopt a set of procedures and measures that contribute to the development of digital governance and enhance the effectiveness of public policy-making within Iraqi government institutions, to support administrative reform and digital transformation efforts and raise the efficiency of government performance in general.

- The need to develop digital infrastructure and communication networks within government institutions to enhance the efficiency of electronic systems and accelerate the exchange of information.
- Work on the training and qualification of human resources in the digital field through the establishment of training programs and workshops related to modern technologies and digital transformation.
- Promoting the application of the principles of transparency and digital accountability by expanding the scope of electronic services and publishing government information in an accurate and clear manner for citizens.
- Updating the legislation and laws related to electronic work and cyber security to ensure the protection of government data and the organization of digital transformation processes.
- Supporting electronic integration between Iraqi government institutions and establishing unified central databases that contribute to raising the efficiency of public policy-making and improving the quality of government services.

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