

THE ROLE OF MODERN TECHNOLOGY IN ADMINISTRATIVE CONTROL GOVERNANCE: A LEGAL ANALYTICAL STUDY OF THE IMPACT OF DIGITAL TRANSFORMATION ON ADMINISTRATIVE EFFICIENCY

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Abstract

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The study aims to analyze the role of modern technology in governance related to administrative control. It focuses on digital applications that enhance transparency, accountability, and efficiency in administrative work. Additionally, the study explores the legal implications of digital transformation and examines how laws and regulations can ensure these technologies align with established administrative values. The study addresses the interconnected themes of governance, administrative control, modern technology, and digital transformation. It specifically investigates the legal effects of digital transformation on administrative control governance and its impact on administrative efficiency, as well as the legal challenges that may arise in the administrative sector due to digital transformation. The findings indicate that digital transformation significantly contributes to improved administrative control and enhanced efficiency in administrative processes (Ashour, 2009; Egodawe et al., 2022). The study highlights the stresses the necessity for developing laws and regulations that support the effective use of modern technology in this field.

Keywords: Modern Technology, Governance, Administrative Control, Digital Transformation, Administrative Efficiency

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1. INTRODUCTION

We live in a world undergoing digital transformation, characterized by constant change and renewal. In this environment, initiatives driven by projects and

governance are on the rise (AbdelHafiz et al., 2024). Various governance influences have emerged that are essential for addressing the challenges brought about by continuous change in professional paths (Alalawi & Alkrisheh, 2024). As a result, digital

transformation has become a crucial pillar in businesses' daily operations (Ashour, 2009).

Digital transformation involves rethinking how we work and breaking free from monotony. It accelerates daily operations by leveraging technological advancements and integrating digital technology into various work areas. This integration enhances workflow efficiency, reduces errors, and boosts productivity. Additionally, it enhances communication speed and collaboration, while enabling regular and continuous information updates, and provides access to plans and projects (Hamza & Majzoub, 2023).

The need for institutions to undergo digital transformation has become increasingly urgent due to the rapid advancement of information technology tools and methods across all sectors of life, including both the government and private sectors. Digital transformation significantly enhances administrative efficiency and governance. By applying information technology, institutions can create a comprehensive network system that connects all administrative departments. As a result, it simplifies management processes, reduces time consumption, and enables effective information management (Ibrahim, 2023).

The significance of this study is rooted in its alignment with current international trends and issues, particularly the topic of administrative control governance. It's crucial for the success of applied institutions, aims to expand understanding both intellectually and cognitively by encouraging further scientific inquiry, also monitoring and measuring additional variables.

Additionally, the study highlights the impact of digital transformation on enhancing administrative control governance from a legal principle, which is a contemporary topic in the implementation of digital transformation within governmental institutions. Understanding the relationship between digital transformation and the efficiency of the state's administrative apparatus is vital, as it plays a key role in the progress of countries. This research seeks to examine the extent to which digital transformation influences the efficiency of government operations.

It is essential for improving the efficiency of governance of services provided to citizens and investors. It involves converting traditional government operations into electronic systems, facilitating the provision of government services online. This transformation plays a crucial role in enhancing the digital economy within both governmental and private institutions, and according to a recent World Bank report, digital transformation is critical for enhancing governance efficiency by transitioning traditional operations to electronic systems, enabling online service delivery, and fostering digital economic growth across public and private sectors (World Bank, 2023).

Digital transformation plays a key role in strengthening the governance of administrative performance by improving transparency, enhancing oversight, and leveraging advanced technologies. These technologies offer valuable data-driven insights and assist in risk mitigation. Strengthening governance over employee performance within institutions is more important than ever. However, in Jordan, the implementation of digital transformation remains below the desired level.

Therefore, the main problem identified is the weakness of digital transformation capabilities, which could negatively impact the efficiency of

the state's administrative apparatus. Consequently, the study aims to address a central question, from which several related questions emerge:

RQ1: What is the role of modern technology in enhancing administrative control governance?

The study attempted to answer the following questions:

RQ2: What is digital transformation, and what is administrative efficiency?

RQ3: Does the implementation of digital transformation technologies in organizations improve performance efficiency?

RQ4: What challenges arise when applying modern technology to administrative control governance?

RQ5: What is the role of legal legislation concerning digital transformation, and its impact on administrative control governance?

The objectives of this study are as follows:

1. To emphasize the importance of the study topic for both theoretical and practical benefits for students and researchers.
2. To define the concepts of digital transformation and administrative efficiency.
3. To define the concept of governance.
4. To outline the laws that govern digital transformation.
5. To examine the role of digital transformation in enhancing the efficiency of the state's administrative apparatus.
6. To contribute to the legal library by providing a comprehensive and independent research study on the subject.

The structure of this paper is as follows. Section 2 reviews the relevant literature. Section 3 analyses the methodology. Section 4 presents the results and discussion. Finally, Section 5 concludes the paper.

2. LITERATURE REVIEW

In this section, the researchers discuss the nature of digital transformation and its impact on administrative efficiency.

2.1. The nature of digital transformation

Digital transformation involves a fundamental rethinking of how modern technologies can be used to develop new business models. This process requires collaboration among departments to integrate a focus on work with the rapid advancement of applications (Abawi, 2021).

Digital transformation has emerged as a key modern administrative concept, gaining significant attention in recent years. Due to its broad application across various sectors, it lacks a single, universal definition. It is often described as the shift from traditional to digital services and practices, driven by information and communication technologies, and supported by a culture that embraces digital change along with its technical and human requirements (Ahmed & Abdel Aziz, 2024).

It has been defined in various ways. One definition describes it as a process of transition across forms, content, techniques, and methods that vary based on the transformer's own intent or external pressures to keep pace with modern advancements (Masoudi & Amer, 2021).

Another perspective views digital transformation as: "A fundamental shift in businesses or government operations through radical changes that affect business models and workflows. This transformation may involve altering products or

completely redefining service delivery methods to align with modern advancements” (AbdelHafiz et al., 2024, p. 2). From an administrative and economic standpoint, digital transformation is defined as the use of computers and the internet to create more efficient economic value (Shahata, 2020).

Based on these definitions, digital transformation can be seen as a transition from relying primarily on physical resources to prioritizing information-driven resources enabled by technology. This shift promotes intellectual engagement and behavioral development, fostering impactful change through the adoption of advanced technologies across sectors. It delivers value to employees, customers, and stakeholders alike, both personally and professionally.

Digital transformation encompasses multiple dimensions, including:

Artificial intelligence (AI). AI refers to the study of intellectual abilities through computer models that simulate human thinking. It is a technology used to build machines capable of mimicking human processes, such as thinking, forming opinions, making judgments, and learning and developing over time (Russell & Norvig, 2022; Abdel Nour, 2005; Al-Tkhayneh et al., 2023).

Electronic signature. An electronic signature is a procedure carried out by an individual who wishes to sign an electronic document. This can include contracts, agreements, sales and purchase orders, or personal correspondence. An electronic signature serves a similar purpose as a handwritten signature. It authenticates the validity of the document being signed, often referred to as a message. This message can take various forms, including emails, specific contracts, or complex messages sent using particular protocols (Abu Maria, 2010; Alkrisheh, 2022).

Signatures play a vital role in the formation of commercial transactions that require formal authorization. This process is well-supported by the French Electronic Signature Law, which came into effect on March 13, 2000. Additionally, the Law of Evidence has clarified how to assess the legal weight of electronic documents. Notably, some legal systems have explicitly mandated the use of electronic documents, encouraging a shift away from paper-based transactions wherever possible. Information presented in electronic form holds the same legal validity as its paper counterpart. Electronic documents are integral to a wide range of administrative, commercial, and financial systems, impacting both governmental operations and individual interactions (Kazem & Naama, 2008).

Big data. Big data consists of large and complex sets of data that possess unique characteristics, such as size, speed, diversity, variation, and data accuracy. These data sets cannot be processed efficiently with current and traditional technologies (AbdelHafiz et al., 2024).

Digital transformation offers numerous advantages, with the most significant being (Al-Hussein, 2024):

1. Improving efficiency:

- **Saving time.** It allows access to electronic services anytime and anywhere, significantly reducing the time needed to complete transactions.

- **Accelerating procedures.** It minimizes bureaucratic processes, enhancing the speed of service delivery.

2. Increasing transparency and accountability:

- **Combating corruption.** Reducing direct human interactions helps decrease corruption and improve transparency.

- **Providing information.** It enables easy access to information and public data.

- **Data protection.** It employs modern security technologies to safeguard citizens' data and ensure their privacy.

- **Business continuity.** It implements backup systems and information technology solutions to ensure the continuity of legal services during emergencies.

2.2. The nature of administrative efficiency

The development of business intelligence and the use of computers have led to increased interest in adopting modern technologies across various fields. This shift helps overcome certain human shortcomings in the workplace, enhancing the efficiency and effectiveness of businesses. Information technology plays a crucial role in decision-making and improving productivity within business establishments, making it one of the most important tools for delivering services and producing products (Kameel et al., 2022).

The size of a state's administrative apparatus is closely linked to its goals and activities. As the state's objectives and the range of services it provides expand and diversify, the size of its administrative apparatus also grows, along with its organizational structure. In Egypt, the administrative apparatus has undergone various transformations influenced by political, economic, social, and legislative factors. These shifts necessitated significant modifications to the structure of the administrative apparatus to align with these changing variables, highlighting the need to reconsider its size (Abawi, 2021; Al-Hosary, 2019).

Recently, the concept of efficiency has gained prominence across various fields. Generally, efficiency is viewed as the optimal criterion for utilizing financial, human, and material resources, in addition to the available information. Therefore, efficiency serves as a measure of how well material, financial, and human resources are leveraged in production processes. Management plays a critical role in the effective use of these resources. When management is confident in the sustainability of material and human resources, its operations are both effective and continuous. In addressing administrative efficiency, management needs to possess high academic qualifications (Khaled & Rashid, 2022; Al-Hilali, 2010).

Administrative efficiency refers to an organization's capacity to achieve its goals while minimizing the use of time, money, personnel, materials, and energy, all within a supportive social environment. This involves offering guidance, conducting regular staff meetings, promoting interaction, and encouraging employee involvement in decision-making processes. Therefore, the effectiveness of administrative operations is closely tied to the contributions of employees and the quality of their work in supporting institutional objectives. Enhancing administrative efficiency among staff has become a key priority in fostering effective teamwork (Russell & Norvig, 2022).

Administrative efficiency can be defined as the set of administrative and communication knowledge and skills that enable employees to carry out their tasks with minimal effort and time (Ibrahim, 2023).

Therefore, the researcher can define administrative efficiency as the ability to perform work and duties effectively and efficiently, through a combination of administrative skills encompassing

functions like planning, organization, communication, decision-making, human relations, and evaluation, all of which are essential for individuals.

2.3. The legal framework for digital administrative control in Jordan

Digital transformation has become a central priority for nations and organizations across various sectors. Driven by modern technological advancements, it pushes contemporary institutions to adopt and integrate digital solutions across all areas of operation. Its value lies in the ability to keep information up to date, streamline administrative workflows, reduce time and effort, and enhance overall productivity. These advancements not only increase operational efficiency but also boost employee morale and accelerate the completion of tasks and service delivery (Russell & Norvig, 2022).

In this section, the researchers address the legal framework for digital administrative control in Jordan through the following subsections.

2.3.1. Jordanian legislation related to digital administrative control governance

Control refers to the efforts made to achieve specific goals that legislators aim to accomplish. Some argue that the foundation of control lies in determining the tasks that each individual must perform within a project, as this ensures that the necessary work is completed by the specified deadlines (Badawi, 1985).

Governance

In a broad sense, governance is not an end in itself (i.e., governance for the sake of governance) but rather a means to achieve a higher objective: the well-being and security of society, alongside the establishment of social justice. This framework aims to elevate individuals to a level of dignity that respects their humanity (Al-Hussein, 2024).

The concept of governance is political, economic, and social in nature. It requires an understanding of the people's needs and demands, even in the most minor details, with the support of the ruling class in establishing the foundations of good governance.

The World Bank was the first to introduce the term *governance* in a study addressing the economic crisis in sub-Saharan Africa in 1989. The Bank defined governance generally as the exercise of political authority to manage the affairs of the state (Tawfiq, 2005).

Recently, the importance of governance has increased significantly in achieving development and enhancing administrative control. Its comprehensiveness varies from one society to another, influenced by laws and regulations, which serve as barriers against manipulation and corruption. Governance plays a crucial role in administrative control by fostering economic development and preventing crises. It builds trust among individuals and organizations dealing with institutions, combats corruption, and significantly improves the quality of administrative control (Barafi et al., 2022).

Furthermore, good governance ensures the integrity, neutrality, and righteousness of employees in organizations and administrative positions. It helps to minimize intentional errors and reduce unintentional deviations, ultimately ensuring the highest level of effectiveness in administrative control (Dudin, 2015; Alkrisheh, 2022).

While traditional control tends to focus on past performance due to its reliance on prior planning and execution, digital control enables real-time monitoring through a management network. This capability reduces the time lag between identifying a deviation or error and taking corrective action. Digital control is a process that identifies discrepancies through the flow of information and networking among departments. As everyone collaborates simultaneously, this fosters greater electronic trust and loyalty, positioning digital control closer to trust-based control (Barafi et al., 2022; Ashour, 2009).

In this context, Jordanian legislation related to digital administrative control is examined through the following topics:

1. Electronic Transactions Law No. 85 of 2001 and its role in digital transformation.

2. The Integrity and Anti-Corruption Law and its impact on administrative control.

3. The Role of Government Systems and Instructions in Regulating Digital Control.

Electronic Transactions Law No.85 of 2001 and its role in digital transformation. Digital transformation involves a complete rethinking of how modern technologies are utilized to create new business models. This process requires collaboration among departments to combine the philosophy of focusing on work with the rapid development of applications (Abawi, 2021).

The Electronic Transactions Law No. 85 of 2001 (3/A) was established to facilitate the use of electronic means for conducting transactions. It ensures that these electronic transactions adhere to the provisions of any other relevant laws without amending or canceling those provisions.

One key aspect of digital transformation is the electronic signature. Article 2 of the Electronic Transactions Law No. 85 of 2001 defines the electronic signature as "data that takes the form of letters, numbers, symbols, signals, or other formats. This data is included electronically, digitally, optically, or by any similar means within an information message, added to it, or linked to it. The signature must possess characteristics that identify the individual who signed it and distinguish them from others, thereby validating the content".

According to Article 4 of the same law, the provisions of this law shall apply to the following: 1) "electronic transactions, electronic records, electronic signatures, and any electronic information messages", and 2) "electronic transactions adopted, in whole or in part, by any government department or official institution".

Article 5 stipulates: 1) "the provisions of this law shall apply to transactions in which the parties agree to carry out their transactions electronically unless there is an explicit text stating otherwise", and 2) "for the purposes of this article, an agreement between certain parties to carry out specific transactions electronically shall not be considered binding to carry out other transactions using these means".

The integrity and anti-corruption law and its impact on administrative control. The phenomenon of corruption highlights a lack of moral values, foundational principles, and controls that guide human behavior in general and administrative conduct in particular. This absence can disrupt and hinder the success of development plans and programs. Examples of administrative corruption include breaches of trust, bribery, abuse of office,

covering up for superiors and subordinates, and nepotism. Corruption can be defined as the actions taken by individuals outside of government structures that benefit public employees, allowing them to evade laws and policies. This may be achieved either through the implementation of new laws or by the repeal of existing ones that enable direct and immediate personal gains. Corruption can involve threats, intimidation, and extortion perpetrated by a public employee or a client, and it can occur within both public and private institutions. From a procedural standpoint, corruption is characterized as behavior that violates legislative, moral, societal, and functional values. It aims to secure material or moral benefits for personal gain at the expense of the public interest, particularly within Jordanian society (Al-Subaie, 2010; Al-Dalahma & Al-Asasfa, 2021; Mohammed & Abdel-Naeem, 2024).

The impact of administrative and financial corruption is significant, affecting state institutions in both the short and long term. One contributing factor to the prevalence of corruption is the weak performance of control bodies. Despite having been granted substantial powers and authority by law to combat corruption, these bodies often struggle to effectively hold individuals accountable.

To combat administrative corruption, control bodies must implement effective and stringent administrative controls over the entities they control. They should enhance accountability for employees who violate regulations and conduct periodic inspections across state sectors to ensure compliance with applicable legislation.

In Jordan, the legislator has been proactive in addressing corruption through the Integrity and Anti-Corruption Law No. 13 of 2016, which established the Integrity and Anti-Corruption Commission. Article 3/A of this law states: "A body called the Integrity and Anti-Corruption Commission shall be established in the Kingdom, enjoying legal personality, as well as financial and administrative independence" (Integrity and Anti-Corruption Commission, 2016).

The Integrity and Anti-Corruption Commission possesses, who define its entity. While the state is the largest legal entity that establishes its basic law via the constitution, other legal persons operate within the boundaries set by law (Barafi et al., 2022; Abu Younis, 2010).

As one of the most important control bodies in Jordan, the Integrity and Anti-Corruption Commission is affiliated with the legislative authority. The legislator has endowed it with a range of powers and competencies over the administrative apparatus, as outlined in its establishment Law No. 13 of 2016. The Commission's purpose is to ensure effective administrative and financial control of the executive branches of the state, monitoring their performance and ensuring adherence to laws and regulations.

Article 4 states: "The Authority aims to ensure compliance with the principles of national integrity and combating corruption through: A. Activating the system of values and codes of conduct in public administration and ensuring their integration. B. Ensuring that public administration provides high-quality, transparent, and just services to citizens. C. Ensuring that public administration adheres to the principles of good governance and standards of equality, merit, entitlement, and equal opportunities. D. Ensuring that the executive authority adheres to transparency when setting

policies and making decisions, and ensuring the citizens' right to access information following legislation. E. Ensuring that public administration applies legislation transparently and in a manner that achieves the principles of justice, equality, and equal opportunities. F. Ensuring that there is a legal framework that regulates the accountability of officials and decision-makers in public administration and their accountability. G. Receiving complaints and grievances from those affected, following the provisions of this law. H. Cooperating in providing and requesting international legal assistance in the field of combating corruption if the conditions for providing it through official channels are met. I. Investigating financial and administrative corruption in all its forms, uncovering violations and transgressions, collecting evidence and information related to this, conducting investigations, and taking the necessary administrative and legal procedures. J. Prosecute anyone who commits any act of corruption and take the necessary measures to do so. K. Combat character assassination. L. Ensure that private sector control institutions and civil society institutions set good governance standards and ensure proper implementation".

In conclusion, after examining the Electronic Transactions Law No. 85 of 2001 and its role in digital transformation alongside the Integrity and Anti-Corruption Law and its influence on administrative control, it becomes evident that the Jordanian legislator needs to enhance and activate the role of control bodies. This requires amending the regulations that govern these bodies and providing them with broader powers to more effectively eradicate corruption at its roots.

The legal challenges associated with digital transformation in the administrative sector are diverse and complex. The most significant issues can be summarized as follows (Barafi et al., 2022; Abu Younis, 2010):

1. *Updating legislation and regulations.* Many existing legal frameworks struggle to keep pace with rapid technological advancements. There is a pressing need to amend and update laws and regulations to align with digital transformation in the administrative sector, including data protection laws, accountability procedures, and the processes for providing digital services.

2. *Protecting privacy and data.* As digital transformation leads to increased use of technology for data collection and analysis, concerns about privacy and personal data protection are growing. Legal questions may arise regarding how to secure data collected from citizens or employees and how to use it without infringing on individuals' rights.

3. *Cybersecurity.* Digital transformation necessitates robust security measures to protect digital systems from cyberattacks. There is a critical need for stringent legislation that mandates cybersecurity standards to safeguard sensitive data and information.

4. *Verifying the validity of electronic documents and digital signatures.* Government entities may encounter challenges in legally implementing and authenticating electronic documents and digital signatures, ensuring they carry the same legal weight as traditional paper documents.

5. *Legal liability in cases of errors or malfunctions in digital systems.* Issues may arise concerning the determination of legal liability in instances of errors or malfunctions in digital

systems, such as failures in providing electronic services or the loss of important data. A clear legal framework is needed to define responsibilities in these situations.

6. *Integrating technology into traditional administrative procedures.* The incorporation of modern technology into administrative systems may necessitate significant changes to procedures and transactions. This requires appropriately training employees both legally and technically to adapt to these changes.

7. *Integration of digital systems in the public sector.* Public sector institutions often rely on outdated technical systems, which present a legal challenge in terms of how to effectively integrate modern systems with legacy systems.

8. *Ensuring transparency and accountability.* In the context of digital transformation, achieving full transparency and accountability can be challenging, particularly when there is a reduction in human involvement in decision-making. While technology may expedite procedures, it is essential to have legal mechanisms in place to ensure the integrity of electronic decisions (Alkrisheh & Gourari, 2025).

The role of government systems and instructions in regulating digital control. We cannot imagine that there exists an administrative apparatus within the state that functions properly according to laws and regulations without control regarding how it performs its duties and the tasks assigned to it. These bodies may violate the laws and decisions governing them, whether in good faith or bad faith, leading to illegitimate decisions and actions. Control serves as a compass for leadership, helping to ensure that work proceeds within the correct framework (Battikh, 2010).

The significance of administrative control is particularly evident in preventing the judiciary from intervening by enabling the administrative apparatus to fulfill its responsibilities and exercise its powers effectively. Proper control allows for the correction of errors made by administrative personnel during decision-making, fostering a higher standard of independent administrative work without judicial interference. This independence helps maintain the prestige of the administrative apparatus and elevates the quality of its work to higher levels of accuracy and caution (Al-Masaeed, 2007).

The role of control has evolved beyond merely verifying that administrative activities adhere to legal limits; it now also includes ensuring that these activities are conducted efficiently and effectively. Consequently, control is no longer confined to identifying errors but has expanded to seek out methods that enhance the efficiency of the administrative apparatus and motivate it by highlighting its positive contributions.

The initiative to build internal control bodies within the ministries, departments, and public institutions of Jordan aims to serve higher objectives in public financial control. This ensures adherence to planned performance levels, achieving specified goals in line with established plans and policies, and providing senior management with information and data for control and regulatory purposes.

To support this initiative, the Audit Bureau Law No. 28 of 1952 was enacted, defining the powers of the Audit Bureau over entities designated for control under Article 4 of the law, which includes:

1. Ministries, government departments, official public institutions, and public institutions.
2. Municipal and village councils and joint services

councils. 3. Any entity that the Council of Ministers decides to assign to the Audit Bureau for auditing its accounts (Audit Bureau of Jordan, 2018).

In Jordan, the administrative control bodies are represented by the Integrity and Anti-Corruption Commission, established by Law No. 13 of 2016, along with the administrative control units within government bodies, created under the Internal Control System No. 3 of 2011 (Al-Obaidi, 2016).

There are internal control units, which are established within the organizational structure of the government unit established under the Internal Control System No. 3 of 2011, which work to supervise the technical, administrative, and financial transactions in the government unit to verify the extent of its compliance with laws and regulations, and its head is linked to the relevant minister.

The internal control units aim, according to the provisions of Article 8 of the system, to preserve public funds and public assets and ensure their optimal use. To achieve its objectives, the internal control unit undertakes the following tasks: 1) verify the validity and accuracy of accounting records, data, information, and financial statements, 2) verify the effectiveness and efficiency of the financial operations followed, 3) protect financial resources and assets from misuse, 4) verify the extent of compliance with applicable legislation to reduce errors and discover them if they occur, 5) adhere to the approved financial policies of government departments and units, and 6) exercise administrative and technical control and ensure that the department and government unit achieve the objectives and general policies of the department and government unit by reviewing the administrative decisions issued in this regard.

2.3.2. Legal and practical challenges of digital transformation in administrative control

Technology has fundamentally changed the priorities of the information technology (IT) industry, resulting in significant improvements in the surrounding environment, human welfare, and social equality. This transformation naturally enhances the efficiency and performance of institutions. Experts believe that a crucial element in transitioning from traditional governance to e-governance is digital transformation. This involves creating a new business model that relies entirely on digital technologies, which fosters innovation and increases the efficiency of the state's administrative apparatus. Such advancements also provide convenient and cost-effective ways to deliver products and services by leveraging technology for the benefit of the public.

The goals of digital transformation often include increasing efficiency, streamlining processes for quick decision-making, and modifying standard procedures. Additionally, it aims to change the organizational culture by reducing the burden of simple administrative tasks filled with data, enabling employees to collaborate and communicate more effectively. This increased efficiency ultimately leads to improved productivity.

The shift to digital transformation in administrative control encounters many legal and practical challenges, which are addressed in the following:

1. Establishing and updating digital control legislative frameworks to keep pace with advancements.
2. Addressing challenges related to data protection and information privacy.

Establishing and updating digital control legislative frameworks to keep pace with advancements. Administrative laws originated in a traditional environment characterized by direct interactions and face-to-face meetings. Consequently, the transition to digital control necessitates the enactment of new laws that align with this administrative evolution. This includes legislation focused on the confidentiality and privacy of data circulating on networks, as well as the protection of intellectual property rights (Al-Salmi & Al-Sulaiti, 2008).

Each new law should be tailored to meet the requirements of the administration, ensuring that existing laws are updated to support the objectives of digital control (Hamza & Majzoub, 2023).

The Audit Bureau in Jordan has been working to establish a mechanism for electronic digital transformation across all its operations. This initiative is part of the strategic plan for the years 2021 to 2023, focusing on improving the quality of audit operations and outcomes, enhancing the work environment, and increasing overall efficiency. The implementation of this mechanism involves automating auditing procedures by equipping auditors with modern computers, acquiring licenses for the teammate and teammate analytics programs, and providing the necessary training for employees on the updated work processes (Audit Bureau of Jordan, n.d.).

Addressing challenges related to data protection and information privacy. Big data can be sourced from both internal and external avenues within organizations. However, businesses often encounter challenges in collecting, analyzing, and processing this data. Additionally, organizations may gather more data than they can effectively utilize (Mohammed, 2025).

Digital control systems can be vulnerable to espionage and hacking, exposing management to security threats and potential interference in internal affairs. This risk extends to national security, particularly for sensitive institutions.

Despite the widespread adoption of digital control and the encouragement from various countries to implement it across all sectors, including e-commerce, e-government, and institutional management, this approach has faced several challenges:

- Digital control lacks human interaction, which is essential for genuine development within organizations, employees, systems, and standards development (Mohammed, 2020; Alalawi & Alkrisheh, 2024).
- Digital control makes management and sensitive information more susceptible to hacking and potential breaches of secrets, databases, and private data.
- There exists a level of digital illiteracy, making it difficult for some individuals to communicate effectively using modern technology.
- There is a risk of over-reliance on the Internet, that acquiring standard software to manage administrative tasks and digital control is insufficient, as effective control requires intelligent administrative work, which involves continually reassessing what needs to be monitored. It also necessitates linking these elements to external factors that require complementary control efforts, given their impact on overall management and outcomes (Al-Hilali, 2010; Alalawi & Alkrisheh, 2024).

Despite the diversity of theoretical models in e-governance, public administration reform, and e-government, critical engagement with these models reveals several challenges and limitations. Integrated e-government models are criticized for the difficulty of coordination among government agencies and cybersecurity challenges. Therefore, the success of these models largely depends on the local context and the readiness of institutions and individuals to embrace change (Mohammed, 2025).

International perspectives can place Jordan's experience in implementing information technology and law within a broader, more comprehensive context. Such comparisons help to understand challenges and opportunities from a global viewpoint, highlighting common elements and contextual differences, thereby enhancing the potential for generalizing or adapting the findings to various legal and administrative environments. These perspectives also allow for assessing the alignment of Jordan's policies and practices with international standards and exploring best practices (Audit Bureau of Jordan, 2018).

Digital transformation is reshaping the structure of governance by introducing fundamental changes in power dynamics within the state and between the state and its citizens. Furthermore, it reshaped bureaucratic work, phasing out some traditional roles while creating new ones related to digital system management, data analysis, and information security, thereby requiring new strategies for workforce reskilling and recruitment within public institutions (Battikh, 2010).

Despite the existence of a legal framework governing digital transformation, it faces significant challenges, resulting in a clear gap between legal provisions and institutional practices. This discrepancy is often due to weak institutional capacity, a lack of training and development, or internal resistance to change rooted in bureaucratic culture (Alalawi & Alkrisheh, 2024).

In Jordan, digital laws are sometimes enacted preemptively or symbolically in response to international pressures or modernization narratives, without being supported by adequate technical or human infrastructure to ensure their effective implementation. As a result, the law becomes largely theoretical, with little practical impact on institutional performance (Mohammed, 2020).

The limited availability of empirical data and illustrative case examples from Jordanian institutions, despite Jordan being the focal point, stems primarily from an institutional gap in transparency and documentation, weak collaboration between decision-makers and researchers, and the absence of a systematic culture for evaluating digital performance (Audit Bureau of Jordan, 2018).

Jordan has witnessed several digital governance initiatives that have varied between success and challenges. The "Sanad" platform for digital government services is considered a successful example in simplifying procedures and improving citizens' access to services, alongside the "Digital Identity" program, which has enhanced the reliability of electronic transactions and facilitated their use. These experiences reflect the importance of having a strong technical infrastructure, continuous training for staff, effective coordination between institutions, and the adoption of a continuous evaluation culture to ensure the success and sustainability of digital governance in Jordan. (Audit Bureau of Jordan, 2018).

3. RESEARCH METHODOLOGY

This study employs a descriptive-analytical methodology, combining systematic description with critical analysis to investigate the influence of digital transformation on administrative control governance within legal and administrative frameworks.

The descriptive dimension focuses on identifying and accurately presenting the key concepts, structures, and processes associated with modern technology and its integration into administrative control systems, which involves collecting and organizing legal texts, institutional reports, and empirical data relevant to governance practices influenced by digital tools, such as AI, electronic documentation, and automated control systems.

The analytical dimension extends beyond surface-level description. It entails dissecting the legal, regulatory, and operational mechanisms affected by digital transformation.

This methodology allows for in-depth engagement with relevant legislative texts, administrative doctrines, comparative legal materials, and recent reforms adopted in technologically advanced governance models. The study aims to uncover latent structural weaknesses or interpretive gaps that may arise in the implementation of digital governance systems.

Moreover, this approach enables the researcher to identify contradictions, inconsistencies, or areas of legal ambiguity within the current administrative oversight systems when interfaced with modern technologies. The analysis will also explore whether the existing legal frameworks are sufficient to govern emerging technologies or whether new regulatory instruments are required.

The research relies on evidence-based interpretation, cross-referencing legal sources. These insights will help determine the extent to which digital transformation can enhance the efficiency, integrity, and accountability of administrative governance.

4. RESULTS AND DISCUSSION

Modern technology plays a pivotal role in enhancing the governance of administrative oversight by improving performance efficiency, facilitating decision-making, and promoting transparency and accountability. Digital transformation contributes to simplifying administrative procedures, reducing costs, and enabling early detection of corruption through tools such as AI and blockchain. However,

the effectiveness of these tools depends on the presence of a developed legal framework that ensures data protection and keeps pace with technological advances, in addition to training human resources. Thus, the use of technology becomes a fundamental tool for achieving a qualitative shift in administrative oversight and realizing good governance (AbdelHafiz et al., 2024; Abawi, 2021).

The research investigates the pivotal role of modern technology in enhancing the governance of administrative control and emphasizes how digital transformation significantly contributes to improving institutional efficiency.

5. CONCLUSION

The study presents key findings following a detailed analysis. It identifies a legislative gap in the regulation of digital oversight, noting that certain laws remain ambiguous, enabling discretionary interpretation that may serve individual or hierarchical interests. The research also underscores the complexity of addressing administrative and financial corruption, which demands integrated strategies across local, regional, and international levels due to its deep entrenchment in legal, political, and socio-economic systems. Furthermore, it highlights the pivotal role of digital transformation in enhancing transparency, performance monitoring, and risk reduction through technologies such as AI and blockchain. These tools are shown to improve public service delivery and support more effective policy implementation. Based on these findings, the study recommends reinforcing the independence and authority of Jordanian oversight bodies, adopting digital signature legislation, and enhancing public employee awareness. It further calls for structured international engagement to leverage global best practices in AI-enabled oversight and institutional development.

The recommendations are as follows: update and unify legislation related to electronic signatures, data protection, and digital transactions to ensure alignment with international standards; bridge the gap between legal texts and practical implementation by developing clear and binding executive regulations; review outdated laws that hinder digital transformation and replace them with legislation that supports digital governance; strengthen the role of regulatory bodies in monitoring institutional compliance with digital laws.

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