



6-30-2026

The impact of Technological Empowerment on the Strategic Readiness of Private Universities: The Mediating Role of Digital Transformation

Rami Fouad Ahmed Al-Sheikhli

Department of Business Administration, College of Administration and Economics, University of Baghdad, Baghdad, Iraq, Rami.Fouad1603i@coadec.uobaghdad.edu.iq

Mustafa Mahmoud Al-Somaidaee

Department of Business Administration, College of Administration and Economics, University of Baghdad, Baghdad, Iraq, mostafa.m@coadec.uobaghdad.edu.iq

Follow this and additional works at: <https://jeasiq.uobaghdad.edu.iq/home>



Part of the [Business Administration, Management, and Operations Commons](#)

Recommended Citation

Al-Sheikhli, R., & Al-Somaidaee, M. (2026). The impact of Technological Empowerment on the Strategic Readiness of Private Universities: The Mediating Role of Digital Transformation. *Journal of Economics and Administrative Sciences*, 32(2), 28-38. <https://doi.org/10.33095/2227-703X.4347>

This Article is brought to you for free and open access by Journal of Economics and Administrative Sciences. It has been accepted for inclusion in Journal of Economics and Administrative Sciences by an authorized editor of Journal of Economics and Administrative Sciences. For more information, please contact jeaschief@coadec.uobaghdad.edu.iq.



RESEARCH ARTICLE

The impact of Technological Empowerment on the Strategic Readiness of Private Universities: The Mediating Role of Digital Transformation

Rami Fouad Ahmed Al-Sheikhli^{1b}*, Mustafa Mahmoud Al-Somaidae^{1b}

Department of Business Administration, College of Administration and Economics, University of Baghdad, Baghdad, Iraq

Abstract

In the context of the Fourth Industrial Revolution, technological empowerment has become a strategic and existential necessity for organizations striving for growth and continued competitiveness, particularly private universities, which face significant challenges in comprehensive digital transformation. Literature reveals the absence of an integrated model linking the three research variables (technological empowerment, strategic readiness, and digital transformation). This paper aimed to examine the mediating role of digital transformation in the impact of technological empowerment on strategic readiness in Iraqi private universities. The study has employed a descriptive analytical approach, utilizing a questionnaire as the primary data collection tool. The questionnaire was distributed to 142 individuals, including university presidents, faculty members, and middle management administrative staff. The results revealed a statistically significant impact of technological empowerment on both strategic readiness and digital transformation. Additionally, the results demonstrated the effective role of digital transformation in enhancing strategic readiness and its function as a mediating variable, facilitating the transmission of influence (both directly and indirectly) between technological empowerment and strategic readiness. The paper concludes that the relationship between the three variables is complementary, with digital transformation playing a pivotal mediating role. Technological empowerment is the strategic foundation for the success of digital transformation. The paper recommends investing in technological empowerment as a comprehensive strategic approach and adopting a clear vision for decision-makers that links technology and strategy to ensure a sustainable competitive advantage for Iraqi private universities.

Keywords: Digital transformation, Iraq, Private universities, Strategic readiness, Technological empowerment

1. Introduction

The world is currently witnessing an unprecedented technological boom in the era of the Fourth Industrial Revolution (4.0). Technological empowerment in the workplace has become not just a strategic resource but an existential necessity for organizations seeking to survive and thrive in the competitive landscape. According to the [Future of Jobs Report \(2025\)](#), expanding digital access is the most transformative trend globally, with 60% of employers predicting they will fundamentally change their businesses by 2030. Among these, artificial intelligence and big data top the list of the fastest-growing skills. This

global reality reflects a radical shift from reliance on traditional resources and work methods to technological empowerment, which provides employees with the authority, tools, and skills to contribute to improved organizational performance with high efficiency. This transformation is driven by changes in the organizational environment, particularly private universities, which are among the most important higher education institutions facing the challenge of comprehensive digitalization. In the local context, the Iraqi government announced ambitious initiatives in recent years (2024–2025) that include introducing artificial intelligence into curricula, launching the official electronic signature, and developing the digital

Received 2 May 2026; revised 24 May 2026; accepted 28 May 2026.
Available online 30 June 2026

* Corresponding author.

E-mail addresses: Rami.Fouad1603i@coadec.uobaghdad.edu.iq (R. F. A. Al-Sheikhli), mostafa.m@coadec.uobaghdad.edu.iq (M. M. Al-Somaidae).

<https://doi.org/10.33095/2227-703X.4347>

2227-703X/© 2026 The Author(s). Published by College of Administration and Economics, University of Baghdad. This is an open-access article distributed under the terms of the Creative Commons Attribution–Non Commercial 4.0 International License (CC BY-NC 4.0).

infrastructure. [World Bank \(2022\)](#) also indicated efforts to digitize curricula and educational data. However, these transformations face structural and skill-based challenges, making strategic readiness at the university level in particular a strategic goal.

Although previous international studies and literature have examined the variables of this study (technological empowerment, strategic readiness, and digital transformation) separately, insufficient attention has been given to them at the Arab and local levels. To the best of the researcher's knowledge, there is a lack of an integrated model addressing these three variables, particularly in private universities. Previous studies, which we will review later in this study, focused on the technical, human, and administrative dimensions, leaving two dimensions—ecological empowerment and platform empowerment—unexplored as well as their potential direct impact on strategic readiness and digital transformation. Furthermore, previous studies highlighted the impact of digital transformation as an independent or dependent variable, but did not examine its role as an explanatory mediator, a conduit for influence that explains the relationship between technological empowerment and strategic readiness. In this regard, this study poses the main question: What is the impact of technological empowerment on enhancing strategic readiness? And does digital transformation play a mediating role in this relationship? It branches out into sub-questions related to (determining the level of technological empowerment, measuring the level of strategic readiness, analyzing digital transformation initiatives, direct impact, and the role of mediation in private universities).

This study is grounded in the growing need to understand how higher education institutions, particularly private universities, can effectively respond to the accelerating demands of digital transformation. In contemporary academic environments, technological advancement is no longer a complementary asset but a strategic necessity for institutional survival, competitiveness, and long-term sustainability. Despite this urgency, many universities—especially in developing contexts—continue to face structural, technical, and organizational challenges that hinder their readiness for comprehensive digital transformation. Accordingly, the importance of this study stems from its attempt to address a critical gap in the literature by integrating the concept of technological empowerment with strategic readiness and digital transformation within a unified analytical framework. While previous studies have often examined these constructs in isolation, limited attention has been given to how different dimensions of technological empowerment—namely, resource, structural,

platform, and ecological empowerment—collectively influence an institution's capacity to transition digitally. This research, therefore, provides a more holistic understanding of the mechanisms through which technological capabilities can be leveraged to enhance institutional preparedness and adaptability. Furthermore, the justification for this study lies in its practical relevance to ongoing national and organizational efforts aimed at modernizing the education sector. As governments and educational authorities increasingly emphasize digitalization as a strategic priority, there is a pressing need for evidence-based models that can guide decision-makers in implementing effective transformation strategies. By proposing and empirically examining a comprehensive explanatory model, this study offers actionable insights for university leaders and policymakers. It also contributes to the development of human and technical competencies necessary to achieve sustainable strategic readiness, thereby supporting the broader transition toward digitally enabled education systems.

2. Literature review and hypothesis development

2.1. *Technological empowerment*

Technological empowerment is a strategic pillar based on three main axes: quality of life for individuals, sustainable economic growth, and efficient institutional performance. Technological empowerment is not an end goal, but rather a tool to break down traditional barriers in the workplace, improve the quality of organizational outputs, expand access to them, and effectively deliver knowledge to everyone ([Abd Majid et al., 2025](#)). According to [Skene \(2021\)](#), empowerment refers to granting permission to act or delegating authority. Empowerment involves providing employees with the necessary skills, capabilities, and authority to enable them to make decisions without needing prior approval from senior management, thus achieving smooth workflow, development, and organizational success ([Djunaedi et al., 2023](#)). [Abubaker and Albayaydah \(2024\)](#) presented a concept of technological empowerment as the technologies and digital platforms that facilitate communication between organizations and the outside world, contributing to the development of rapid and accurate solutions that enhance organizational success. [Lingling and Ye \(2023\)](#) stated another concept: a systematic process of organizational self-transformation, using next-generation digital technology as an enabler, leading to comprehensive changes in organizational management and

overcoming traditional innovation methods. (Beer & Mulder, 2020) identified digital tools used to replace or complement traditional work activities. The contemporary business environment demands flexibility and real-time responsiveness to change. In this context, (Ononiwu et al., 2024) highlighted the importance of technological empowerment through employees' use of digital tools, building flexible and adaptable capabilities by developing skills, supported by leadership and an innovative culture that overcomes obstacles to change through continuous training. (Juliana, 2023) added that technological empowerment is crucial for organizations, including enabling communication with people and organizations in different locations around the world through instant digital communication channels, and providing employees with tools and skills to save time and effort when completing administrative tasks and accessing information at any time. Pradeeba and Nandhini (2025) pointed out that the ability of organizations to work from various locations, both within and outside the organization's immediate environment, demonstrated the necessity of technology for business continuity during the COVID-19 pandemic, particularly in the education sector. Zou et al. (2025) reinforced the importance of technological empowerment in educational institutions through curriculum digitization, preparing successful students for a digital world, and utilizing data for proactive planning.

To fully grasp this variable, it is necessary to break it down into its essential dimensions, which constitute its conceptual framework. These four dimensions are: resource empowerment, structural empowerment, platform empowerment, and ecological empowerment, based on (Li et al., 2022). Khan et al. (2025) defined the first dimension as the technical resources used to improve the performance of organizational processes to achieve high-quality services. This empowerment inspires employees, enabling them to control and interact with their jobs, and allows them to efficiently achieve the organization's goals in the long term. Azouz (2025) addressed the second dimension, structural empowerment, which includes providing a suitable work environment that empowers employees to access the necessary support, information, and authority to perform activities effectively. Li and Mei (2024) identified the third dimension, platform empowerment, as an opportunity to create value by satisfying platform users, expanding market reach, and increasing profitability. This, in turn, leads to the improvement of the digital industries embodied in these platforms. Ogbari (2024) further elaborated that these are the external conditions and influences represented by economic conditions, technological advancements, and social circumstances. Internal en-

vironmental elements, represented by resources and the insightful vision of managers, contribute positively to capitalizing on opportunities. Technological changes and fierce competition drive organizations to adopt a proactive approach in developing their human resources and acquiring skills and capabilities to cope with uncertainty, which positively impacts organizational performance and ensures the maintenance of organizational efficiency.

2.2. Strategic readiness

Strategic readiness, as a concept, comprises two elements: "readiness," which is a state of preparedness for what might happen, and "strategy," which is the plan devised to achieve a specific goal. The essential role of strategic readiness depends on the degree of integration and alignment between human, informational, and organizational capital. Without this integration, no strategy can succeed (Holopainen et al., 2022). The concept of strategic readiness was introduced by Kaplan and Norton (2015), who developed a tool to measure and evaluate the harmony between human, informational, and organizational capital and the organization's strategy, rather than relying solely on material resources (Mansour et al., 2021). Kaewsaengon (2024) described strategic readiness as a tool that prepares the organization to respond to technological, commercial, and competitive developments by providing tangible and intangible resources to maintain its market position and enhance long-term success. In the same context, Salih et al. (2024) pointed out that the concept of strategic readiness is a state of preparedness and prior organization of the organization's various resources (human, informational, and organizational) to address challenges efficiently.

Atalay (2022) finds that the fundamental importance of strategic readiness in the workplace lies in enhancing organizational resilience to uncertainty and promoting self-regulation, rather than resorting to temporary crisis measures. It establishes a preventative tool to mitigate the negative impacts of environmental uncertainty by aligning internal structures with external transformations. Al-Smadi (2025) adds that it serves as a powerful organizational tool when organizational readiness is linked to tangible results. It strengthens the organization's ability to monitor indicators and technological advancements to address the digital divide among its human resources and to cultivate a skilled workforce proficient in using digital tools. This has become a fundamental pillar of organizational operations due to its inherent capacity to adapt to changing environmental events (Godolja et al., 2025).

If we were to dissect this concept, we would find it to be a web of dimensions. The first is the readiness of human capital as a key player, which (Alyasiri & Al-Tae, 2024) defined as the knowledge, skills, and abilities possessed by an individual that are used to effect change within the scope of personal work or at the organizational level, facilitating the development of the organization's character and economic well-being. Conversely, McClam et al. (2025) identified the second dimension, organizational readiness for change, as the organization's capacity to implement any change or new practices through its preparedness, a fundamental factor in the application of innovations. The third dimension, leadership and management readiness, is the possession of the personality and ability to engage in practices that prepare others to perform actions beneficial to the organization. Based on the above, it is clear that these dimensions do not operate in isolation; rather, their overlap and integration form the structural framework of the variable, making understanding any one of them essential for grasping the complete picture.

2.3. Digital transformation

Digital transformation is fundamentally human-centered, even more so than tools and technologies. It aims to fundamentally change the "mental culture." Digital transformation is not merely an "organizational embellishment" or a "technological luxury," but has become a strategic pillar for developing the dynamic capabilities of organizations (Kraus et al., 2021). The concept of digital transformation refers to the organizational framework that aims to create modern business models by integrating traditional (manual) work methods with advanced digital technologies, in an effort to enhance operational efficiency (Sürmen et al., 2024). Chao et al. (2024) indicated that digital transformation in the business and management environment represents a methodology that maximizes added value, bringing about a fundamental transformation in the structure of economic activities, including research and development processes, organizational and institutional frameworks, and innovative design. Digital transformation is a fundamental pillar through which organizations seek to address environmental challenges and overcome the repercussions of global crises. It enhances the dynamic capabilities of the administrative system, ensuring flexibility and adaptability to evolving business environment conditions (Papagiannidis et al., 2020), thereby guaranteeing significant improvements in efficiency and effectiveness. The concept of digital transformation transcends the mere implementation of a strategy for digitizing resources;

it extends to reshaping the organization's corporate identity and organizational structures (Mkrtchyan & Melkumyan, 2023). The impact lies not only in acquiring digital technologies but also in how employees interact with and utilize them in their tasks. Thus, possessing technologies is not an end in itself; the true value lies in the patterns the organization adopts to develop its operational models (Mergel et al., 2019). Agustian et al. (2023) emphasized the necessity of preparing employees both psychologically and structurally to adapt to new technologies and business models.

The importance of digital transformation lies in its pursuit of providing and developing digital competencies and preparing new skills that suit the modern work environment. Furthermore, it is a driver of innovation, as it is linked to generating new ideas and transforming them into tangible realities (Awad & Martín-Rojas, 2024). It also enables overcoming geographical barriers between institutions and countries. Moreover, it has contributed to the creation of new jobs, such as platform management, cybersecurity, and software and application development (Agustian et al., 2023). It has also contributed to changing the nature of performance by combining technology and communication tools, as happened during the COVID-19 crisis, where it enabled individuals through virtual meetings and shifted the educational process to the horizons of distance learning (Wahyudin et al., 2024). The effective use of digital tools and technologies, it helps in collecting, analyzing, and using data in decision-making (Erceg & Dalić, 2024). In an effort to operationally deconstruct this variable, this paper adopts the following dimensions (data digitization, process digitization, and comprehensive digitization), derived from the study by Pettersson et al. (2024). The researcher's perspective in choosing this measure stems from its comprehensive and gradual approach to the concept of digital transformation. (Rusdi et al., 2025) defined data digitization as the process of converting paper documents and records into organized, stored data, enabling easy storage and real-time retrieval. Omol (2023) defined process digitization, from a marketing and service perspective, as the process of delivering products and services from their direct physical context to a virtual space that transcends traditional limitations. Daud (2024) presented a concept of comprehensive digitization as a holistic transformation process affecting all parts of the organization, from the organizational structure and corporate culture to the technological infrastructure and operational processes. To enhance the organization's resilience in delivering optimal value to customers, employees, and all stakeholders. These dimensions allow us to assess their impact on strategic readiness.

2.4. Hypothesis development

In light of intense competition among organizations, there is a need for flexible organizational structures that reflect their specific philosophies and objectives. Organizations do not operate in isolation from their external environment; therefore, they must overcome organizational inertia by, they are obligated to adopt modern, innovative business models that re-engineer human and organizational behaviors by employing digital tools in administrative and operational contexts (Bai, 2021). Deng et al. (2022) indicated that technological empowerment is not merely about digital tools. Rather, it goes beyond that, representing a strategic incentive that contributes to re-engineering knowledge-based decision-making, digital communication, and information exchange, ultimately enhancing individuals' readiness to perform their jobs and keep pace with digital transformations, thus establishing a forward-looking environment. A study by Atobishi et al. (2024) indicated a direct relationship between digital capabilities and organizational flexibility, demonstrating the importance of investing in technological infrastructure, digital platforms, and smart technologies to create an interactive environment for information sharing, work flexibility, and process development, thereby enhancing the trust and satisfaction of the target audience. Accordingly, digital capabilities constitute a key driver of organizational readiness, as they enhance efficiency in adapting to the demands of the digital age. The researcher develops the following hypothesis:

H1: Technological empowerment has a positive effect on strategic readiness.

The relationship between digital transformation and strategic readiness is crystallized through the reshaping of human resource roles and the organization's internal and external operational processes. Organizations also strive to attract high-quality skills and develop business models, aiming to make strategic decisions that ensure more effective and sustainable outcomes (Maksimenko et al., 2021). The relationship between digital transformation and strategic readiness is based on human resources, which are the cornerstone of this process. Digital transformation acts as a catalyst for organizational learning, encouraging the acquisition of skills, capabilities, and capacities to ensure the integration of human resources with digital tools. Furthermore, organizations endeavor to develop their human resources from both a psychological and technical perspective, making technology a strategic enabler through the twin pillars of digitization and automation, which enhance the efficiency of human interaction to generate

added value (Qureshi, 2023). Digital transformation has become an essential practice in modern management methods; organizational leaders no longer perform routine operations in isolation from digital technologies. This transformation has accelerated the completion of daily tasks, allowing managers to focus their efforts on vital and strategic objectives. A study indicates (Bozintan et al., 2023). A study by Al-Wedyan et al. (2025), conducted in Jordanian universities, revealed that digital transformation is a key driver in enhancing strategic decision-making and raising productivity levels. An investigation by Singh and Preeti (2024) further emphasized that organizations possessing digital tools are better equipped to reshape their strategic practices and are more adept at adapting to the digital age, thus gaining a competitive edge. Based on the above, the following hypothesis can be developed:

H2: Digital transformation has a positive effect on strategic readiness.

Achieving strategic readiness by simply providing technical resources is insufficient unless it is coupled with practical actions that embody digital transformation as the applied practices that activate the strengths of technological empowerment (Zhao et al., 2025). A study by Babalola and Bo (2023) concluded that digital resources and dynamic capabilities are the fuel and driving force behind digital transformation, making it a tangible reality. In this context, technological empowerment emerges as the input, while digital transformation represents the context of processes and outcomes. An experiment by Chwiłkowska-Kubala et al. (2023) concluded that digital transformation cannot achieve its desired results in isolation from a supportive environment (such as financial, human, and technological resources), as these are the essential enablers for transforming the vision of digital transformation into a tangible reality. The findings of the study by (Basit et al., 2024) reinforce the conclusion that enhancing employees' digital skills and capabilities is the bridge to efficient use of digital platforms. This demonstrates that technological empowerment cannot be reduced to the technical dimension alone; rather, organizations must align human resource empowerment with their digital transformation visions to ensure the sustainability of results. Based on this premise, the researcher develops the following hypothesis:

H3: Technological empowerment has a positive effect on digital transformation.

The current research attempts to develop a conceptual model to test the mediating role of digital transformation in the impact of technological

empowerment on strategic readiness. Given the scarcity of previous research directly supporting our model, we draw upon the arguments of [Yarkarami \(2026\)](#); [Zhang et al. \(2026\)](#) regarding the mediating role of digital transformation in enhancing resilience and strategic performance. Accordingly, we propose the following hypothesis:

H4: Digital transformation mediates the effect of technological empowerment on strategic readiness.

3. Methodology

Despite the growing interest in technological empowerment and digital transformation within educational institutions globally, studies examining their relationship to strategic readiness in local contexts and developing countries have been limited. The concepts of technological empowerment, strategic readiness, and digital transformation are relatively new in both the private and public sectors, particularly the service sector, and require further in-depth research to clarify their meaning. Private universities are considered a fundamental and crucial pillar of higher education institutions, contributing to the responsibility of building human capital. They must address these challenges and changes to ensure their future readiness. Educational institutions recognize the importance of investing in technology within the educational process and will undoubtedly employ emerging disciplines such as artificial intelligence, big data, and machine learning, given their anticipated impact in the coming years. Technological empowerment can assist bridge the digital divide ([Abd Majid et al., 2025](#)). Furthermore, digital transformation is not merely about acquiring new technologies; it encompasses all aspects of business ([Abhari, 2025](#)). Hence, the research problem lies in answering the main question: What is the impact of technological empow-

erment on enhancing strategic readiness? And does digital transformation play a mediating role in this relationship?

To achieve the research objectives, answer its questions, and test its hypotheses, this research employed the descriptive-analytical method. The descriptive aspect involves describing and diagnosing the reality of the research variables as they exist within the research population. The analytical aspect involves analyzing the collected data to study the relationships between the variables, determine the nature of their influence, and examine the role of the mediating factor of digital transformation. The research population consists of several private universities: Imam Jaafar Al-Sadiq University, Al-Israa University, Al-Ma'moun University, Al-Turath University, and the Iraqi University of Science (formerly Baghdad College of Economic Sciences). Due to the large size of the research population, purposive sampling was employed to ensure fair representation of all categories and administrative levels within the sample, guaranteeing a sample size that accurately reflects the population. Purposive sampling was employed to select respondents from different administrative levels, including top, middle, and operational management. The selection was based on predefined criteria such as managerial position, years of experience, and involvement in decision-making processes. This approach ensured a balanced representation of administrative perspectives within the organization. A total of 142 questionnaires were distributed, and all were returned without exclusion (100%). The scale ([Li et al., 2022](#)) was used to measure technological empowerment. The scale ([Pettersson et al., 2024](#)) was used to measure digital transformation. Regarding the strategic readiness variable, the scale ([Kaplan & Norton, 2015](#)) was used. Based on the preceding discussion, the conceptual model for the research was developed as shown in [Fig. 1](#) below.

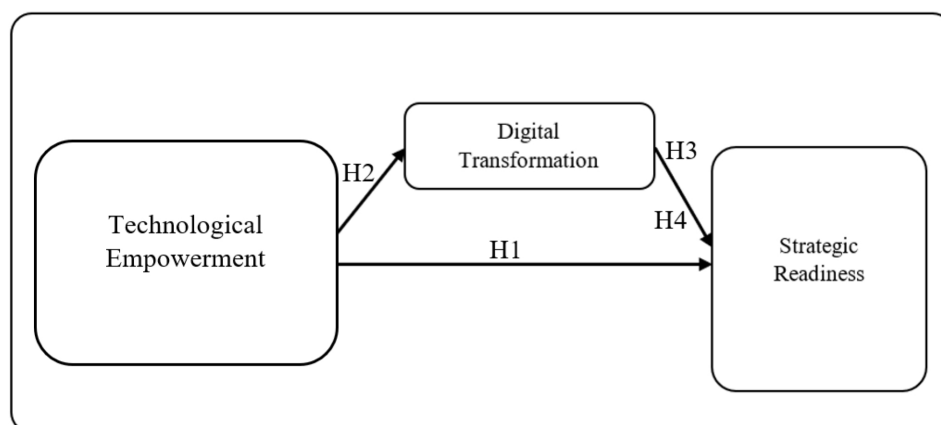


Fig. 1. Conceptual model.

4. Results and discussion

The response results reveal that the number of males was 80 participants, representing 56.3%, which is higher than the number of females (42), representing 43.7%. The largest age group was (31–40 years), with 41 participants (28.9%), followed by the age group (20–30 years), with 33 participants (23.2%). Together, these two age groups constituted 52.1% of the total sample. The results also showed that PhD holders ranked first, with 59 participants (41.5%), followed by Master's degree holders 38.0%. Thus, the total percentage of those holding advanced degrees (PhD and Master's) reached approximately (79.5%), representing the vast majority of the sample. This reflects the high academic standing of the respondents. The study sample did not include diploma holders, which explains the absence 0% of responses in this category. In contrast, the higher diploma was only represented by two participants 1.4%. The 1–5 years of service category was the most frequent, with 48 participants (33.8%), followed by the 6–10 years category with 31 participants (21.8%). Together, these two categories accounted for 55.6% of the sample. Regarding job title, the “faculty/staff” category was the most frequent, with 42 participants (29.6%). Conversely, the “assistant university president/dean's assistant” category had the lowest frequency, with only nine participants (6.3%). [Table 1](#) below presents the detailed data for the study sample, including the demographic and academic characteristics of the participants.

According to the indicators in [Table 2](#) below, Cronbach's alpha coefficients range between 0.850 and 0.749, which are results that exceed the minimum acceptable limit of 0.7 in behavioral and administrative studies. This reflects a good level of internal consistency and homogeneity between the items of the variables and dimensions studied, and confirms the reliability of the study measures to a good degree, which allows reliance on these results in conducting subsequent statistical tests. It is also evident that the KMO index values for the variables were 0.830, 0.873, and 0.857 respectively, values higher than the minimum acceptable threshold (0.50). This indicates that the sample size was sufficient and of a very good standard to complete the advanced analysis. The table also shows the results of Bartlett's test, which measures the significance of the correlation between items belonging to the scale variables. The significance level was less than 0.001 for all variables and less than 0.05, confirming the existence of statistically significant correlations between the items. Furthermore, the overall model quality indicators demonstrate an acceptable to good level of fit. The value of CMIN/DF reached (2.348), which falls within the acceptable range (less than 3), indi-

Table 1. Demographic responses.

Variable	n	%
Sex		
Male	80	56.3
Female	62	43.7
Age (years)		
20–31	33	23.2
31–40	41	28.9
41–50	17	12
51–60	21	14.8
61 or above	30	21.1
Educational Qualification		
Bachelor's	27	19.0
Higher Diploma	2	1.4
MSc	54	38.0
PhD	59	41.5
Years of experience		
1–5	48	33.8
6–10	31	21.8
11–15	18	12.7
16–20	13	9.2
21–25	10	7.0
26 or more	22	15.5
Job Position		
University President/College Dean	16	11.3
Assistant University President/Associate Dean	9	6.3
Department Head/Department Director	36	25.4
Assistant Head (Rapporteur)/Department Director	39	27.5
Staff/Faculty Member	42	29.6

Source: Prepared by the authors using SPSS v.26.

cating a reasonable fit between the proposed model and the observed data. The RMSEA value of 0.087 suggests an acceptable approximation error, particularly in exploratory research contexts. In addition, the incremental fit indices such as TLI (0.919) and CFI (0.936) exceed the recommended threshold of 0.90, reflecting a good comparative fit of the model. The GFI value (0.905) also supports the adequacy of the model, as it surpasses the minimum acceptable level. Collectively, these indicators confirm that the structural model exhibits an acceptable level of validity and goodness-of-fit, making it suitable for hypothesis testing and further analysis.

[Table 3](#) presents the results of the hypothesis testing relating technological empowerment, digital transformation, and strategic readiness in Iraqi private universities—key variables in contemporary management literature. According to the results, the statistical values (β , CR, and p-values) indicate the strength and statistical significance of the relationships extracted from the analysis, thus supporting all four hypotheses and ultimately strengthening the coherence of the proposed conceptual model. In the first hypothesis (H1), which posits a direct impact of technological empowerment on strategic readiness, the analysis shows a high regression coefficient ($\beta = 0.542$), indicating a strong and positive effect on strategic readiness. These results are fur-

Table 2. Reliability, sampling adequacy, and model fit indices.

Index	Technological Empowerment	Strategic Readiness	Digital Transformation	Interpretation
KMO	0.830	0.873	0.857	Adequate
Bartlett's Factors	$P < 0.001$ 4	$P < 0.001$ 3	$P < 0.001$ 3	model fit and measurement reliability
Cronbach's α	0.950	0.882	0.888	

$CMIN/DF = 2.348$, $RMSEA = 0.087$, $TLI = 0.919$, $CFI = 0.936$, $GFI = 0.905$.
Source: Prepared by the authors using SPSS AMOS v.26.

Table 3. Hypothesis analysis.

Hypothesis	Path	β	CR	P.	Decision
H1	Technological Empowerment > Strategic Readiness	0.542	9.911	<0.001	Accepted
H2	Technological Empowerment > Digital Transformation	0.750	13.401	<0.001	Accepted
H3	Digital Transformation > Strategic Readiness	0.701	11.617	<0.001	Accepted
H4	Technological Empowerment > Digital Transformation > Strategic Readiness	0.295	3.725	<0.001	Accepted

Source: Prepared by the authors using SPSS AMOS v.26.

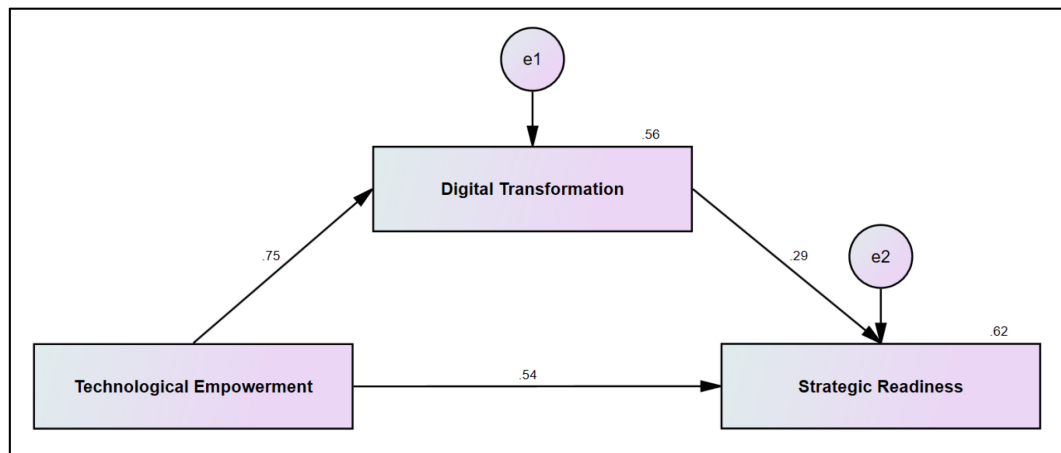


Fig. 2. SEM output.

Source: Author's analysis using SPSS AMOS v26.

ther supported by a CR value (13.943), exceeding the acceptable threshold at a significance level of 0.05 (1.96), thus confirming that the effect is statistically significant at a confidence level of 0.99. This suggests that Iraqi private universities investing in technological empowerment—such as enhancing resources, platforms, and infrastructure—can achieve high strategic readiness, enabling them to respond to environmental changes and make effective strategic adaptation decisions. In the second hypothesis (H2), the results show that this relationship is also strong ($\beta = 0.750$) and highly statistically significant (<0.001). This finding is theoretically consistent, as technological empowerment is a prerequisite for the success of digital transformation, since transformation initiatives cannot—theoretically—be implemented without sufficient technological resources and an organizational culture that supports the use of technology. In the results of the analysis of the third

hypothesis (H3), (digital transformation and strategic readiness), the value of β (0.701) was found to be high, indicating a strong positive effect with clear statistical significance ($CR = 11.617$; $P < 0.001$). Thus, digital transformation enhances the ability of Iraqi private universities to engage in strategic planning and adapt to the inherently competitive environment. Moving on to the fourth hypothesis (H4) (the mediation hypothesis), a more complex analysis is presented by testing the indirect (mediating) effect of technological empowerment on strategic readiness through digital transformation. The results showed that the indirect effect ($\beta = 0.295$) was statistically significant that the overall effect (direct and indirect) is statistically significant. Furthermore, the CR value (3.725) is higher than the acceptable minimum, with strong statistical significance ($P < 0.001$). Therefore, it can be concluded that digital transformation plays a mediating role in the impact of technological empowerment on the

strategic readiness of Iraqi private universities. Based on the results, it can be said that the relationship between the three variables is not only direct but also complementary. Technological empowerment is the foundation that enables Iraqi private universities to implement digital transformation, which in turn enhances strategic readiness. The findings derived from the hypothesis analysis underscore the importance of investing in technology (empowerment and transforming) as a strategic approach, not merely an operational tool. It is also crucial to note that digital transformation should be viewed as a comprehensive transformational process that reshapes the strategic capabilities of Iraqi private universities. This highlights the need for decision-makers within these universities to adopt an integrated vision that links technology and strategy to ensure a sustainable competitive advantage. Fig. 2 shows the structural equation modeling of the tested model.

5. Conclusion

The current study investigated the mediating role of digital transformation in the impact of technological empowerment on the strategic readiness of Iraqi private universities. The results showed a strong impact of technological empowerment on strategic readiness, clearly indicating the importance of investing in technological infrastructure and supporting resources to enhance the ability to respond to and adapt to environmental changes. Technological empowerment acts as a driving force that strengthens institutional readiness, thus confirming the fundamental relationship between technological empowerment and strategic readiness. In parallel, the results also showed an impact of technological empowerment on digital transformation, which can be explained by the fact that technological empowerment represents one of the most important procedural approaches to the digital transformation process. This can be explained by the logical relationship between technological support and successful digital transformation to create a suitable environment for achieving the digital transformation initiative. Furthermore, the results showed that digital transformation plays a partial mediating role in the relationship between technological empowerment and strategic readiness through two pathways: a significant direct impact on strategic readiness, and an indirect impact that varies according to the type of digitization. This confirms that it does not negate the importance of technological empowerment, but rather enhances it by transferring technical capabilities from the operational level to the strategic level, as an effective channel to maximize its impact in enhancing strategic readiness. The cross-

sectional study and the selected sample are among the study's main limitations. These aspects weaken the generalizability of the results over a longer time period, necessitating further research efforts in a similar context. This paper offers theoretical contributions by testing a new theoretical model based on examining the relationship between technological power (technological empowerment and digital transformation) and its impact on enhancing the readiness of business organizations. The practical contributions include drawing the attention of decision-makers and policymakers to the importance of investing in technology due to its vital role in effectively responding to environmental changes and their constant fluctuations.

Acknowledgment

The author may include an acknowledgment statement to express their gratitude to those who have helped during their research. Information concerning funding organizations can also be mentioned here.

Conflicts of interest

The second author is a member of the journal's editorial board but was not involved in the review or decision process for this manuscript.

Author contributions

Rami Fouad Ahmed Al-Sheikhli: Conceived and designed the analysis, Collected the data, and Wrote the paper.

Mustafa Mahmoud Al-Somaidae: Contributed data or analysis tools and Performed the analysis.

Funding statement

The authors declare that no funds, grants, or other support were received during the preparation of this manuscript.

Authors' declaration

- We hereby confirm that all the Figures and Tables in the manuscript are ours. Furthermore, any Figures and images that are not ours have been included with the necessary permission for re-publication, which is attached to the manuscript.

- The authors confirm that this study involving human participants was conducted in accordance with ethical standards. Informed consent was obtained from all participants, and the authors have signed the ethical considerations approval form as required.

Data availability

The data that support the findings of this study are available on request from the corresponding author.

References

- Abd Majid, M. Z., Norman, H., Zaini, M., Zulnaidi, H., & M. Nasir, M. K. (2025). Technological Empowerment in Education: A Systematic Review. *SAGE Open*, 15. <https://doi.org/10.1177/21582440251325077>
- Abhari, K. (2025). Employee participation in digital transformation: From digitalization sentiment to transformation predisposition. *Information & Management*, 104212. <https://doi.org/10.1016/j.im.2025.104212>
- Abubaker, J., & Albayaydah, H. (2024). The Impact of Technology and Digital Applications on Organizational Performance in Jordanian Commercial Banks. *Pakistan Journal of Life and Social Sciences (PJLSS)*, 22. <https://doi.org/10.57239/PJLSS-2024-22.2.00731>
- Agustian, K., Mubarak, E., Zen, A., Wiwin, W., & Malik, A. (2023). The Impact of Digital Transformation on Business Models and Competitive Advantage. *Technology and Society Perspectives (TACIT)*, 1, 79–93. <https://doi.org/10.61100/tacit.v1i2.55>
- Al-Smadi, M. (2025). Insurance sector readiness for digital transformation: Empirical evidence from Jordan. *Insurance Markets and Companies*, 16, 33–41. [https://doi.org/10.21511/ins.16\(1\).2025.03](https://doi.org/10.21511/ins.16(1).2025.03)
- Al-Wedyan, A., Alzoubi, M., & Ababneh, A. (2025). Mechanisms of digital transformation practices and their impact on improving the strategic performance of employees at Yarmouk University and the University of Jordan. *International Journal of Management and Sustainability*, 14(2), 711–724. <https://doi.org/10.18488/11.v14i2.4331>
- Alyasiri, W., & Al-Tae, A. (2024). The effect of human capital on organizational readiness: An analytical study at the Middle Technical University. *Journal of Economics and Administrative Sciences*, 30, 17–28. <https://doi.org/10.33095/9175a682>
- Atalay, A. (2022). Strategic Readiness as One of the Ways to Cope With Uncertainty during the Pandemic of COVID 19 /Pandemi Döneminde Belirsizlikle Başa Çıkma Yollarından Biri Olarak Stratejik Hazırbulunuşluk. *e-International Journal of Educational Research*. <https://doi.org/10.19160/e-ijer.1092163>
- Atobishi, T., Moh'd Abu Bakir, S., & Nosratabadi, S. (2024). How Do Digital Capabilities Affect Organizational Performance in the Public Sector? The Mediating Role of the Organizational Agility. *Administrative Sciences*, 14(2), 37. <https://doi.org/10.3390/admsci14020037>
- Awad, J., & Martín-Rojas, R. (2024). Digital transformation influence on organisational resilience through organisational learning and innovation. *Journal of Innovation and Entrepreneurship*, 13. <https://doi.org/10.1186/s13731-024-00405-4>
- Azouz, M. (2025). Developing a Theoretical Model of Structural and Digital Empowerment in Technology Organizations: An Analysis of Dimensions and Influencing Factors. *Journal of Economics of Finance and Business*, 10, 1169. <https://doi.org/10.5281/zenodo.18998830>
- Babalola, E. O., & Bo, W. (2023). Effects of Digital Resources on Digital Transformation in the Current Digital Age: The Moderating Role of Organizational Slack. *Research Square, Manuscript under review*, 1–31. <https://doi.org/10.21203/rs.3.rs-2985159/v1>
- Bai, H. (2021). Role of Digital Technology in Transforming Organizational Competencies Influencing Green Economy: Moderating Role of Product Knowledge Hiding [Original Research]. *Frontiers in Psychology, Volume 12 - 2021*. <https://doi.org/10.3389/fpsyg.2021.792550>
- Basit, A., Jing, Z., Li, W., & Rabeeu, A. (2024). Assessing the impact of employee-centric digital transformation initiatives on job performance: The mediating role of digital empowerment. *Strategic Management*, 29, 5–18. <https://doi.org/10.5937/StraMan2300057R>
- Beer, P., & Mulder, R. (2020). The Effects of Technological Developments on Work and Their Implications for Continuous Vocational Education and Training: A Systematic Review. *Frontiers in Psychology*, 11, 918. <https://doi.org/10.3389/fpsyg.2020.00918>
- Bozintan, A., Crisan, E., & Pinco, O. (2023). The Impact of Digital Transformation on Strategic Management. *The Annals of the University of Oradea. Economic Sciences* 3, 647–657. [https://doi.org/10.47535/1991AUOES32\(1\)049](https://doi.org/10.47535/1991AUOES32(1)049)
- Chao, N., Zhou, Y., & Yang, H. (2024). Digital Transformation of Rural Banks: Scale Development and Validation. *SAGE Open*, 14. <https://doi.org/10.1177/21582440241304457>
- Chwilkowska-Kubala, A., Cyfert, S., Malewska, K., Mierzejewska, K., & Szumowski, W. (2023). The impact of resources on digital transformation in energy sector companies. The role of readiness for digital transformation. *Technology in Society*, 74, 102315. <https://doi.org/10.1016/j.techsoc.2023.102315>
- Daud, I. (2024). The Effect of Digital Transformation on Organizational Performance: A Meta Analysis. *DiE: Jurnal Ilmu Ekonomi dan Manajemen*, 15, 50–65. <https://doi.org/10.30996/die.v15i1.10643>
- Deng, H., Duan, S., & Wibowo, S. (2022). Digital technology driven knowledge sharing for job performance. *Journal of Knowledge Management*, 27. <https://doi.org/10.1108/JKM-08-2021-0637>
- Djunaedi, Nimran, U., Al Musadieq, M., & Afrianty, T. W. (2023). Empowerment effect on competence and organizational commitments: Organizational learning culture as moderating. *Multidisciplinary Reviews*. <https://doi.org/10.31893/multirev.2024038>
- Erceg, Ž., & Dalić, N. (2024). the importance of digital transformation for business decision-making in organizations. *Нови економист* 18, 41–48. <https://doi.org/10.69781/NOEK202436041>
- Future of Jobs Report 2025. https://reports.weforum.org/docs/WEF_Future_of_Jobs_Report_2025.pdf
- Godolja, M., Tavanxhiu, T., & Sevrani, K. (2025). Strategic Readiness for AI and Smart Technology Adoption in Emerging Hospitality Markets: A Tri-Lens Assessment of Barriers, Benefits, and Segments in Albania. *Tourism and Hospitality*, 6, 187. <https://doi.org/10.3390/tourhosp6040187>
- Holopainen, M., Ukko, J., & Saunila, M. (2022). Managing the strategic readiness of industrial companies for digital operations. *Digital Business*, 2, 100039. <https://doi.org/10.1016/j.digbus.2022.100039>
- Juliana, J. (2023). Technological advancement and its impact on workers. *International Journal for Multidisciplinary Research*, 5(6), 1–11. <https://doi.org/10.36948/ijfmr.2023.v05i06.10014>
- Kaewsaengon, R. (2024). Organizational Readiness, Digital Technology, and Sustainable Performance: The Moderating Role of Knowledge Acquisition. *Journal of Digitization and Information System*, 4, 98–111. <https://doi.org/10.54433/JDIIS.2024100040>
- Kaplan, R. S., & Norton, D. P. (2015). *Balanced Scorecard Success: The Kaplan-Norton Collection (4 Books)*. Harvard Business Review Press.
- Khan, A., Wang, Y., Khan, N., & Ahmad, A. (2025). Digital Leadership Enhances Employee Empowerment, Techno-work Engagement, and Sustainability: SEM Analysis in Public Healthcare. *INQUIRY: The Journal of Health Care Organization, Provision, and Financing*, 62. <https://doi.org/10.1177/00469580251317653>
- Kraus, S., Durst, S., Ferreira, J. J., Veiga, P., Kailer, N., & Weinmann, A. (2021). Digital transformation in business and management research: An overview of the current status quo. *International Journal of Information Management*, 63. <https://doi.org/10.1016/j.ijinfomgt.2021.102466>
- Li, D., & Mei, X. (2024). Evolutionary game analysis of data sharing among large and medium-sized enterprises in the perspective of platform empowerment. *Scientific Reports*, 14. <https://doi.org/10.1038/s41598-024-62156-2>
- Li, Z., Li, H., & Wang, S. (2022). How Multidimensional Digital Empowerment Affects Technology Innovation Performance: The Moderating Effect of Adaptability to Technology Em-

- bedding. *Sustainability*, 14(23), 15916. <https://doi.org/10.3390/su142315916>
- Lingling, L., & Ye, L. (2023). The impact of digital empowerment on open innovation performance of enterprises from the perspective of SOR. *Frontiers in Psychology*, 14, 1109149. <https://doi.org/10.3389/fpsyg.2023.1109149>
- Maksimenco, I., Vashko, T., & Zdrestova-Zakharenkova, S. (2021). Digital transformation and its challenges to the strategic management system. *SHS Web of Conferences*, 106, 01035. <https://doi.org/10.1051/shsconf/202110601035>
- Mansour, H., Aminudin, E., & Mansour, T. (2021). Implementing industry 4.0 in the construction industry- strategic readiness perspective. *International Journal of Construction Management*, 23, 1–14. <https://doi.org/10.1080/15623599.2021.1975351>
- McClam, M., Workman, L., Walker, T. J., Dias, E. M., Craig, D. W., Padilla, J. R., Lamont, A. E., Wandersman, A., & Fernandez, M. E. (2025). Organizational readiness for implementation: a qualitative assessment to explain survey responses. *BMC Health Services Research*, 25(1), 36. <https://doi.org/10.1186/s12913-024-12149-8>
- Mergel, I., Edelmann, N., & Haug, N. (2019). Defining digital transformation: Results from expert interviews. *Government Information Quarterly*, 36(4), 101385. <https://doi.org/10.1016/j.giq.2019.06.002>
- Mkrtychyan, T., & Melkumyan, N. (2023). The Foundations of Digital Transformation of the Public Administration System. *Alternative* 118–127. <https://doi.org/10.55528/18292828-2023.2-118>
- Ogbari, M. E. (2024). Exploring the Effect of Organizational Environments on Organizational Performance During Covid-19 Pandemic. *JCHRM*, 15(1). <https://doi.org/10.47297/wspchrmWSP2040-800507.20241501>
- Omol, E. (2023). Organizational digital transformation: from evolution to future trends. *Digital Transformation and Society*, 3. <https://doi.org/10.1108/DTS-08-2023-0061>
- Ononiwu, M., Onwuzulike, O., & Shitu, K. (2024). The role of digital business transformation in enhancing organizational agility. *World Journal of Advanced Research and Reviews*, 23, 285–308. <https://doi.org/10.30574/wjarr.2024.23.3.2670>
- Papagiannidis, S., Harris, J., & Morton, D. (2020). WHO led the digital transformation of your company? A reflection of IT related challenges during the pandemic. *International Journal of Information Management*, 55, 102166. <https://doi.org/10.1016/j.ijinfomgt.2020.102166>
- Pettersson, F., Siljebo, J., Wolming, S., & Ferry, M. (2024). A validated questionnaire for measuring digitalization as socio-cultural change in educational contexts. *International Journal of Information and Learning Technology*, 41(4), 359–370. <https://doi.org/10.1108/ijilt-08-2023-0149>
- Pradeeba, & Nandhini. (2025). Impact of Technological Advancements on Organizational Structure and Operations. *South Eastern European Journal of Public Health*, 3090–3096. <https://doi.org/10.70135/seejph.vi.4435>
- Qureshi, S. (2023). Digital transformation for development: a human capital key or system of oppression? *Information Technology for Development*, 29(4), 423–434. <https://doi.org/10.1080/02681102.2023.2282269>
- Rusdi, A. J., Bulgis, M., & Yosin, K. D. (2025). Handling of Medical Record Documents in Facing Data Digitization at Mitra Sehat Situbondo Hospital. *Hearty* 13(2), 433–438. <https://doi.org/10.32832/hearty.v13i2.17345>
- Salih, A., Abutaha, L., & Nasereddin, A. (2024). Does the development of strategic readiness represent a response to the relationship of strategic competencies and the healthcare information system? Evidence from private hospitals in Jordan. *Journal of Infrastructure, Policy and Development*, 8, 6151. <https://doi.org/10.24294/jipd.v8i11.6151>
- Singh, D., & Preeti, D. (2024). Strategic Management in the Era of Digital Transformation: Challenges and Opportunities. *Darpan International Research Analysis*, 12, 212–215. <https://doi.org/10.36676/dira.v12.i3.68>
- Skene, K. (2021). What is the Unit of Empowerment? An Ecological Perspective. *The British Journal of Social Work*, 52. <https://doi.org/10.1093/bjsw/bcab012>
- Sürmen, Y., İrak, G., & Bilir, K. (2024). Scale Development Study to Determine the Effectiveness of Digital Transformation in Businesses: An Application in Turkish Defence Industry. *Fiscaoeconomia*, 8. <https://doi.org/10.25295/fsecon.1382697>
- Wahyudin, M., Devi, R., & Sensuse, D. (2024). Digital Transformation Readiness Model in Government. *Ranah Research: Journal of Multidisciplinary Research and Development*, 6, 689–709. <https://doi.org/10.38035/rj.v6i4.868>
- World Bank, U., UNICEF, USAID, FCDO, Bill & Melinda Gates Foundation. (2022). *The State of Global Learning Poverty*. <https://www.unicef.org/reports/state-global-learning-poverty-2022>
- Yarkarami, F. (2026). Building Supply Chain Resilience through Market Orientation: The Mediating Role of Process Improvement, Digital Transformation, and Efficiency in Enhancing Performance. *Business, Technology & Innovation Studies Journal*, 2(1). <https://doi.org/10.66578/btis.v2i1.19>
- Zhang, S., Hong, J., Lau, K., & Tian, Y. (2026). How digital transformation enhances supply chain resilience and organisational performance: a digital affordance perspective. *Annals of Operations Research*, 359, 1–34. <https://doi.org/10.1007/s10479-026-07085-1>
- Zhao, Y., Zhou, Y., Yang, Q., & Gong, Y. (2025). Technology Empowerment, Digital Transformation, and Enhancing Corporate ESG Performance. *International Review of Economics & Finance*, 101, 104239. <https://doi.org/10.1016/j.iref.2025.104239>
- Zou, Y., Kuek, F., Feng, W., & Cheng, X. (2025). Digital learning in the 21st century: trends, challenges, and innovations in technology integration. *Frontiers in Education*, 10. <https://doi.org/10.3389/feduc.2025.1562391>