







# “The nexus between digital transformation and financial sustainability: Does firm size Matter? The Jordanian experience (manufacturing sector)”

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# THE NEXUS BETWEEN DIGITAL TRANSFORMATION AND FINANCIAL SUSTAINABILITY: DOES FIRM SIZE MATTER? THE JORDANIAN EXPERIENCE (MANUFACTURING SECTOR)

## Abstract

Digital transformation plays a crucial role in the evolution of industrial companies, serving as a key driver for boosting productivity and streamlining operational efficiency. This modern shift not only facilitates the adoption of advanced technologies but also fosters a culture of innovation and agility within organizations. Therefore, this study aims to explore the relationship between digital transformation and financial sustainability among industrial companies listed on the Amman Stock Exchange, shedding light on how these digital initiatives can lead to long-term financial health and resilience in an increasingly competitive market. Panel data were built based on the annual reports of 32 industrial companies listed on the Amman Stock Exchange from 2015 to 2023, which were chosen due to their critical role in the national economy. FEM and GMM were employed to obtain study outputs. The study concluded that the relationship between digital transformation and financial sustainability is significant and positive (Coef 0.52, P-value 0.01), meaning that digital transformation contributes significantly and positively to enhancing financial sustainability in Jordanian industrial companies. An interaction coefficient was also found between digital transformation and firm size (Coef = 0.07, P-value = 0.04), where company size is a moderating factor that strengthens the impact of this transformation on financial sustainability. Accordingly, the study recommends expanding the scope of future research to explore the factors driving digital transformation, most notably entrepreneurship and organizational innovation, given their potential role in accelerating the pace of transformation and achieving its sustainable impact.

## Keywords

digitization, scalability, performance, governance,  
investment, competitiveness, technology, innovation,  
emerging market

## JEL Classification

O33, G32, M15, L25, Q56

## INTRODUCTION

In recent decades, the world has witnessed a radical shift in business models driven by rapid technological developments. Digital transformation has become a key component of organizations' growth and competitiveness strategies. This transformation involves the application of artificial intelligence tools, cloud computing, big data analytics, and the Internet of Things, which have contributed to improving operational efficiency, enhancing decision-making, and improving the quality of the customer experience. Recent studies (Holmlund et al., 2020; Martínez-Peláez et al., 2023) have confirmed that organizations that effectively adopted digital transformation achieved positive results in terms of productivity and profitability.



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Conversely, financial sustainability has become a strategic dimension in corporate policies, as companies seek to achieve long-term growth, reduce risks, and ensure survival in the face of economic and environmental changes. Several studies (McPhee, 2014; Jum'a et al., 2022) have also demonstrated that technological innovation can be a contributing factor in achieving sustainability by improving resource efficiency and increasing competitiveness.

In the Jordanian context, particularly in the industrial sector, digital transformation is emerging as an area of governmental and institutional interest, with initiatives aimed at supporting innovation and the adoption of technology in production processes. Public policies have focused on stimulating digital transformation as a means of enhancing sustainable economic growth, particularly in light of the challenges facing industrial companies, such as high production costs and market volatility (Lutfi et al., 2022).

Despite the expansion of studies on digital transformation globally, the literature still lacks an in-depth analysis of the impact of digital transformation on financial sustainability, particularly in developing and emerging economies. There is also a clear gap in studies that address the moderating role of company size in this relationship, even though company size is a significant factor influencing an organization's ability to adopt technology and invest in it to enhance long-term financial performance.

Based on the above, this study aims to analyze the impact of digital transformation on financial sustainability in Jordanian industrial companies and to test whether company size plays a moderating role in this relationship.

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## 1. LITERATURE REVIEW AND HYPOTHESES

Over the past two decades, digital transformation has gained considerable scholarly attention as a key driver of organizational performance and competitiveness. Where academics pointed out that organizations must change their mindsets and strategies to stay relevant and foster innovation, using technologies such as cloud services and big data to become more efficient and to engage with their customers. Using digital technologies, businesses build new products and services that are aligned with changing customer needs (Frank et al., 2019). This is particularly valuable within a dynamic business landscape of consumer preferences and market trends that constantly change (Patel & Chauhan, 2024).

The connection between digital transformation and financial sustainability is explained by various theories, such as sustainable innovation theory and resource-based view, and the transaction cost theory, which focuses on the costs related to economic dealings and how to minimize them (Cuypers et al., 2021 & Al-Okaily & Alsmadi, 2024).

The resource-based view emphasizes the strategic value of internal company resources and the ability to get a sustainable competitive advantage (Enriquez de la O, 2015). This can be seen as a resource that grants firms unique capabilities. Digital transformation adds to a firm's resource base. It facilitates valuable resources acquisition, integration & reconfiguration (e.g., data, technology, and human capital) (Zhu & Li, 2023). In addition, it increases efficiency and adaptability. These changes give a significant competitive advantage (AL-Khatib, 2024). Generally, firms can develop distinctive capabilities through investing in digital transformation so that this might drive sustainable, profitable growth.

Business Ecosystem Theory views firms as parts of a dense network of interrelated organizations that adapt and co-evolve to environmental change (Mitleton-Kelly & Papaefthimiou, 2002). Because of Digital transformation is all about how to rearrange the new business environments, companies work together and create with partners, suppliers, and customers to create a conducive can help in developing innovation and sustainability (Al Omoush et al., 2025). According to Sustainable Innovation Theory, innovation aimed at sustain-

ability brings environmental and social benefits and provides a corporation with a competitive advantage (Cillo et al., 2019).

### 1.1. Digital transformation and corporate financial sustainability

Wider adoption of digital technologies in business processes improves operational efficiency and enhances the promotion of financially sustainable practices (Javaid et al., 2022). Digital transformation is frequently an important driver of a firm's sustainability (Razzak et al., 2025; Turban et al., 2021).

The link between digital transformation and corporate sustainability is evident in a few key ways. First, many companies and organizations can make operational efficiency improvements through digital technologies (Lameijer et al., 2021). In fact, companies can save on energy usage, avoid wastage, and maximize resource allocation by eliminating unnecessary processing of internal and external procedures (Al-Rwaidan et al., 2023). Not only does this give cost reductions, but it also increases the environmental sustainability of enterprise activities. Second, digital transformation initiatives promote holistic, sustainable operations by enabling appropriate resource allocation, smoothing out production processes, and enhancing companies' performance (AL-Khatib, 2024; Al-Shouha et al., 2024). Third, digital transformation can also help in making organizations more transparent and accountable (Sarker et al., 2018). Through using data analytics and digital reporting tools, companies can more effectively track and report on their sustainability performance (Mehedintu & Soava, 2023). This transparency builds trust between stakeholders and results in sustainable practices adopted by businesses. Digital technologies characteristics, such as a high level of information availability, the ability to integrate multiple sources to improve decision-making, the automation of data-based activities, and real-time processing continuously helped manufacturers be more sustainable by providing them with the tools they needed to make intelligent decisions, which resulted in better financial sustainability outcomes (Al-Rwaidan et al., 2023).

On the other hand, while there are several opportunities that digital transformation can provide for corporate sustainability, there are also poten-

tial downsides (Goel et al., 2024), such as access to digital tech is not equally available to all companies and communities, leading to the digital divide and halting wider advancements. Moreover, the acceleration of digital transformation creates socioeconomic consequences, particularly in less prosperous areas (Brunetti et al., 2020). This really impedes some businesses from making the most out of digital transformation in the sustainable development context (Del Río et al., 2015).

### 1.2. Moderating role of digital transformation and financial sustainability

The impact of technological transformation on financial sustainability cannot be viewed in isolation from the structural characteristics of companies, primarily company size. Companies differ in their ability to adopt technology and in their financial and administrative resources that enable them to invest in digital transformation to enhance their sustainability. From this perspective, company size is a crucial factor that can alter the nature of the relationship between technological transformation and financial sustainability. Large companies may be better able to bear the costs of investing in technology and manage the associated risks, compared to small companies that may face financing or regulatory challenges that hinder their full benefit from this transformation. Therefore, it is logical to investigate the moderating role of firm size in this relationship.

Firm size has a profound impact on how its digital transformation plays out with respect to its sustainability (Kraus et al., 2021). The resource-based view indicates that the resources and a company's capabilities are among the strongest factors affecting firm efficiency (Miller, 2019). Bigger companies generally have more resources, so they can take on more large-scale digital transformation initiatives. This is consistent with Al-Khatib (2024), who mostly stresses the importance of resource presence for digital transformation in companies.

On the other hand, cost theory (TCT) indicates that digital transformation lowers transaction costs by streamlining processes and enhancing communication (Anjaria, 2024). To a certain extent, however, the availability of such benefits for

companies depends on their size. According to Al-Rwaidan et al. (2023), larger firms experience cost reductions usually attributed to economies of scale. In another context, Business Ecosystem Theory emphasizes how companies are part of an ecosystem (Koenig, 2013). Digital transformation often leads to better engagement of a firm with its ecosystem, which typically leads to improved sustainability (Martínez-Peláez et al., 2023). Larger firms may find it easier than others to ride digital transformation, helped by their extensive networks.

Smaller firms face resource constraints, which may limit their capacity to leverage a digital transformation for sustainability (Li et al., 2025). Big businesses have more extensive resources (capital/human talent) that they can devote to digital transformation initiatives. Consequently, more efficient digital transformation adoption improves sustainability outcomes.

However, larger organizations have resources for digital transformation, but they also may have a bureaucracy that makes it harder to react quickly or slow decision-making (Herbert, 2017). Smaller firms with flatter organizational structures can respond quickly to change; therefore, they can flourish because they can be nimble, they adapt rapidly to new technology, and edge in the advantage. In this context, Lutfi et al. (2022) indicated that SMEs in Jordan have more successful digital transformation implementations that ultimately improve their sustainability outcomes.

Generally, larger companies have an advantage in adapting to digital transformation to achieve financial sustainability. However, smaller firms can realize significant benefits by being nimble and focusing on strategic planning.

After the above arguments, it can be said that previous literature has examined the effects of adopting digital technology on companies, and it has made progress in understanding how digital transformation impacts business performance, while there is a gap in the previous studies when it related to the impact of digital transformation on companies' financial sustainability. This investigation presents a comprehensive analysis of this phenomenon, contributing to digital and financial sustainability literature, and it offers use-

ful perspectives to academics, practitioners, and policymakers alike. The current study provides two main contributions: First, it provides a measure of digital transformation in Jordanian companies, as it relied on content analysis using five words that characterize the Jordanian economic environment. Second, it is considered one of the first to provide evidence on the impact of digital transformation on sustainability and the moderating role of firm size.

Therefore, the current study aims to investigate the relationship between digital transformation and financial sustainability and the moderating role of firm size. Thus, the following hypotheses can be put forward:

*H1: Digital transformations have a positive impact on a manufacturing company's sustainability.*

*H2: Firm size moderates the relationship between digital transformation and financial sustainability.*

## 2. METHODOLOGY

The current study investigates the connection between digital transformation and the financial sustainability of the industrial sector on the Amman Stock Exchange. Given the importance of this sector, the study focused on industrial companies listed on the Amman Stock Exchange. The industrial sector is one of the main pillars of the Jordanian economy, given its significant contribution to the gross domestic product (GDP) and its pivotal role in creating direct and indirect job opportunities. The literature indicates that sectors with a broad economic impact constitute a fertile environment for studying modern variables, such as digital transformation, as their repercussions are not limited to companies alone, but extend to the entire economy. Therefore, the selection of industrial companies enhances the scientific value of the study and makes its findings generalizable on a broader scale than just individual units.

Panel data were built from 2015 to 2023 for 32 industrial companies (see Appendix A) that were selected purposively based on data availability, con-

sistency, and diversity in terms of size and type of industrial activity. This sample is believed to reflect the heterogeneity within the industrial sector in Jordan and provides a suitable basis for quantitative analysis.

The study model was developed to measure the impact of digital transformation on financial sustainability, and to test the moderating role of company size in this relationship, using a multiple regression model on Panel data, as shown in Equation (1).

$$\begin{aligned} SUST_{it} = & \beta_0 + \beta_1 DT_{it} + \beta_2 LEVE_{it} \\ & + \beta_3 ROA_{it} + \beta_4 CR_{it} + \beta_5 SIZ_{it} \\ & + \beta_6 GROTH_{it} + \beta_7 DT_{it} \cdot SIZ_{it} + u_{it}, \end{aligned} \quad (1)$$

where  $i$  denotes firm and  $t$  denotes time.  $SUST$  refers to financial sustainability.  $DT$  represents digital transformation.  $LEVE$  is the firm's leverage.  $ROA$  is the return on assets.  $CR$  represents the current assets that can meet short-term obligations.  $SIZ$  shows the firm size, and  $GROTH$  refers to firm growth.

## 2.1. Data collection

The current study relied on secondary data extracted from the annual reports and financial statements of industrial companies published on the Amman Stock Exchange website. The study focused on the period between 2015 and 2023, which is crucial for the evolution of digital transformation in the manufacturing industry. The current study retained only the companies regularly listed on the ASE during the study period as a sample for the study. A detailed screening was carried out to exclude firms that were not listed in all study periods or had missing data for the years under consideration.

Outliers can be highly influential in statistical models, as well as misleading conclusions (Osborne & Overbay, 2004). The study applied the winsorization technique to properly handle these outliers. This approach substitutes extreme values with the closest values lying within a percentile of interest range, which was defined in this study by the 2% and 98% thresholds. It frequently preserves the data's normal distribution while reducing the

impact of extreme values. The researchers performed this winsorizing to ensure that their analyses would yield more robust and reliable results.

A fixed effect model (FEM) was employed to estimate the relationship between digital transformation and financial sustainability, after conducting a Hausman test, which showed that the fixed effects model was more appropriate than the random effects model (REM). The generalized method of moments (GMM) model was adopted to address the problem of endogeneity and verify dynamic relationships, given the cross-sectional nature of the data (panel data) spanning multiple years.

## 2.2. Study variables

**Dependent variable:** Financial sustainability was measured by the operating profit margin, which measures a company's efficiency in generating profits from its core operating activities (Lee, 2023). This margin is calculated by dividing operating profit by total revenues, which in turn shows the percentage of profits that the company generates from its operations compared to its revenues. In the context of the current study, it indicates a company's ability to achieve sustainable profits from the company's operations, depending on its core activities and focus on them. The higher the operating profit margin, the more efficient the company is in managing its costs and achieving sustainable profitability.

**Independent variable:** The current study relies on the text mining method to build the Digital Transformation Index. The words were selected based on the dimensions proposed by Kharrat et al. (2024). Only five keywords were selected, due to appearing frequently in the annual reports of Jordanian companies: (1) digital technology application, (2) artificial intelligence technology, (3) blockchain technology, (4) cloud computing technology, and (5) big data technology. The words were extracted using the word processing software AntConc. The frequency of each of the selected words was measured. The company's annual reports were downloaded in English, then they were entered into the program, and the frequencies of the words were calculated. The more the number of words, the more developed and advanced the digital transformation.

**Control variables:** To strengthen the robustness of the study findings, the current study included a number of control variables that potentially have an impact on corporate financial sustainability. These were firm size (SIZ), which was measured by the natural logarithm of total assets; leverage ratio (LEVE), measured by total debt-to-total assets; and return on assets (ROA), measured by net profit to total assets. Growth rate (GROTH) is measured by the change in assets to total assets. Current ratio (CR) is measured by current assets to current liabilities.

### 3. RESULTS AND DISCUSSION

This section presents the results of the statistical analysis to test the research hypotheses. The aim is to verify the relationship between technological transformation and financial sustainability in industrial companies, while examining the moderating role of firm size.

#### 3.1. Descriptive analysis

Table 1 describes the study variables for 32 industrial Jordanian companies over eight years from 2015 to 2023. The average of financial sustainability for the study sample was 0.06, with values between 0.-0.76 and 0.26, and the SD was 0.18.

The result indicates that the financial sustainability of industrial companies in Jordan is relatively low and weak, as some companies suffer from their inability to cover operating costs. In addition, there is a variation in the financial sustainability of industrial companies, as some companies achieve good performance, while others suffer losses and weak financial sustainability. Related to the digital transformation, the average was 0.012, with a standard deviation of 0.011, and the values were between 0.0 and 0.03. These results refer to low digital transformation in the industrial sector in Jordan.

As regards the control variables, results show that the average of the return on assets is 0.083, with an SD of 0.063. The values are between -0.013 and 0.177. The mean of the current ratio is 1.95, where the SD is 1.51, and the values range between 0.3 and 5.8. Leverage means 0.74 with SD 0.7 and the values between 0.03 and 2.51. The results related to firm size show a mean of 7.6 and an SD of 0.52, where the values range between 5.5 and 9.4.

The average of firm growth is 0.01 with SD 0.,94 and the values are between -0.9 and 47.1.

In another context, Table 1 shows the skewness and kurtosis values, which indicate the normal distribution of the collected data. As indicated by Kline (2015), data are considered to have a normal distribution if the value of skewness is within the threshold (3 -+) and the value of kurtosis is within the threshold (10+-). Table 1 shows that the results are satisfactory and meet the assumption of a normal distribution for the data.

**Table 1.** Descriptive statistics

(Var)	(Obser)	(AVA)	(S-D)	(Mini)	(Maxi)	(Skew)	(Kurt)
DT	288	.0012	.0011	0	.003	0.85	1.99
SUST	288	0.06	0.18	-0.76	0.26	-1.9	5.2
LEVE	288	0.74	0.70	0.03	2.51	-708	3.661
CR	288	1.95	1.51	0.31	5.80	.903	3.273
ROA	288	.083	.063	-1.39	.177	-1.237	5.524
SIZ	288	7.6	0.52	5.5	9.4	-711	4.739
GROTH	288	0.01	0.94	-0.9	407.1	1.12	44.5

#### 3.2. Correlation matrix

The correlation matrix is presented in Table 2. The outputs indicate that all correlation values are below the value of the threat threshold, as Field (2013) indicated that the values should be less than 0.8. Therefore, there are no indicators of a multicollinearity problem. However, according to Hair et al. (2010), the multicollinearity problem may arise even if it does not exceed the threshold indicated in the correlation matrix. Therefore, this study applied the variance inflation factor (VIF) test as an additional test to detect a multicollinearity problem. The values should be less than 10 (Hair et al., 2010). Table 2 shows VIF test results, where all values are within the normal limit, so the study model does not suffer from a multicollinearity problem.

**Table 2.** Correlation matrix

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	VIF
(1) SUS	1.00							1.30
(2) DT	0.101	1.00						1.45
(3) DEBT	-0.32	-0.077	1.00					1.40
(4) CR	0.23	-0.144	-0.46	1.00				1.52
(5) SIZ	0.03	-0.073	0.04	-0.020	1.00			1.48
(6) GROTH	0.03	0.04	0.07	0.01	0.04	1.00		1.48
(7) ROA	0.140	-0.076	0.069	0.15	-0.19	0.12	1.00	1.61

### 3.3. Multiple regression results

Multiple regression analysis was applied to verify the relationship between the study variables. To choose the most appropriate model, the Hausman test was utilized to examine the FEM and the REM. The result of the Hausman test is demonstrated in Table 3, which suggests that the FEM is suitable for this study. Moreover, the Wooldridge test was employed to examine the autocorrelation issue, while the modified Wald test was utilized to establish the heteroscedasticity issue. Robust standard errors were estimated as a solution for Heteroskedasticity and Autocorrelation (Stock & Watson, 2008).

Table 3 shows the research results regarding the connection between digital transformation and financial sustainability for companies. The output of the study model shows that 46% of the change in financial sustainability is caused by the components of the study model. It appears from the table that the relationship between digital transformation and financial sustainability is significant and positive (Coef 0.52, P-value 0.01). This means that every change by one unit in digital transformation, whether by rise or reduction, keeping other factors constant, has a corresponding impact of 0.52 on the financial sustainability in the same direction.

The results indicate that digital transformation has a positive impact on the financial sustainability of an enterprise. This result is consistent with Khatib et al. (2025). In addition, the results are consistent with the Resource-Based view and Innovation theory. Therefore, it can be said that the optimal use of companies' resources enables them to undergo digital transformation and adopt technology, which plays a role in firm growth and operational efficiencies and increases financial sustainability. It gives businesses the resources they need to create new products and processes, and enhances the sustainability of companies.

In the same context, digitalization can analyze data sets to find inefficiencies in production to boost productivity and decrease cost, using fewer raw materials to produce the same output. Technologies make manufacturing more precise and less wasteful, yielding cost savings (Alshouha et al., 2025). Moreover, digital transformation

achieves resource optimization; firms can more effectively monitor and reduce consumption, which is important for financial sustainability.

The interaction coefficient between digital transformation and firm size (Coef = 0.07, P-value = 0.04) indicates that firm size plays a positive and significant moderating role in the relationship between digital transformation and financial sustainability. In other words, every one-unit increase in firm size enhances the impact of digital transformation on financial sustainability by an additional 0.07, holding other factors constant. This suggests that larger firms benefit more from digital transformation in achieving financial sustainability than smaller firms.

In the context of the resource-based view, larger companies have more financial, human, and technological resources to invest in and implement new technologies in an efficient manner. In turn, smaller firms are less able to afford similar investments. Larger firms are better able to exploit new critical technologies. This enables them to leverage digital transformation opportunities to drive operational efficiencies and support financial sustainability, whereas smaller entities may not realize the upfront costs of such a shift.

From another perspective, larger companies may have research and development departments that significantly enhance their ability to transform technology, in addition to developing technological tools that contribute to enhancing a company's performance and achieving financial sustainability.

The results showed that the financial leverage variable (LEVE) had a weakly significant positive effect on financial sustainability, with an impact coefficient of 0.25 and a p-value of 0.09, which is within the limits of weak significance. Furthermore, firm size (SIZ) was found to have a positive and significant impact on financial sustainability, with an impact coefficient of 0.18 at the significance level ( $P = 0.03$ ). This reflects that larger firms have a better ability to achieve financial sustainability than smaller firms, which is consistent with previous literature. The return on assets (ROA) variable had a significant and positive effect (coefficient = 0.30,  $P = 0.012$ ), indicating that good financial perfor-

mance contributes to enhancing a company's financial sustainability. In contrast, the growth (GROTH) and current ratio (CR) variables had no significant effect on financial sustainability, with P values above 0.1, indicating that their impact is not statistically significant in the sample under study.

**Table 3.** Results of the fixed effects method

Variables	Coef.	P-value	
DT	0.52	0.01	
SIZ	0.18	0.03	
LEVE	0.25	0.09	
GROTH	0.1	0.2	
CR	0.05	0.15	
ROA	0.30	0.012	
DT*SIZ	0.70	0.04	
CON	0.54	0.98	
Mean dependent var	0.06	SD dependent var	0.18
R-squared	0.46	Number of obs	288
F-test	1.865	Prob > F	0.00
Breusch & Pagan	22.88*	Hausman Test	8.55*

Note: \*\*\* p < .01, \*\* p < .05, \* p < .1.

### 3.4. Robustness test

An endogeneity problem may lead to biased results when testing the connection between digital transformation and financial sustainability. Instrumental variables GMM regression can be applied to alleviate endogeneity fears (Zahid et al., 2020). Table 4 shows the outputs of the instrumental variables GMM regression.

The study model was re-estimated using a two-step GMM method to address concerns about heteroscedasticity and serial correlation. In addition, the two-step GMM is crucial in addressing the endogeneity problem, which is a common problem in dynamic panel data models.

The results of the two-step GMM are presented in Table 4, which shows that the Hansen test to verify the validity of the instruments used in the model indicates the tools' validity, as the null hypothesis cannot be rejected ( $p > 0.05$ ). The instruments are thus not correlated with any of the error components of the model (no-correlation condition) (Ghosh et al., 2023). The Arellano-Bond test for the presence of autocorrelation in the residual errors for the dynamic model of panel data is given in Table 4, where one can observe that the result of AR(1) is significant (p-value 0.05), which means

that there is a first-order serial correlation, which is expected in this type of model (Roodman, 2009). The AR(2) result is insignificant (p-value > 0.05), confirming that the data do not have second-order serial correlation, which means that the model and the instruments used in the two-step GMM are valid.

The output shows that the connection between digital transformation and financial sustainability is significant at a level of less than 0.1. These results are close to the results obtained in the primary analysis of the study variables. Therefore, this is consistent with the study hypothesis.

**Table 4.** Two-step GMM

Variables	Coef.	P-value
FS-1	0.35	0.001
DT	0.45	0.04
SIZ	0.40	0.051
ROA	0.2	0.06
LEVE	-0.15	0.049
GROTH	0.12	0.06
CR	0.07	0.68
DT*SIZ	0.16	0.05
Constant	0.01	0.6
Hansen	0.33	No. groups
AR(1)	-1.85	No. instruments
AR(2)	0.94	
No. of obs	256	

Note: \*\*\* p < .01, \*\* p < .05, \* p < .1.

The results of this study indicate that digital transformation has a positive impact on the financial sustainability of an enterprise. This result is consistent with Khatib et al. (2025). In addition, the results are consistent with the Resource-Based view and Innovation theory.

Therefore, it can be said that the optimal use of companies' resources enables them to undergo digital transformation and adopt technology, which plays a role in firm growth and operational efficiencies and increases financial sustainability. It gives businesses the resources they need to create new products and processes, and enhances the sustainability of companies.

In the same context, digitalization can analyze data sets to find inefficiencies in production to boost productivity and decrease cost, using fewer raw materials to produce the same output.

Technologies make manufacturing more precise and less wasteful, yielding cost savings (Alshouha et al., 2025). Moreover, digital transformation achieves resource optimization; firms can more effectively monitor and reduce consumption, which is important for financial sustainability.

The results indicated that firm size moderates the relationship between digital transformation and a company's financial sustainability. In the context of the resource-based view, larger companies have more financial, human, and technological resources to invest in and implement new technologies in an efficient manner. In turn, smaller firms are less able to afford similar investments.

In this context, larger firms are better able to exploit new critical technologies. This enables them to leverage digital transformation opportunities to drive operational efficiencies and support financial sustainability, whereas smaller entities may not realize the upfront costs of such a shift.

From another perspective, larger companies may have research and development departments that significantly enhance their ability to transform technology, in addition to developing technological tools that contribute to enhancing a company's performance and achieving financial sustainability

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## CONCLUSION

This study examined the impact of digital transformation on financial sustainability, focusing on the moderating role of company size. The study analyzed data from Jordanian industrial companies listed on the Amman Stock Exchange (ASE) over the period from 2015 to 2023. The results showed a positive and statistically significant impact of digital transformation on financial sustainability. The analysis also confirmed that company size plays a moderating role, strengthening this relationship, as larger companies benefit more from digital transformation efforts in achieving better financial sustainability.

Theoretically, these results support existing theoretical frameworks such as the resource-based view, which asserts that competitive advantage is built through the optimal use of resources and capabilities, particularly through the adoption of digital transformation and modern technologies. The results are also consistent with innovation theory, which highlights the role of innovation in enhancing organizational growth and operational efficiency through the use of digital technologies, which contributes to increased financial sustainability.

On a practical level, the study provides important empirical evidence for managers of industrial companies, emphasizing the need to adopt technological solutions and undertake digital transformation as a means to improve financial performance and ensure sustainability in a changing competitive environment. The results also carry clear implications for decision-makers, recommending the enactment of policies and legislation that support digital transformation while preserving the interests of all stakeholders, including employees, investors, and customers, to ensure a smooth transition to a sustainable digital economy.

Finally, the study recommends expanding the scope of future research to include exploring the factors influencing the adoption of digital transformation within various industrial sectors. It also recommends applying the study's findings to other sectors to deepen understanding of how to effectively integrate digital transformation in diverse industrial environments. This research approach will contribute to building a comprehensive framework that addresses the challenges and opportunities specific to each sector in the context of digital transformation.

It should also be noted that the study is limited to a sample of listed Jordanian industrial companies, which requires caution in generalizing the results. It is recommended that the study be replicated using broader samples and in multiple geographic contexts.

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## APPENDIX A

**Table A1.** Industrial companies

<b>Jordanian Poultry Processing and Marketing Company</b>	<b>Jordanian Phosphate Mines</b>	<b>International Silica Industries</b>	<b>National Petroleum</b>
Jordanian Dairy	Jordanian Pipe Manufacturing Company	Al Kindi Pharmaceutical Industries	Jordan Steel
General Mining Company	Integrated Multi-Projects	Travertine	Arabian Electrical Industries Company
Arab Aluminum Industries (Aral)	National Aluminum Industries Company	Jordanian Pharmaceutical Production Company	Middle East Pharmaceutical, Chemical, and Medical Supplies Industries
Industrial, Commercial, and Agricultural (Production)	Dar Al Ghaddaa	Jordanian Concrete Industries	Union Tobacco and Cigarette Production Factories
National Steel Industry	Middle East Complex for Engineering, Electronics, and Heavy Industries	Arab Pesticides and Veterinary Medicines Manufacturing Company	Jordanian Worsted Factories
Dar Al Dawa for Development and Investment	Arabian Metal Pipes Manufacturing Company	Jordan Petroleum Refinery	Philadelphia Pharmaceuticals
Jordanian Paper and Cardboard Mills	Jordanian Vegetable Oil Factories	Jordan Magnesia	Asas Industries Concrete