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# Examining the Effect of Digital Capability on Organizational Performance with the Mediating Role of Digital Culture and Digital Transformation Strategy

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## **Abstract**

Digital technologies, including social networks, mobile technologies, cloud computing, and the Internet of Things, have compelled companies to undergo digital transformation in order to survive or maintain dominance in the market. Digital transformation refers to the integration of digital technologies into all areas of business; therefore, this integration leads to fundamental changes in performance. Since digital transformation requires digital fit, meaning the alignment of culture, strategy, and capabilities, this study seeks to examine the relationship among three key variables in the field of digital transformation: digital transformation strategy, digital culture, and digital capabilities. It also investigates the relationship of these three variables with organizational performance. This study adopts a deductive approach and is quantitative in nature. Data were collected using an electronic questionnaire. The statistical population of the study consisted of information technology companies in the country. The research hypotheses were tested using structural equation modeling with AMOS software. Based on the results, it can be stated that hardware companies had the lowest mean organizational performance, whereas software companies had the highest organizational performance. The results of the hypothesis testing indicated the positive effect of digital capability on organizational performance, digital culture, and digital strategy; the positive effect of digital culture on digital transformation strategy and organizational performance; and the positive effect of digital transformation strategy on organizational performance. Based on the findings, it can be concluded that the companies under study can improve their organizational performance by employing digital capabilities, enhancing digital culture, and adopting an appropriate digital transformation strategy.

**Keywords:** digital transformation strategy, organizational performance, digital culture, digital capability, structural equation modeling

## **1. Introduction**

Digital transformation has become one of the central strategic imperatives for contemporary organizations, particularly in industries where technological turbulence, platform-based competition, data-driven decision-making, and digitally enabled service delivery are reshaping the foundations of value creation. Unlike limited forms of information technology adoption, digital transformation refers to a broader organizational reconfiguration in which digital technologies are embedded into business models, operational processes, customer interfaces, organizational structures, and managerial routines. This transformation is not merely technological; rather, it involves a strategic, cultural, and capability-based renewal through which



organizations attempt to improve agility, innovation, responsiveness, and performance in increasingly dynamic environments. The expansion of digital technologies such as cloud computing, social networks, mobile systems, analytics, and the Internet of Things has created new opportunities for firms to redesign their activities, but it has also intensified pressure on organizations to adapt rapidly and systematically. In this context, digital transformation is increasingly understood as a multidimensional phenomenon that requires the simultaneous development of digital capabilities, a supportive digital culture, and a coherent digital transformation strategy (Saarikko et al., 2020; Sebastian et al., 2020; Warner & Wager, 2019).

The importance of digital transformation is especially evident in technology-intensive sectors, where firms operate under conditions of continuous innovation, short product life cycles, knowledge-based competition, and high customer expectations. For information technology companies, digitalization is not only an operational tool but also a strategic foundation for survival, differentiation, and growth. These firms must constantly integrate emerging technologies into their products, services, processes, and market interactions while maintaining organizational flexibility and strategic coherence. Prior studies indicate that digital transformation enables firms to enhance business model innovation, improve process efficiency, create new channels of customer engagement, and develop more adaptive organizational structures (Margiono, 2020; Sun et al., 2025). However, the outcomes of digital transformation are not automatic. The mere availability of digital technologies does not guarantee superior performance; rather, performance improvement depends on how organizations mobilize technological resources, align digital initiatives with strategic goals, and cultivate cultural conditions that support experimentation, collaboration, and digital learning (Correani et al., 2020; Eller et al., 2020).

Digital capability is one of the most important antecedents of successful digital transformation and organizational performance. It generally refers to an organization's ability to acquire, deploy, integrate, and renew digital technologies, skills, and resources in ways that support business objectives. Digital capability includes technological capability, such as access to digital infrastructure, software systems, data platforms, and digital tools, as well as human capability, including employees' digital skills, technological literacy, adaptive capacity, and willingness to use digital systems effectively. In knowledge-intensive organizations, digital capability functions as a strategic organizational resource because it enables firms to sense technological opportunities, respond to environmental change, and transform operational and strategic processes. Empirical evidence shows that digital technology and digital capability are positively associated with organizational performance, particularly when firms are able to convert digital resources into innovation, efficiency, customer value, and competitive advantage (Khin & Ho, 2020). From this perspective, digital capability is not simply a technical asset; it is a dynamic organizational competence that enables firms to use digital technologies productively and strategically.

The link between digital capability and performance can be further explained through the dynamic capabilities perspective. In turbulent digital environments, firms need capabilities that allow them to continuously renew their resource base, reconfigure organizational processes, and align technological investments with changing market conditions. Digital transformation therefore requires more than isolated technology adoption; it depends on the ability to build, integrate, and reconfigure digital resources over time. Warner and Wager emphasized that building dynamic capabilities for digital transformation is an ongoing process of strategic renewal, through which organizations repeatedly adapt their structures, competencies, and strategic priorities (Warner & Wager, 2019). Similarly, digital transforming capability has been discussed as a microfoundational mechanism through which organizations improve performance by connecting individual skills, managerial actions, technological resources, and operational routines (Sousa-Zomer et al., 2020). These arguments suggest that digital capability may directly enhance organizational performance, while also indirectly shaping performance through its influence on strategic and cultural mechanisms.

Digital transformation strategy represents another key construct in understanding how digital capability leads to performance outcomes. A digital transformation strategy provides a guiding framework for the integration of digital technologies into business objectives, value creation mechanisms, structural arrangements, financial priorities, and innovation processes. It determines how an organization interprets digital opportunities, allocates resources, redesigns processes, and coordinates digital initiatives across different units. Without a clear digital transformation strategy, digital initiatives may remain fragmented, operationally isolated, or disconnected from organizational goals. Research has shown that digital transformation strategy has a significant effect on performance because it helps firms align digital investments with market positioning, internal processes, and long-term value creation (Wang et al., 2020). Moreover, studies of digital strategy implementation demonstrate that firms



must develop learning mechanisms, cross-functional coordination, and strategic consistency to successfully execute digital transformation projects (Correani et al., 2020). Therefore, digital transformation strategy can be considered a central pathway through which digital capability is translated into organizational performance.

The strategic dimension of digital transformation is also closely related to business model transformation. Digital technologies enable firms to redesign how they create, deliver, and capture value, but business model change requires strategic clarity and organizational commitment. In small and medium-sized enterprises, digital innovation is often associated with new forms of market access, customer interaction, resource coordination, and value proposition development; however, such changes are constrained by limited resources, managerial capabilities, and strategic uncertainty (Sun et al., 2025). Similarly, digitalization in small and medium-sized firms is influenced by antecedents such as leadership commitment, technological readiness, customer pressure, and market dynamics, and it can produce consequences such as improved competitiveness, efficiency, and customer relationships when managed effectively (Eller et al., 2020). These findings indicate that the strategic management of digital transformation is particularly important for organizations seeking to convert digital investments into measurable performance improvements.

Digital culture is another fundamental element of digital transformation. Digital culture refers to the shared values, norms, assumptions, behaviors, and practices that support the effective use of digital technologies and the acceptance of digitally enabled change. It includes openness to innovation, tolerance for experimentation, data-driven decision-making, customer-centricity, collaboration, agility, and continuous learning. Digital culture shapes whether employees and managers perceive digital technologies as opportunities or threats, whether they are willing to change established routines, and whether they support the organizational learning required for transformation. Studies have emphasized that digitalization requires cultural change, particularly because agile methods, open innovation, and digital collaboration challenge traditional hierarchical and control-oriented organizational cultures (Burchardt & Maisch, 2019). Similarly, research on cultural values and digital transformation indicates that cultural assumptions influence how organizations interpret digital change and how successfully they implement transformation initiatives (Hartl & Hess, 2017).

The role of culture becomes more critical when organizations attempt to scale digital transformation beyond technical implementation. Digital transformation often disrupts existing workflows, authority structures, communication patterns, and employee roles. Therefore, organizational members must develop a shared understanding of why digital change is necessary and how it contributes to collective objectives. A digital culture encourages employees to experiment with new tools, engage in knowledge sharing, adopt digital platforms, and participate in innovation processes. Goran and colleagues argued that organizations require a culture suited to the digital age, one that promotes speed, external orientation, learning, risk-taking, and cross-functional collaboration (Goran et al., 2017). In a similar vein, digital organizational culture has been found to play an important role in the relationship between digital technologies and firm performance, suggesting that technological adoption produces stronger outcomes when supported by cultural readiness and organizational acceptance (Martinez-Caro et al., 2020).

Digital culture may also function as a mediating mechanism between leadership, digital transformation, and performance. Recent studies have increasingly examined the role of digital culture in enabling organizations to achieve higher levels of employee and organizational performance. For example, digital culture has been shown to mediate the effect of transformational leadership on employee performance, indicating that leadership-driven change becomes more effective when it produces cultural conditions supportive of digital work practices (Sumara et al., 2024). Similarly, digital leadership and organizational culture influence employee performance through digital transformation, which highlights the interdependence among leadership, culture, transformation processes, and performance outcomes (Widodo et al., 2024). These findings are relevant to the present study because they suggest that digital culture may not only directly improve organizational performance but also strengthen the strategic implementation of digital transformation.

Contemporary research also shows that digital culture interacts with digital strategy and organizational agility. Digital transformation requires organizations to remain strategically focused while responding flexibly to technological and market changes. In this regard, digital culture can support strategic transformation by encouraging adaptive thinking, innovation-oriented behavior, and organizational learning. Research on digital transformational leadership and organizational agility has shown that digital culture and digital strategy can moderate or shape transformation-related outcomes, especially in



environments where agility is essential for responding to technological change (Özkan Alakaş, 2024). Furthermore, paradoxical leadership has been found to support digital transformation by balancing innovation culture and organizational agility, suggesting that effective transformation requires both cultural openness and strategic coordination (Su et al., 2026). These studies reinforce the view that digital culture and digital transformation strategy should be analyzed together rather than treated as separate and independent organizational factors.

Organizational performance, as the ultimate outcome of digital transformation, is a multidimensional construct that includes financial and non-financial indicators. In management research, performance is frequently assessed through dimensions such as financial results, customer outcomes, internal processes, and learning and growth. The balanced scorecard model provides a useful foundation for evaluating these multiple dimensions because it moves beyond narrow financial indicators and considers how organizational capabilities, customer relationships, internal processes, and learning mechanisms jointly contribute to performance (Nisha, 2017). This multidimensional approach is especially suitable for studies of digital transformation because digital initiatives may influence performance through different pathways: they may reduce costs, improve service quality, enhance customer experience, accelerate processes, strengthen innovation, and improve employee learning. Therefore, evaluating organizational performance in the digital era requires attention to both immediate financial outcomes and broader organizational development indicators.

The relationship between digital transformation and performance has been widely discussed, but there remains a need for integrative models that simultaneously examine digital capability, digital culture, digital transformation strategy, and organizational performance. Many studies have focused on isolated relationships, such as the effect of digital capability on performance, the role of digital strategy in transformation, or the importance of culture in digitalization. However, organizations rarely experience these factors separately. Digital capability provides the technological and human foundation for transformation, digital culture creates the behavioral and normative conditions for change, and digital transformation strategy directs digital resources toward value creation and performance improvement. If these elements are not aligned, organizations may invest in technologies without strategic coherence, develop strategies without sufficient capabilities, or attempt transformation in cultures resistant to change. Therefore, examining the mediating roles of digital culture and digital transformation strategy can provide a more comprehensive understanding of how digital capability affects organizational performance.

The educational, communicative, and cognitive effects of digital media also demonstrate that digital technologies reshape not only organizational processes but also patterns of learning, interaction, and knowledge development. In digitally mediated environments, communication channels can bridge cultural gaps, support knowledge exchange, and transform learning processes, which is highly relevant for organizations that depend on employee learning and digital communication (Singer, 2025). Although such findings are often discussed in educational contexts, they have important implications for management because digital transformation requires organizations to develop new forms of communication, shared cognition, and cross-cultural understanding. As employees interact through digital platforms and participate in digitally enabled workflows, organizational culture and learning capacity become increasingly central to performance.

In summary, the literature suggests that digital transformation should be conceptualized as a systemic organizational process grounded in digital capabilities, enabled by digital culture, and guided by digital transformation strategy. Digital capability equips organizations with the technological and human resources required for transformation; digital culture facilitates acceptance, collaboration, agility, and learning; and digital transformation strategy aligns digital initiatives with organizational objectives and value creation. Together, these factors can enhance organizational performance across financial, customer, process, and learning-related dimensions. Nevertheless, the precise relationships among these variables require further empirical investigation, particularly in information technology companies where digital transformation is both a competitive necessity and a strategic opportunity. The aim of this study is to examine the effect of digital capability on organizational performance with the mediating roles of digital culture and digital transformation strategy among information technology companies.



## 2. Methods and Materials

This study is cross-sectional because it examines a specific phenomenon at a specific point in time. Accordingly, the target population was identified in four categories: software companies with 766 firms, hardware companies with 675 firms, network companies with 603 firms, and internet companies with 110 firms.

In this study, library sources and articles were used to collect information related to the literature and theoretical foundations, and a questionnaire was used to collect data. After being designed, the questionnaire was uploaded to the Porsline website and sent to the selected companies through email or company websites in several stages. Finally, after receiving responses from 342 companies and once the required number of responses had been obtained from each field, data collection was stopped and the data analysis stage began.

After data collection, the analysis of the obtained information is considered one of the most important parts of the research process. After being collected, raw data are analyzed using relevant software, and the required information and results are extracted from them. In this study, data analysis was conducted in two sections: descriptive statistics and inferential statistics.

## 3. Findings and Results

In this section, one-way analysis of variance was used to compare the research variables, namely digital capability, digital culture, digital strategy, and organizational performance, as well as their respective dimensions, across different fields of information technology, including software, hardware, network, and internet. This section seeks to answer the question of whether there is a mean difference among fields of activity. Accordingly, two hypotheses were considered: 1) there is no significant difference among fields of activity; and 2) at least the mean of one field differs significantly from the others.

The results in Table 1 show that, considering the significance level (Sig), which is smaller than the test error level of 0.05 for all variables and dimensions, there is a significant difference among fields of activity.

The comparison of digital capability across the four fields of activity shows that the internet field had the highest mean, whereas the network field had the lowest mean. This can also be observed in the dimensions of digital capability, namely technology and employees, for which the internet field had the highest mean compared with the other fields.

The comparison of digital culture across the four fields of activity shows that the software field had the highest mean, followed by the internet field, then the network field, and finally the hardware field, which had the lowest mean. Therefore, digital culture was stronger in the software field than in the other fields.

The comparison of digital transformation strategy across the four fields of activity shows that the software field had the highest mean, indicating that its strategy was in a better condition. The internet field ranked next, while the hardware field had the lowest mean. The dimensions of strategy also show that the software field had the highest mean in the dimensions of technology, value creation, and structure, whereas the financial dimension had the highest mean in the internet field. The results also show that software companies had the best performance and hardware companies had the lowest performance. The dimensions of performance also confirm this finding.

**Table 1. One-Way Analysis of Variance Test for Field of Activity**

Variable/Dimension	Software	Hardware	Network	Internet	F	Sig.
Digital capability	3.15	2.46	2.66	3.28	22.55	0.00
Technology	3.23	2.56	2.84	3.24	15.52	0.00
Employees	3.06	2.35	2.47	3.22	22.16	0.00
Digital culture	3.44	2.91	3.10	3.27	14.65	0.00
Digital transformation strategy	3.31	2.86	3.02	3.29	18.20	0.00
Innovation	3.44	2.71	2.21	3.28	6.36	0.00
Value creation	3.44	2.89	3.12	3.25	12.21	0.00
Structure and process	3.27	2.83	2.92	3.16	7.37	0.00
Financial	3.09	2.64	2.85	3.28	9.66	0.00
Organizational performance	3.42	2.85	2.93	3.38	17.45	0.00
Financial	3.46	2.91	2.91	3.41	11.81	0.00
Customer	3.26	2.88	2.82	3.15	9.64	0.00
Process	3.51	2.94	3.08	3.57	12.39	0.00
Learning and growth	3.37	2.66	2.90	3.22	14.39	0.00



In this section, one-way analysis of variance was used to compare the research variables, namely digital capability, digital culture, digital transformation strategy, and organizational performance, as well as their respective dimensions, across the four groups considered for company size based on the number of employees: micro companies with fewer than 10 employees, small companies with 10 to 49 employees, medium-sized companies with 50 to 100 employees, and large companies with more than 100 employees. This section seeks to answer the question of whether there is a significant difference among company sizes. Accordingly, two hypotheses were considered:

1. There is no significant difference among companies based on the number of employees.
2. At least the mean of one group differs significantly from the others.

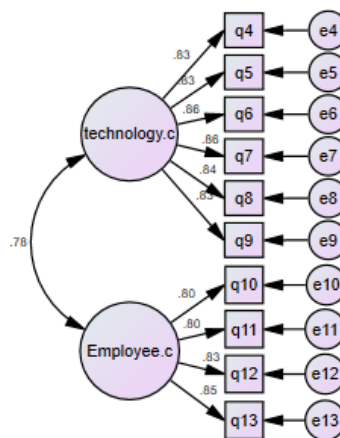
The results in Table 2 show that, considering the significance level (Sig), which is greater than the test error level of 0.05 for all variables and dimensions, there is no significant difference among the fields of activity.

**Table 2. One-Way Analysis of Variance Test for Number of Employees**

Variable/Dimension	Fewer than 10	10 to 49	50 to 100	More than 100	F	Sig.
Digital capability	2.97	2.77	2.73	2.92	1.75	0.15
Technology	3.09	2.89	2.82	2.97	1.40	0.24
Employees	2.85	2.64	2.62	2.88	1.69	0.16
Digital culture	3.20	3.19	3.14	3.02	0.60	0.61
Digital transformation strategy	3.15	3.11	3.02	3.07	0.57	0.63
Innovation	3.33	3.26	3.02	3.26	0.46	0.70
Value creation	3.26	3.21	3.11	3.00	1.01	0.38
Structure and process	3.07	3.06	2.97	3.04	0.23	0.87
Financial	2.94	2.89	2.84	3.00	0.26	0.77
Organizational performance	3.18	3.15	3.01	2.99	0.94	0.42
Financial	3.21	3.15	3.11	3.04	0.28	0.83
Customer	3.09	3.15	2.91	2.84	1.55	0.20
Process	3.21	3.24	3.11	3.11	0.18	0.48
Learning and growth	3.12	3.05	2.92	2.92	0.67	0.56

In this section, it is necessary to evaluate the measurement model of the research variables. For this purpose, confirmatory factor analysis was conducted in AMOS software. Confirmatory factor analysis is used to examine the relationships among variables, extracted factors, and questions or observed variables, and it represents the measurement model. First, the measurement model is presented. Then, the factor loadings, regression coefficients, and significance levels of the questions are shown in two separate tables. After that, the fit of each model is assessed based on three indices, namely CMIN, RMSEA, and Baseline. Finally, the table of validity, reliability, and Cronbach’s alpha values is determined.

According to Figure 1, the first model is related to the digital capability variable, which has two dimensions: technological capability and employee capability. Factor loadings indicate the correlation between variables and factors, and in this model, all factor loadings are higher than 0.40, which indicates a good level of significance.



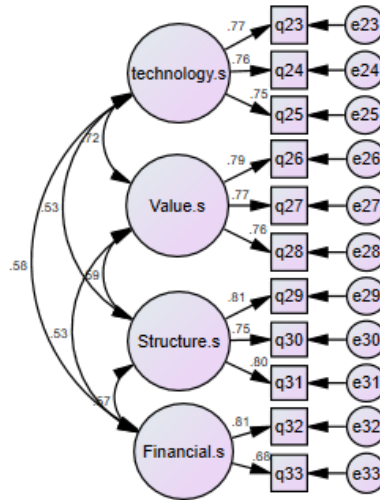
**Figure 1. Standardized Factor Loadings of Digital Capability**



As observed, CMIN/DF is smaller than 3. RMSEA is also smaller than 0.08. Moreover, the five Baseline indices were used, all of which are greater than 0.90, collectively indicating good model fit.

The second variable examined is digital transformation strategy. The standardized factor loadings of its four dimensions, namely transformation in technology, transformation in value creation, transformation in structure and process, and transformation in finance, are shown in Figure 2. In this model, all factor loadings are higher than 0.40, indicating an acceptable

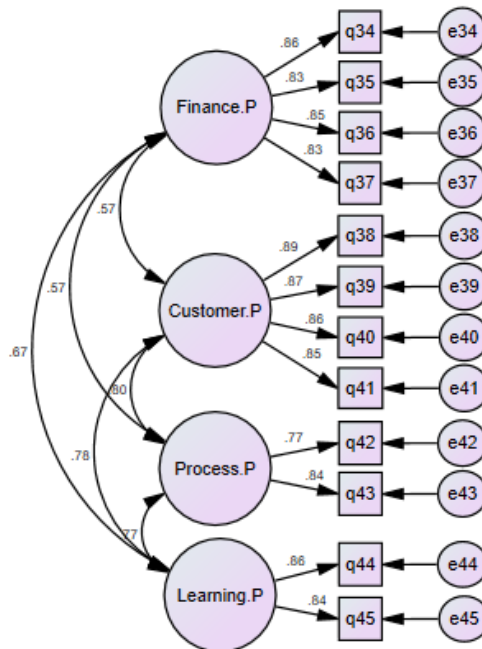
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**Figure 2. Standardized Factor Loadings of the Digital Transformation Strategy Model**

As observed, CMIN/DF is smaller than 3. RMSEA is also smaller than 0.08. Moreover, the five Baseline indices were used, all of which are greater than 0.90, collectively indicating good model fit.

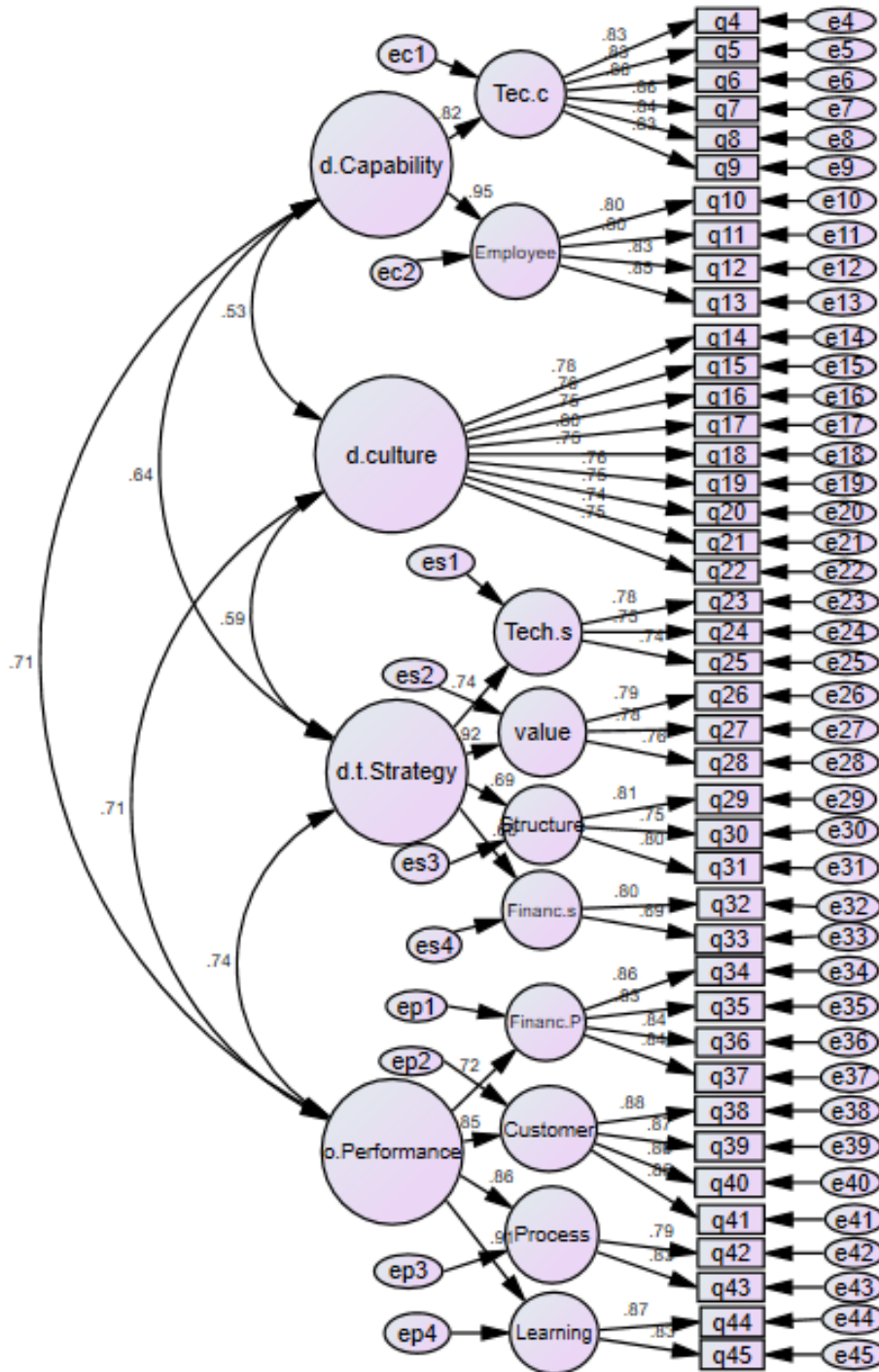
The third variable examined is organizational performance. The standardized factor loadings of its four dimensions, namely financial performance, customer performance, process performance, and learning and growth performance, are shown in Figure 3. In this model, all factor loadings are higher than 0.40, indicating an acceptable level.



**Figure 3. Standardized Factor Loadings of the Organizational Performance Model**

As observed, CMIN/DF is smaller than 3. RMSEA is also smaller than 0.08. Moreover, the five Baseline indices were used, all of which are greater than 0.90, collectively indicating good model fit.

This measurement model, consisting of variables, dimensions, and questions, is presented in Figure 4. Factor loadings indicate the correlation between variables and factors, and in this model, all factor loadings are higher than 0.40, which indicates a good level of significance.



**Figure 4. Standardized Factor Loadings of the Variables Model**

As observed, CMIN/DF is smaller than 3. RMSEA is also smaller than 0.08. Moreover, the five Baseline indices were used, all of which are greater than 0.90, collectively indicating good model fit.

AMOS software was used to examine the hypotheses of the model, and the model was drawn as shown in Figure 5.

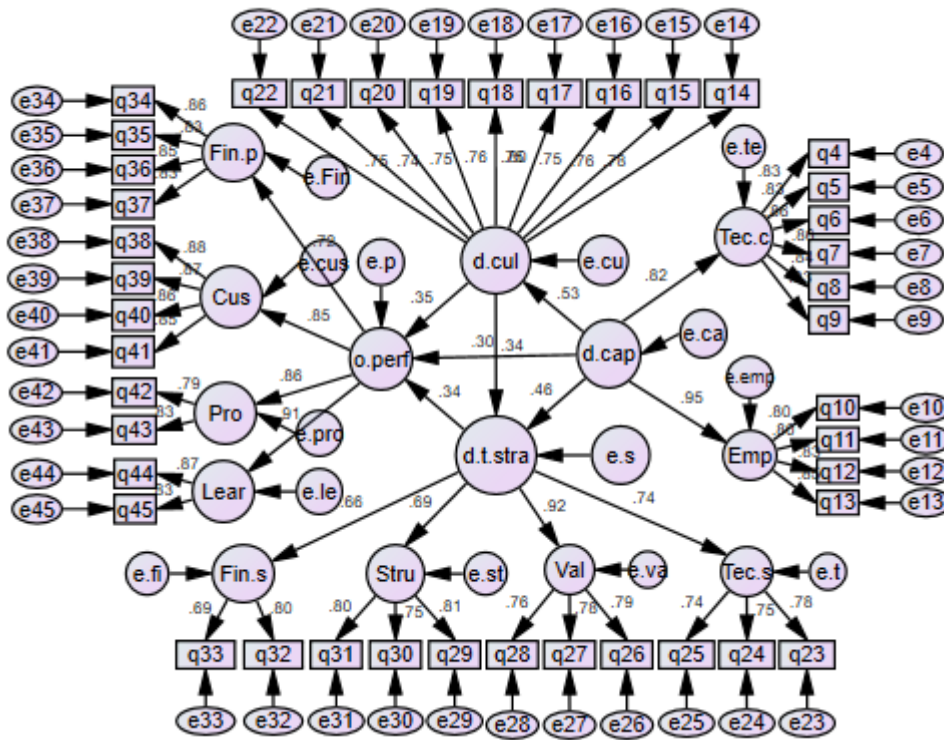


Figure 5. Standardized Factor Loadings of the Model

According to Table 3, considering the significance level (P-value), which is less than 0.0001, and because these values are smaller than 0.05, the significance of the path coefficients is confirmed. The regression value also indicates the magnitude of the effect for each hypothesis.

Table 3. Results of Hypothesis Testing

Hypothesis	Standardized Regression Coefficient	Significance Level	Result
Digital capability has a positive and significant effect on organizational performance.	0.34	0.000	Confirmed
Digital capability has a positive and significant effect on digital transformation strategy.	0.46	0.000	Confirmed
Digital capability has a positive and significant effect on digital culture.	0.53	0.000	Confirmed
Digital culture has a positive and significant effect on organizational performance.	0.35	0.000	Confirmed
Digital culture has a positive and significant effect on digital transformation strategy.	0.30	0.000	Confirmed
Digital transformation strategy has a positive and significant effect on organizational performance.	0.34	0.000	Confirmed

The mediating hypotheses were examined using the Sobel test. The Sobel test is the most common method for testing mediation coefficients. This framework was proposed by Michael Sobel in 1982. The Sobel test is used to examine the significance of the mediating variable in the relationship between an independent variable and a dependent variable; that is, whether the effect of the independent variable on the dependent variable is transmitted through the mediating variable.

#### 4. Discussion and Conclusion

The present study examined the effect of digital capability on organizational performance with the mediating roles of digital culture and digital transformation strategy among information technology companies. The findings confirmed all direct relationships in the conceptual model. Specifically, digital capability had a positive and significant effect on organizational performance, digital transformation strategy, and digital culture. Digital culture also had a positive and significant effect on organizational performance and digital transformation strategy. In addition, digital transformation strategy had a positive and significant effect on organizational performance. These results indicate that digital capability does not influence organizational



performance only through direct technological or operational mechanisms; rather, it also contributes to performance by strengthening a supportive digital culture and enabling a more coherent digital transformation strategy. Therefore, the findings support the view that digital transformation is a systemic organizational phenomenon in which technological resources, human capabilities, cultural readiness, strategic alignment, and performance outcomes are closely interconnected.

The descriptive and comparative findings also provide important insights into the condition of information technology companies across different fields of activity. The results of the one-way analysis of variance showed significant differences among software, hardware, network, and internet companies in all main variables and dimensions. Internet companies had the highest mean in digital capability, especially in the dimensions of technology and employees, whereas network companies had the lowest mean in this variable. This finding suggests that internet-based firms may be more dependent on advanced digital infrastructure, platform-based operations, and digitally skilled employees, which can increase their level of digital capability. At the same time, software companies had the highest mean in digital culture and digital transformation strategy, indicating that these firms may possess more flexible, innovation-oriented, and strategically adaptive environments. The results further showed that software companies had the highest organizational performance, whereas hardware companies had the lowest performance. This pattern is consistent with the idea that digital transformation is more effective when firms combine technological capability with cultural openness and strategic coherence rather than relying only on physical assets or technical production capacity.

The finding that company size based on the number of employees did not create significant differences in digital capability, digital culture, digital transformation strategy, or organizational performance is also noteworthy. This result suggests that, in the information technology sector, digital transformation may not be determined primarily by organizational size. Micro, small, medium-sized, and large firms may all be able to develop digital capabilities and transformation strategies if they possess appropriate technological infrastructure, skilled employees, managerial commitment, and cultural readiness. This interpretation is consistent with research showing that digitalization in small and medium-sized enterprises can generate important performance outcomes when firms effectively manage digital antecedents, overcome resource limitations, and align digital tools with business needs (Eller et al., 2020). It also supports the argument that digital transformation is less a matter of size alone and more a matter of capability configuration, strategic direction, and organizational learning (Sousa-Zomer et al., 2020; Warner & Wager, 2019).

The positive effect of digital capability on organizational performance confirms the central assumption that firms with stronger digital resources and digital competencies are better positioned to improve performance. Digital capability enables organizations to use digital technologies for process optimization, customer interaction, data-driven decision-making, innovation, and operational flexibility. In the present study, the standardized regression coefficient between digital capability and organizational performance was positive and significant, indicating that companies with higher levels of technological and employee-related digital capability reported better organizational performance. This result is aligned with Khin and Ho, who demonstrated that digital technology and digital capability contribute to organizational performance by enabling innovation and improving the firm's ability to respond to technological change (Khin & Ho, 2020). Similarly, Martinez-Caro and colleagues showed that digital technologies can improve firm performance, particularly when they are embedded in an organizational context that supports digital use and adaptation (Martinez-Caro et al., 2020).

This result can also be interpreted through the dynamic capabilities perspective. Digital capability is not merely possession of digital tools; it is the ability to integrate, deploy, and renew digital resources in response to environmental change. Firms with stronger digital capability can identify digital opportunities, reconfigure processes, develop new products or services, and respond more rapidly to customers and competitors. Warner and Wager argued that digital transformation requires the continuous development of dynamic capabilities through strategic renewal, organizational redesign, and adaptive learning (Warner & Wager, 2019). Sousa-Zomer and colleagues similarly emphasized that digital transforming capability is rooted in microfoundations such as managerial cognition, employee skills, operational routines, and resource orchestration, all of which contribute to performance improvement (Sousa-Zomer et al., 2020). Therefore, the positive relationship found in this study indicates that information technology companies can improve organizational performance when digital capabilities are not treated as isolated technical assets but as strategic and organizational competencies.



The positive effect of digital capability on digital transformation strategy was also confirmed. This finding indicates that firms with higher digital capability are more likely to develop and implement effective digital transformation strategies. Digital capability provides the technical and human foundation necessary for strategic transformation; without adequate infrastructure, skilled employees, and technological competence, digital transformation strategies may remain abstract, fragmented, or difficult to implement. This result is consistent with Wang and colleagues, who found that digital transformation strategy has a significant association with performance and that strategic orientation toward digital transformation helps organizations direct technological change toward organizational objectives (Wang et al., 2020). It also aligns with Correani and colleagues, who emphasized that implementing digital strategy requires organizational learning, coordination, and the ability to translate digital initiatives into structured transformation projects (Correani et al., 2020). Thus, digital capability can be understood as a prerequisite for the formulation and implementation of a meaningful digital transformation strategy.

The positive effect of digital capability on digital culture was one of the strongest relationships in the model. This result suggests that digital capabilities may contribute to the formation of cultural norms that support technology use, innovation, collaboration, and openness to change. When employees have access to digital tools and possess the skills required to use them effectively, they are more likely to accept digital work practices and participate in digital transformation processes. Over time, these practices can become embedded in organizational values and routines, forming a digital culture. This finding is compatible with studies emphasizing that digitalization requires cultural change and that agility, open innovation, and experimentation are necessary for digital transformation (Burchardt & Maisch, 2019). Hartl and Hess also showed that cultural values play an important role in digital transformation because they influence how employees and managers interpret digital change, tolerate uncertainty, and engage with new technologies (Hartl & Hess, 2017). Accordingly, the present study confirms that digital capability can act as a cultural catalyst by increasing employees' readiness and willingness to work in digitally transformed environments.

The finding that digital culture positively affects organizational performance further highlights the importance of cultural readiness in digital transformation. Digital culture encourages employees to adopt new technologies, share knowledge, make data-informed decisions, collaborate across functions, and respond flexibly to environmental changes. These cultural attributes can enhance organizational performance by improving internal processes, customer responsiveness, innovation capacity, and learning. This result is consistent with Goran and colleagues, who argued that organizations operating in the digital age require cultures characterized by speed, learning, risk-taking, and cross-functional collaboration (Goran et al., 2017). It is also supported by the study of Sumara and colleagues, who found that digital culture mediates the relationship between transformational leadership and employee performance (Sumara et al., 2024). Similarly, Widodo and colleagues demonstrated that digital leadership and organizational culture influence employee performance through digital transformation, indicating that culture is a key mechanism through which digital initiatives are converted into performance outcomes (Widodo et al., 2024).

The positive effect of digital culture on digital transformation strategy indicates that culture also functions as a strategic enabler. A supportive digital culture can help organizations develop more realistic, participatory, and adaptive transformation strategies because employees and managers are more willing to engage in innovation, experimentation, and strategic change. In organizations where digital culture is weak, digital transformation strategy may face resistance, poor coordination, and limited implementation capacity. This finding aligns with Özkan Alakaş, who showed that digital culture and digital strategy play important roles in the relationship between digital transformational leadership and organizational agility (Özkan Alakaş, 2024). It is also consistent with Su and colleagues, who found that innovation culture and organizational agility are important in steering digital transformation under paradoxical leadership (Su et al., 2026). Therefore, the present study suggests that digital culture does not only improve performance directly but also strengthens the strategic infrastructure needed for digital transformation.

The positive effect of digital transformation strategy on organizational performance confirms that organizations benefit when digital initiatives are guided by clear strategic direction. A digital transformation strategy helps firms align technology investments with business models, value creation, customer needs, structural redesign, and financial objectives. Without strategic alignment, digital technologies may create operational improvements but fail to generate sustainable performance



gains. The finding is consistent with Wang and colleagues, who showed that digital transformation strategy improves performance by directing organizational resources toward digital objectives (Wang et al., 2020). It also corresponds with Sebastian and colleagues, who explained that large established firms navigate digital transformation by balancing operational backbone development with digital service innovation and strategic alignment (Sebastian et al., 2020). Furthermore, Saarikko and colleagues argued that digitally conscious firms must approach transformation through coordinated managerial recommendations, including strategic awareness, organizational integration, and continuous adaptation (Saarikko et al., 2020). These arguments support the present finding that digital transformation strategy is a direct driver of organizational performance.

The overall model also confirms the importance of analyzing digital capability, digital culture, and digital transformation strategy together. Digital capability provides the resources and competencies required for transformation; digital culture creates the values and behavioral conditions necessary for adoption and adaptation; and digital transformation strategy directs these resources and behaviors toward performance improvement. This integrative interpretation is consistent with Margiono's argument that digital transformation requires firms to set the pace strategically rather than respond passively to technological change (Margiono, 2020). It also resonates with research on digital innovation and business model transformation, which emphasizes that firms must connect digital resources with new forms of value creation and organizational adaptation (Sun et al., 2025). In addition, Singer's findings on digital media, communication, and cognitive development suggest that digital environments transform communication and learning processes, which has implications for organizational culture and knowledge development in digitally mediated workplaces (Singer, 2025). Therefore, the findings of this study support a holistic view of digital transformation as a process that combines technological capability, cultural transformation, strategic renewal, and multidimensional performance.

The performance implications of the findings can also be understood through the balanced scorecard perspective. Organizational performance in this study included financial, customer, process, and learning and growth dimensions. The significant effect of digital capability, digital culture, and digital transformation strategy on organizational performance indicates that digital transformation contributes not only to financial outcomes but also to broader organizational development. Nisha's empirical work on the balanced scorecard model supports the idea that organizational performance should be evaluated through multiple dimensions rather than through financial indicators alone (Nisha, 2017). In the context of the present study, digital capability may improve process efficiency and learning capacity, digital culture may improve employee engagement and customer responsiveness, and digital transformation strategy may align these improvements with financial and strategic goals. Thus, the findings suggest that digital transformation should be assessed as a multidimensional performance phenomenon.

Overall, the results indicate that information technology companies can enhance organizational performance when they develop digital capability, cultivate digital culture, and implement coherent digital transformation strategies. The stronger performance of software companies compared with hardware companies suggests that performance advantages may emerge when firms operate with higher levels of cultural flexibility, strategic digital orientation, and innovation-driven processes. At the same time, the lack of significant differences across company size groups shows that even smaller firms can achieve digital transformation outcomes if they possess the necessary capabilities and cultural-strategic alignment. These findings contribute to the digital transformation literature by demonstrating that digital capability affects performance both directly and through organizational mechanisms related to culture and strategy. Consequently, digital transformation should be managed not only as a technological investment but also as an organizational change process requiring strategic leadership, cultural readiness, employee capability, and continuous learning.

The present study has several limitations. First, the cross-sectional design limits the ability to infer causal relationships among digital capability, digital culture, digital transformation strategy, and organizational performance. Although the structural model supports significant relationships among the variables, longitudinal evidence would be needed to examine how these relationships develop over time. Second, the data were collected through self-report questionnaires, which may be affected by common method bias, subjective perceptions, or social desirability. Third, the study focused on information technology companies, and although this sector is highly relevant to digital transformation, the findings may not be fully generalizable to other industries with different technological maturity, organizational structures, or market conditions. Fourth,



organizational performance was measured perceptually rather than through objective financial and operational indicators, which may limit the precision of performance assessment.

Future studies are suggested to examine the proposed model using longitudinal designs in order to clarify the temporal order among digital capability, digital culture, digital transformation strategy, and organizational performance. Researchers can also compare the model across different industries, such as manufacturing, banking, healthcare, education, and public services, to determine whether the same relationships hold in sectors with different levels of digital maturity. Future research may also include additional mediating or moderating variables, such as digital leadership, organizational agility, innovation capability, knowledge management, environmental turbulence, employee digital readiness, and resistance to change. Moreover, combining questionnaire data with interviews, case studies, or objective organizational indicators could provide a richer understanding of how digital transformation is implemented and how it affects performance in practice.

From a practical perspective, managers of information technology companies should treat digital transformation as an integrated managerial process rather than a purely technological project. Investment in digital infrastructure should be accompanied by systematic development of employee digital skills, continuous training, and mechanisms for knowledge sharing. Managers should also strengthen digital culture by encouraging experimentation, collaboration, data-driven decision-making, openness to change, and tolerance of calculated risk. In addition, organizations should formulate clear digital transformation strategies that define technological priorities, value creation mechanisms, structural requirements, process redesign, and financial objectives. The findings suggest that firms, regardless of size, can improve performance when digital capability, digital culture, and digital transformation strategy are aligned and managed as complementary dimensions of organizational transformation.

### Ethical Considerations

All procedures performed in this study were under the ethical standards.

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### Conflict of Interest

The authors report no conflict of interest.

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