Journal of Management and Economic Sciences Prospects | **Volume: 10 / N°: 01 (2026), p 415-433**

The Contribution of Digital Transformation to Enhancing the Economic Competitiveness of Algerian Exporting Firms within the Framework of Organizational Innovation

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Received: 30/01/2026 *Accepted: 09/05/2026* *Published:30/07/2026*

Abstract:

This study examines the contribution of digital transformation to enhancing the economic competitiveness of Algerian exporting firms within the framework of organizational innovation. Using a descriptive–analytical approach, data were collected from 35 Algerian exporting firms through a structured questionnaire and analyzed using Smart PLS 4 software. The results reveal the absence of a direct effect of digital transformation on economic competitiveness. However, a significant indirect effect was confirmed through organizational innovation as a mediating variable, indicating the presence of a full mediation effect.

Keywords: Digital Transformation, Economic Competitiveness, Exporting Firms, Organizational Innovation.

Jel Classification Codes : O33, O31, L25, F14.

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1. Introduction

The world is witnessing rapid technological and economic developments that have profoundly reshaped the business environment and intensified competitive pressures across industries. In this evolving landscape, digital transformation has emerged as a key driver of organizational change and a critical source of competitive advantage. Advances in digital technologies such as artificial intelligence, big data analytics, cloud computing, and the Internet of Things have compelled firms to rethink their organizational structures, managerial practices, and strategic orientations. In highly competitive international markets, exporting firms face increasing pressure to enhance efficiency, foster innovation, and improve responsiveness, making digital transformation a strategic necessity rather than a purely technological choice.

In developing economies, particularly Algeria, exporting firms operate in complex and dynamic environments marked by strong competition, technological disparities, and structural constraints. These conditions highlight the need for innovative organizational practices that enable firms to convert digital investments into sustainable economic competitiveness. Although previous studies have widely examined the effects of digital transformation and innovation on firm performance, empirical research remains limited with regard to the mediating role of organizational innovation in the relationship between digital transformation and economic competitiveness. This gap is especially evident in the context of exporting firms in emerging economies.

1.1 Statement of the Research Problem

In Algeria, exporting firms operate in an increasingly challenging economic environment characterized by intensified international competition, technological pressures, and the need to improve export performance. In this setting, digital transformation and organizational innovation have emerged as key strategic mechanisms for strengthening firms' economic competitiveness and ensuring sustainable participation in global markets; on this basis, the following main research question can be formulated:

To what extent does digital transformation contribute to enhancing the economic competitiveness of Algerian exporting firms within the framework of organizational innovation?

1.2 Research Questions

- How does digital transformation influence organizational innovation in Algerian exporting firms?
- How does digital transformation contribute to direct enhancement the economic competitiveness of Algerian exporting firms?
- Does organizational innovation mediate the relationship between digital transformation and economic competitiveness in Algerian exporting firms?

1.3 Hypotheses

- H1: Digital transformation has a positive effect on organizational innovation in Algerian exporting firms.
- H2: digital transformation has a direct positive effect on the economic competitiveness of Algerian exporting firms
- H3: Digital transformation has a positive effect on the economic competitiveness of Algerian exporting firms within the framework of organizational innovation.

1.3 Significance of the Study

This study is significant as it provides an integrated analysis of how digital transformation contributes to enhancing the economic competitiveness of Algerian exporting firms through organizational innovation. It offering deeper theoretical insights into the mechanisms linking digitalization, innovation, and competitiveness, particularly in the context of a developing economy. Practically, the findings are expected to support managers in designing effective digital and innovation strategies to improve performance and competitiveness in international markets, while also providing policymakers with relevant insights to promote digitalization and innovation-driven export policies, thereby contributing to sustainable economic development in Algeria.

1.4 Research Objectives

- Determine the level of digital transformation adoption and analyzing the economic competitiveness of the Algerian exporting firms under study in international markets.
- Examine the impact of digital transformation on organizational innovation within Algerian exporting firms.
- Analyze the role of organizational innovation in enhancing the economic competitiveness of Algerian exporting firms.
- Test the nature of the relationship between digital transformation and economic competitiveness within the framework of organizational innovation.

2. Methodology

This study adopts a descriptive–analytical approach due to the nature of the research topic, which requires describing the current state of digital transformation, organizational innovation, and economic competitiveness, as well as analyzing the relationships between these variables. This methodological choice is consistent with previous studies.

3. Conceptual Framework of the Study

3.1 Digital Transformation in Firms

Digital transformation is defined as the adoption and integration of advanced digital technologies, including artificial intelligence, augmented reality, big data, cloud computing, Industry 4.0, and the Internet of Things, into organizational processes and activities (Luu, 2023, p. 1438), Digital transformation also refers to a process that aims to improve an organization by inducing significant changes in its structures, processes, and capabilities through the combined use of information, computing, communication, and connectivity technologies (Vial, 2019, p. 121). Digital transformation goes beyond the mere adoption of new technologies; it entails a fundamental shift in how organizations operate, engage with stakeholders, and create value (Pardo, 2025, p. 1), Based on the foregoing, digital transformation is operationally defined as the extent to which firms adopt and integrate advanced digital technologies into their organizational, operational, and strategic processes, including the redesign of business models, the

improvement of product and process quality, and the enhancement of technological and innovation capabilities, with the aim of increasing performance efficiency and strengthening competitive advantage, particularly in international markets.

The achievement of digital transformation necessitates the availability of a set of requirements representing its core dimensions.

3.1.1 Digital Infrastructure: Digital infrastructure refers to the technological backbone that supports digital transformation, including cloud computing, big data, artificial intelligence, and the Internet of Things. These technologies enable businesses to optimize processes, enhance product offerings, and expand their global presence. Effective digital infrastructure is crucial for the seamless integration of digital technologies into business operations, facilitating improved supply chains and customer service (Vial, 2019).

3.1.2 Digital Skills and Competencies: Developing digital skills and competencies is essential for business leaders and employees to thrive in a digital environment. This includes understanding digital tools, data analytics, and the ability to adapt to new technologies (Hoe, 2022, p. 17). Investment in digital competencies and organizational capabilities is essential for organizations to successfully implement digital transformation strategies and sustain their competitive advantage (Vial, 2019, pp. 128-130).

3.1.3 Digital transformation culture and Organization: Organizational culture plays a pivotal role in digital transformation. A culture that embraces change, innovation, and continuous learning is vital for successful digital transformation, Change management and fostering a mindset open to digital innovation are critical to overcoming resistance and ensuring the effective adoption of new technologies (Hoe, 2022, pp. 41-42).

Digital transformation requires the availability of a coherent set of interrelated foundations that extend beyond technology alone. It relies on

robust digital infrastructure to enable the integration of advanced technologies into business processes, the development of digital skills and competencies to ensure effective utilization and continuous adaptation, and an organizational culture that supports innovation, learning, and openness to change. The alignment of these technological, human, and organizational dimensions is essential for achieving sustainable and effective digital transformation outcomes.

3.2 Economic Competitiveness of Exporting Firms

Firm-level competitiveness can be defined as the organization's ability to sustain long-term efficiency and effectively meet diverse consumer needs and preferences by delivering high-quality goods and services at the lowest possible costs and prices, thereby maintaining or expanding its market share and successfully accessing international markets (مباركي، 2014، صفحة 175). As for Firm-level export competitiveness refers to a firm's ability to enter and sustain export activities, as evidenced by both its decision to export and the proportion of its output allocated to foreign markets (Keshari, 2012, p. 14). Based on the above foregoing, economic competitiveness of exporting firms can be defined as the firm's capacity to sustain long-term efficiency and competitive advantage in international markets through effective export participation by strategic resource utilization, and adaptive responsiveness to environmental changes.

There are multiple conceptualizations of firm competitiveness in general, and exporting firms in particular nevertheless, the majority of these classifications tend to converge around the following key dimensions:

3.2.1 Competitive in Resource-Based View: Investments in export-specific resources, such as human capital and innovation, are crucial for creating a competitive advantage. These investments lead to cost reduction and product differentiation, which are essential for improved export performance (Ngo, Leonidou, Janssen, & Christodoulides, 2024).

3.2.1 Competitive by Adaptation: Firms that prioritize cultural sensitivity in their export processes achieve higher competitiveness and sustainable success. This approach involves developing internal innovation capabilities and emphasizing cross-cultural communication (Çalışkan & Aysan, 2025, p.

196), The ability to adapt swiftly to changes, such as those brought by the COVID-19 pandemic, is vital for maintaining export customer satisfaction. Firms with strong adaptability capabilities, particularly SMEs, can better navigate disruptions and sustain competitive advantage.

Export firm competitiveness can be understood as a multidimensional concept grounded in both resource-based strength and adaptive capability. On the one hand, investments in export-specific resources, such as human capital and innovation, enable firms to achieve cost efficiency and product differentiation. On the other hand, the ability to adapt to cultural differences and rapidly changing market conditions enhances resilience, customer satisfaction, and the sustainability of competitive advantage in international markets.

3.3 The Concept of Organizational Innovation

Organizational innovation is viewed as a multidimensional phenomenon shaped by organizational structures, low formalization, decentralization, and flexible processes that enhance creativity and responsiveness to change (Szczepańska-Woszczyna, 2018, p. 34), Organizational innovation also refers to the introduction of new organizational methods that significantly alter business practices, workplace organization, or external relations (Ángel L. & López-Nicolás, 2013), In the context of this study, organizational innovation is operationally defined as the organization’s ability to introduce and implement new managerial practices, flexible organizational structures, efficient internal processes, and a supportive innovative culture that encourages creativity, continuous learning, and adaptability, with the aim of improving organizational performance and enhancing competitiveness.

The concept is integrative, linking organizational structure, Organizational culture, and administrative process innovation to technological innovation, thereby enhancing innovative performance (Jingjiang & Jiyu, 13 September 2005, p. 646):

3.3.1 Organizational Structure: Innovative organizations often adopt organic structures characterized by flexibility, decentralization, and minimal hierarchy, which facilitate creativity and responsiveness to change (Szczepańska-Woszczyna, 2018, p. 34), Such structures support boundary-spanning activities, enabling collaboration across different functions and divisions which is essential for innovation.

3.3.2 Culture of innovation: A culture that encourages risk-taking, openness, and creativity is vital for innovation. It provides a supportive environment where new ideas can flourish (Shui & Xu, 2006, p. 478), Management encouragement and openness in communication are critical cultural elements that drive organizational innovativeness

3.3.3 Administrative Processes and Methods: Effective innovation processes are necessary to systematically translate organizational innovativeness into successful innovations. This includes having robust methodologies and tools for innovation (Shui & Xu, 2006, p. 478).

Organizational innovation is an integrative concept that connects organizational structure, organizational culture, and administrative processes with technological innovation to enhance innovative performance. Flexible and decentralized organizational structures facilitate collaboration and responsiveness, while an innovation-oriented culture encourages risk-taking, openness, and creativity. In parallel, effective administrative processes and methods provide systematic mechanisms that translate organizational innovativeness into successful and sustainable innovation outcomes.

3.4 The relationship between the variables in Literature Review

Organizational innovation acts as a mediator between digital transformation and competitiveness by reshaping business models and internal processes. This innovation is crucial for firms to adapt to the digital age and maintain competitiveness (Pardo, 2025, p. 8).

The integration of digital technologies facilitates organizational innovation, allowing firms to improve their export performance by learning and adapting their strategies to better meet international market demands (Guri, 2023, p. 111). The synergy between digital transformation and

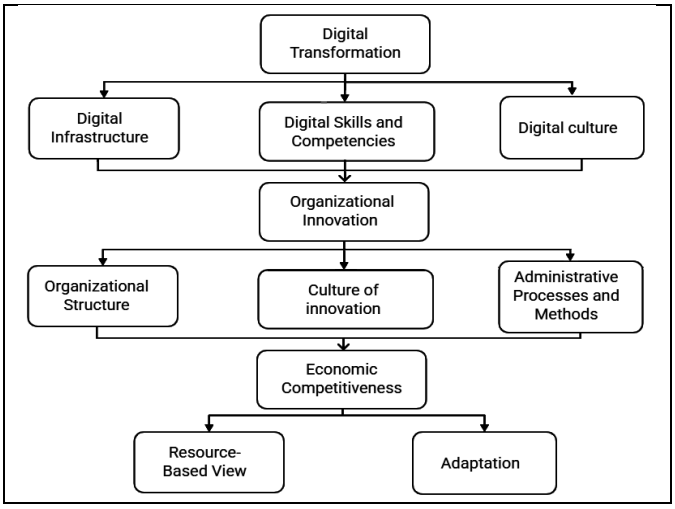
innovation is critical for sustaining corporate competitiveness, as it enables firms to anticipate market changes and respond proactively (Rakibul, 2025).

Exporting firms can enhance their competitiveness by strategically integrating digital transformation and organizational innovation. This integration allows them to improve their export performance and adapt to the rapidly changing global market environment (Luu, 2023, p. 1450). So Policymakers and business leaders should focus on fostering an innovative culture and developing digital capabilities to support firms in their digital transformation efforts, thereby enhancing their competitiveness in the international arena (Puelles & De La Vega, 2024).

Digital transformation enhances firm competitiveness by improving operational efficiency, reducing costs, and enabling participation in global value chains. It fosters technological innovation, which is crucial for maintaining a competitive edge in the digital economy (Panji , Mandagie, & Mil, 2024). In the context of exporting firms, digital transformation is essential for enhancing export performance by improving technological sophistication and product quality, which are critical for competing in international markets (Luu, 2023, p. 1438).

In light of the preceding discussion, the relationships among the study variables are presented in the following figure:

Fig.1. Conceptual Model of the Study Variables



Source: Prepared by the authors based on previous studies.

Digital transformation constitutes a fundamental driver of organizational innovation in exporting firms by reshaping the way organizations operate, coordinate, and manage their activities. Through the development of digital infrastructure, the enhancement of digital skills and competencies, and the establishment of a supportive organizational culture, firms create an enabling environment that facilitates innovation in organizational structures, cultural practices, and administrative processes. These organizational innovations, in turn, strengthen the economic competitiveness of exporting firms by improving their ability to leverage strategic resources effectively and adapt to dynamic international market conditions. Innovative organizational structures enhance flexibility and responsiveness, innovation-oriented cultures foster continuous improvement, and advanced administrative processes increase efficiency and coordination. Consequently, organizational innovation functions as a critical mediating mechanism through which digital transformation translates into sustainable economic competitiveness, enabling exporting firms to build resource-based advantages and maintain adaptive capacity in global markets.

4. Empirical Testing of the Relationships between Variables

4.1 Research Design

For the purpose of verifying the direction of the relationships among the variables, the study was conducted at the level of managerial staff in Algerian exporting firms (one managerial representative from each firm). A five-point Likert-scale questionnaire was employed as the primary data collection instrument for testing the research hypotheses. A total of 60 questionnaires were distributed, of which 35 valid questionnaires were retrieved, yielding a response rate of 58.3%. To process and analyze the collected data, SPSS software version 27 and Smart PLS software version 4.1.1.7 were used. The statistical analyses were conducted with a confidence level of no less than 95% and a margin of error below 5%, in accordance with prior studies.

4.2 Instrument Validity Assessment

4.2.1 Expert Validation of the Instrument

The questionnaire was submitted to three (03) academic experts for review and validation, in order to ensure its clarity, content relevance,

methodological soundness, and suitability for statistical analysis.

4.2.2 Reliability Test

Reliability is used to determine the extent to which the instrument yields stable and consistent measurements. Cronbach's Alpha coefficient was employed to assess the reliability of the research instrument. The results of the reliability test are presented in the following table:

Table 1. Reliability Test*

Digital Transformation in Firms	**DI**	**DSC**	**DTCO**	**0.942**
	0.909	0.764	0.846	
Organizational Innovation	**OS**	**CI**	**APM**	**0.939**
	0.780	0.802	0.922	
Economic Competitiveness of Exporting Firms	**RB**	**AD**		**0.874**
	0.897	0.741		

Source: SPSS 27 Output Results.

The results indicate that the Cronbach's Alpha coefficients for the constructs and dimensions ranged from 0.764 to 0.939, exceeding the acceptable cutoff value of 0.7, thus confirming the reliability of the measurement instrument.

4.2.3 Internal Consistency Test

To verify the presence of internal consistency between the items and the constructs to which they belong, Pearson's correlation coefficient was employed.

Table 2. Internal Consistency Levels for Each Dimension

Digital Transformation in Firms	**DI**	**DSC**	**DTCO**
	0.876-0.959	0.796-0.922	0.680-0.710
Organizational Innovation	**OS**	**CI**	**APM**
	0.801-0.904	0.632-0.694	0.568-0.803
Economic Competitiveness of Exporting Firms	**RB**	**AD**	
	0.771-0.838	0.614-0.724	
SIG < 0.05			

Source: SPSS 27 Output Results.

* **DI**: (Digital Infrastructure), **DSC**: (Digital Skills and Competencies), **DTCO**: (Digital transformation Culture and Organization), **OS**: (Organizational Structure), **CI**: (Culture of innovation), **APM**: (Administrative Processes and Methods), **RB**: (Resource-Based View), **AD**:(Adaptation).

The results of the internal consistency test revealed a statistically significant positive correlation ($p < 0.05$), with correlation coefficients ranging from moderate to strong. This indicates the presence of internal consistency between the instrument items and the dimensions to which they belong.

4.3 Results of Data Analysis for the Study Constructs

4.3.1 General Data

The results of the data analysis for this construct can be presented in the following table:

Table 3. Results of General Data Analysis

Items		Fre	%
Firm Size	Big	14	40,0
	MSE	18	51,4
	Small/Startups	3	8,6
Export Experience	< 5y	7	20,0
	5 - 10 y	20	57,1
	+10 y	8	22,9
Main Market	Africa	15	42,9
	Asia	6	17,1
	Europe	14	40,0
Sector	Industry	25	71,4
	Agriculture	10	28,6

Source: SPSS 27 Output Results.

Based on the analysis of data from 35 Algerian exporting firms, the study sample demonstrates a relative diversity in its general characteristics. In terms of firm size, small and medium-sized enterprises account for the largest share at 51.4%, followed by large firms at 40%, while small or start-up firms represent only 8.6%, indicating that export activities are primarily driven by firms with medium to large organizational capacities. Regarding export experience, the majority of firms have between 5 and 10 years of export experience (57.1%), reflecting a considerable level of maturity in export practices, compared to 22.9% with more than ten years of experience

and 20% with less than five years. With respect to main export markets, Algerian exports are mainly directed toward African markets (42.9%) and European markets (40%), with a lower orientation toward Asian markets (17.1%), suggesting a relatively balanced regional and international export orientation. Concerning the sector of activity, industrial firms dominate the sample with a proportion of 71.4%, compared to 28.6% for agricultural firms, highlighting the central role of the industrial sector in supporting Algerian exports. Industrial exports typically include construction materials such as cement and steel, petrochemical products, semi-finished goods, and processed food products, whereas agricultural exports mainly consist of dates, olive oil, fresh or processed fruits and vegetables, and other value-added agricultural products.

4.3.2 Study Variables

The main results of testing this hypothesis can be illustrated in the following table:

Table 4. Results of Study Variables Analysis

Response Scale: 1. Strongly Disagree, 2. Disagree, 3. Neutral, 4. Agree, 5. Strongly Agree			
Sections & Dimensions	**Sd**	**Mean**	**Tr**
1. Our firm relies on modern digital systems to support its operational activities.	0,80	3,89	Ag
2. Our firm has a digital infrastructure that facilitates internal and external information exchange.	0,91	3,77	Ag
3. The digital technologies used in our firm contribute to improving efficiency and speed operations.	1,02	3,80	Ag
Digital Infrastructure	**0,84**	**3,82**	**Ag**
4. Employees possess the necessary digital skills to perform their tasks effectively.	0,91	3,86	Ag
5. Our firm provides continuous training to develop employees' digital skills.	0,77	4,23	SA
6. Digital competencies within our firm help us adapt to technological changes.	0,68	4,31	SA
Digital Skills and Competencies	**0,65**	**4,13**	**Ag**
7. Top management in our firm encourages the adoption of digital solutions.	0,82	3,97	Ag
8. Our organizational culture supports digital change and innovation.	0,85	3,39	N
9. Leadership in our firm actively supports digital transformation initiatives.	0,83	3,89	Ag
Digital transformation Culture and Organization	**0,73**	**3,75**	**Ag**
Digital Transformation in Firms	**0,70**	**3,90**	**Ag**
1. Our organizational structure is flexible in terms of authority and responsibility.	0,87	3,00	N
2. The organizational structure facilitates quick decision-making.	0,73	3,00	N
3. The organizational structure promotes collaboration among different departments.	0,71	2,97	N
Organizational Structure	**0,64**	**2,99**	**N**

4. Our firm encourages employees to propose new and innovative ideas.	0,41	4,20	SA
5. Management in our firm supports experimentation and learning from mistakes.	0,83	3,89	Ag
6. An innovation-oriented culture prevails within our firm.	0,97	3,94	Ag
Culture of innovation	**0,65**	**4,01**	**Ag**
7. Our firm adopts modern administrative methods in managing its activities.	0,87	3,66	Ag
8. Administrative procedures are continuously improved to enhance performance.	0,97	3,63	Ag
9. Administrative processes in our firm support organizational innovation.	0,87	3,69	Ag
Administrative Processes and Methods	**0,84**	**3,66**	**Ag**
Organizational Innovation	**0,67**	**3,55**	**Ag**
1. Our firm possesses valuable resources that enhance its competitiveness in foreign markets.	0,64	4,06	Ag
2. Our firm effectively invests in human capital to strengthen its export competitiveness.	0,84	3,63	Ag
3. Our organizational capabilities contribute to building a sustainable competitive advantage.	0,73	4,00	Ag
Resource-Based View	**0,68**	**3,95**	**Ag**
4. Our firm has the ability to adapt to the requirements of international markets.	0,82	3,54	Ag
5. Our firm responds quickly to changes in the export environment.	0,98	4,09	Ag
6. Organizational flexibility helps our firm maintain its competitiveness in global markets.	0,55	3,39	N
Adaptation	**0,64**	**3,73**	**Ag**
Economic Competitiveness of Exporting Firms	**0,62**	**3,84**	**Ag**

Source: SPSS 27 Output Results.

The results of the statistical analysis indicate that the overall direction of the arithmetic means tends toward neutrality, agreement, and strong agreement, with most responses leaning toward the level of agreement, which reflects a clear positive attitude among the sample respondents toward the statements included in the questionnaire. In contrast, the Organizational Structure dimension recorded a direction close to the neutral level, indicating a relative hesitation or lack of sufficient clarity in respondents' opinions regarding this dimension compared to the other dimensions. As for the standard deviation, its values ranged from low to moderate, which suggests a high degree of homogeneity in the responses and a low level of dispersion, reflecting convergence in viewpoints and enhancing the reliability and generalizability of the statistical results.

4.3 Results of Hypothesis Testing

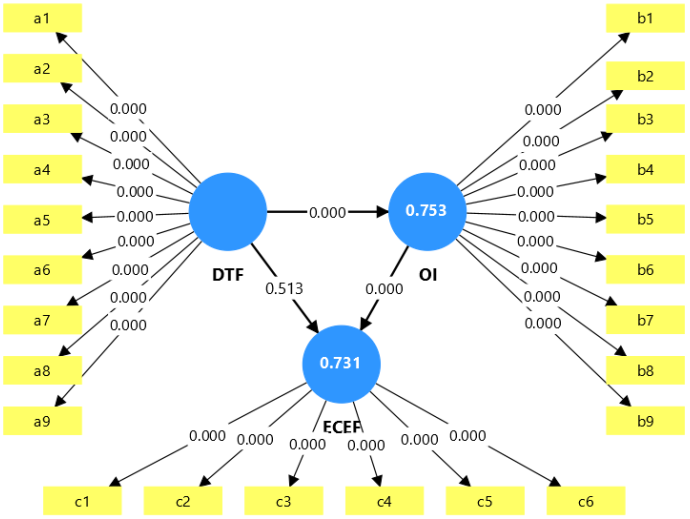
The main results of testing hypotheses can be illustrated in the following table and figure:

Table 5. Test of Hypotheses

Hypothesis		R^2	β	T	Sig.	Decision
H1	**DTF -> OI**	**0.753**	0,868	10,447	0,000	Accepted
H2	**DTF -> ECEF**		-0,245	0,655	0,513	Rejected
H3	**DTF -> OI -> ECEF**	**0.731**	0.758	3,576	0,000	Accepted

Source: Smart PLS 4 Output Results.

Fig.2. Graphical Representation of the Relationship Between Variables



Source: Smart PLS 4 Output Results.

Based on the results of hypothesis testing, the research hypotheses are discussed in light of theoretical and empirical evidence.

- **Discussion of Hypothesis 01 (H1)**

The results of the statistical analysis revealed a strong and statistically significant positive effect of digital transformation on organizational innovation in Algerian exporting firms, with a path coefficient of ($\beta = 0.867$) at a significance level of (Sig. = 0.000), in addition to a high explanatory power ($R^2 = 0.753$). This indicates that digital transformation explains a substantial proportion of the variance in organizational innovation. These findings suggest that the adoption of modern digital technologies, such as integrated information systems, administrative digitalization, and process automation, significantly contributes to enhancing innovative practices, developing organizational structures, and improving work methods. This result is consistent with recent literature, which emphasizes that digital transformation represents a key driver of organizational innovation, enabling firms to enhance their flexibility, foster organizational creativity, and improve their ability to adapt to rapid environmental changes.

- **Discussion of Hypothesis 02 (H2)**

The results showed that the direct effect of digital transformation on the economic competitiveness of Algerian exporting firms is not statistically significant, with a path coefficient of ($\beta = -0.245$) at a significance level of (Sig. = 0.513 > 0.05), leading to the rejection of the second hypothesis. This finding indicates that digital transformation alone does not necessarily lead to a direct improvement in economic competitiveness, unless it is translated into innovative organizational practices and tangible improvements in administrative and operational processes. This suggests that digital transformation acts primarily as an enabling factor rather than a direct source of competitive advantage, requiring a flexible organizational structure and an innovative culture capable of leveraging digital capabilities and converting them into measurable economic outcomes.

- **Discussion of Hypothesis 03 (H3)**

The findings confirmed a strong and statistically significant positive indirect effect of digital transformation on economic competitiveness through organizational innovation, with an indirect path coefficient of ($\beta = 0.758$) at a significance level of (Sig. = 0.000), and a high explanatory power ($R^2 = 0.731$), thus supporting the acceptance of the third hypothesis. These results indicate that organizational innovation plays a full mediating role in the relationship between digital transformation and economic competitiveness, as it transforms digital investments into organizational and operational improvements that ultimately enhance firms' competitive performance. This highlights the strategic importance of integrating digital transformation within a comprehensive organizational innovation framework aimed at achieving sustainable economic competitiveness in highly dynamic and competitive environments.

5. Conclusion

This study explored the impact of digital transformation on the economic competitiveness of Algerian exporting firms within the framework of organizational innovation. The empirical results indicate that digital transformation exerts a significant indirect effect on competitiveness through organizational innovation which confirms the presence of a full mediation effect. This finding highlights the pivotal role of organizational innovation as a strategic mechanism that enables firms to translate digital capabilities into meaningful competitive outcomes. It also suggests that investments in digital technologies alone are not sufficient to enhance economic competitiveness unless they are supported by substantive changes in organizational structures cultures and managerial practices. By promoting innovation oriented environments firms can strengthen flexibility improve operational efficiency and enhance their ability to adapt to competitive international markets. Overall this study contributes to the literature on digital transformation and competitiveness by providing empirical evidence from a developing economy perspective while offering valuable insights for managers and policymakers seeking to advance export competitiveness through integrated digital and organizational development strategies.

6. Research Recommendations

- Algerian exporting firms should adopt a strategic and comprehensive approach to digital transformation by investing in advanced digital infrastructure, modern information systems, and process automation in order to enhance operational efficiency and strengthen organizational innovation capabilities.
- Top management in Algerian exporting firms needs to foster an innovation-oriented organizational culture by promoting creativity, supporting experimentation, encouraging employee participation, and facilitating continuous organizational learning.
- Given that the arithmetic mean of the organizational structure dimension was found to be at a neutral level, Algerian exporting firms are strongly advised to redesign their organizational structures

toward greater flexibility, decentralization, and reduced bureaucratic rigidity. This would help accelerate decision-making, enhance interdepartmental coordination, and create a more supportive environment for organizational innovation.

- Continuous investment in developing digital skills and competencies among employees in Algerian exporting firms is essential. This can be achieved through structured training programs and capacity-building initiatives to ensure the effective use of digital technologies and sustain innovation-driven competitiveness.
- Algerian policymakers should develop national strategies that promote digital transformation and organizational innovation among Exporters by providing financial incentives, facilitating access to digital infrastructure, supporting innovation ecosystems, and encouraging partnerships with universities, and research centers.
- Government institutions in Algeria should also strengthen regulatory frameworks and export-support mechanisms in order to accelerate digital adoption and innovation practices. This would contribute to enhancing the international competitiveness of Algerian exports and supporting sustainable economic development.

7. Bibliography

1. Ángel L., M.-C., & López-Nicolás, C. (2013, 8 8). Understanding the drivers of organizational innovations. *The Service Industries Journal*, pp. 1312-1325. doi:https://doi.org/10.1080/02642069.2013.815736
2. Çalışkan, E., & Aysan, H. (2025, 9 5). Strategic export innovation management: A holistic approach to achieving sustainable global trade performance. *International Emerging Scholars Society, 2*, pp. 196-215. doi:https://doi.org/10.56879/ijbm.v4i2.165
3. Guri, R. (2023, 11 30). Unlocking exporting: Human Capital, Organizational Innovation, and Digital Technologies. *Phd Thesis*. Groningen, Netherlands: University of Groningen. doi:https://doi.org/10.33612/diss.819479069
4. Hoe, S. L. (2022). *Digital Transformation: Strategy, Execution and Technology* (Vol. 1st Edition). New York, USA: Auerbach Publications. doi:https://doi.org/10.1201/9781003311393
5. Jingjiang, L., & Jiyu, Q. (13 September 2005). A theoretical framework for linking technological and organizational innovation in the IT-based networked environment. *IEEE International Engineering Management Conference* (pp. 646–650). John's, NL, Canada: IEEE. doi:https://doi.org/10.1109/IEMC.2005.1559228

6. Keshari, P. K. (2012). FDI and Firm Level Export Competitiveness in the Indian Machinery Industry. *International Journal of Global Business and Competitiveness, 1*, pp. 14-32. doi:https://mpra.ub.uni-muenchen.de/47069/
7. Luu, T. D. (2023, 6 7). Digital transformation and export performance: a process mechanism of firm digital capabilities. *Business Process Management Journal, 5*, pp. 1436–1465. doi:https://doi.org/10.1108/BPMJ-01-2023-0024
8. Ngo, V. D., Leonidou, L. C., Janssen, F., & Christodoulides, P. (2024, 1). Export-specific investments, competitive advantage, and performance in Vietnamese SMEs: The moderating role of domestic market conditions. *Journal of Business Research*. doi:https://doi.org/10.1016/j.jbusres.2023.114315
9. Panji , P., Mandagie, W. C., & Mil, P. N. (2024, 1 1). Digital Transformation and Firm Competitiveness: A Holistic Perspective. *SSRN Electronic Journal*. doi:https://doi.org/10.2139/ssrn.4720578
10. Pardo, G. P. (2025, 5 30). Digital transformation and organizational innovation: challenges, opportunities, and perspectives for business competitiveness. *Revista JRG de Estudos Acadêmicos, 18*, pp. 1-13. doi:https://doi.org/10.55892/jrg.v8i18.2157
11. Puelles, I., & De La Vega, I. (2024, 6). Innovation Management, Digital Transformation, and Firm Performance in the New Normal. *IEEE Engineering Management Review, 3*, pp. 106-124. doi:https://doi.org/10.1109/emr.2024.3373547
12. Rakibul, A. (2025). An Analysis of The Role of Innovation and Digitalization in Enchancing Corporate Competitive Adventage in the Digital Economy Era. *Maneggio, 4*, pp. 199–208. doi:https://doi.org/10.62872/58y55896
13. Shui, C., & Xu, Q. (2006). A Model of Co-evolution of Organization Innovation Based on Haier Group in China. *IEEE International Engineering Management Conference* (pp. 478–482). Salvador, Brazil: IEEE. doi:https://doi.org/10.1109/IEMC.2006.4279913
14. Szczepańska-Woszczyna, K. (2018, 3). Structure and Operational Processes as the Context for the Innovativeness of an Organization. *Foundations of Management, 1*, pp. 33-44. doi:https://doi.org/10.2478/FMAN-2018-0004
15. Vial, G. (2019, 6). Understanding digital transformation: A review and a research agenda. *Business Navigator, 2*, pp. 118-144. doi:https://doi.org/10.1016/j.jsis.2019.01.003
16. سمراء مباركي .(12, 2014) .تأثير إعادة التأهيل على القدرة التنافسية للمؤسسة : دراسة ميدانية لعينة من المؤسسات الصغيرة والمتوسطة بالغرب الجزائري .*مجلة العلوم الاقتصادية وعلوم التسيير، 2*، الصفحات .194-170 تم الاسترداد من https://asjp.cerist.dz/en/downArticle/341/9/9/87615