

THE INFLUENCE OF ORGANIZATIONAL CULTURE AND SHARED LEADERSHIP ON DIGITAL TRANSFORMATION AND FIRM PERFORMANCE

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Abstract

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The purpose of the paper is articulated well, targeting an essential aspect of modern business management: the impact of organizational culture (OC) and shared leadership (SL) on digital transformation (DT), and its subsequent effect on firm performance (FP). The use of structural equation modeling (SEM) in data analysis provides a strong basis for determining relationships between the variables involved, as this method can handle complex relationships effectively. The sample size of 245 managers and information technology (IT) staff across 49 commercial enterprises appears suitable, but the selection only from enterprises in the Mekong Delta region of Vietnam may introduce geographical biases into the study. The paper confirms and builds upon established research, indicating a positive correlation between organizational cultural values, shared leadership, digital transformation, and firm performance. Such a connection is crucial in today's digital age. The paper has rightfully pointed out the limitations of the study, mainly that the generalizability of results may be affected due to the convenience sampling method. Additionally, the geographical limitation (Mekong Delta region) could potentially impact the application of these results to other regions or countries. The authors' exploration of organizational culture values and shared leadership as drivers of digital transformation in the context of Vietnam offers a fresh perspective, considering that studies in this specific context seem to be limited.

Keywords: Organizational Culture, Shared Leadership, Digital Transformation, Firm Performance

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1. INTRODUCTION

With the trend of globalization, international economic integration, and rapid development in the region, there are many opportunities for enterprises to develop sustainably plus economic cooperation, and learning managerial experiences. At the same time, there are also many challenges, especially the competition from domestic and foreign companies to operate enterprises effectively, they must constantly innovate in all aspects.

Digital transformation (DT) is a new approach for many countries to gain competitive advantages in dynamic and competitive markets. Through digital transformation, it can be necessary for enterprises to increase their competitiveness, improve operational efficiency and achieve business growth (Chen et al., 2021). Technology and the Internet have significantly changed the way the market operates by reducing search costs, transportation, reproduction, and transactions and finding new market opportunities; digital technology, digital innovation, and digitization are changing the basic processes of business, products, services, and relationships. Organizations need to fundamentally change their business models and employees' mindset and restructure to survive (Osmundsen et al., 2018). Digital transformation brings many benefits but to successfully implement it, it must be vital for organizations to make strategic decisions and undertake major transformations including culture, processes, and technology (Chen et al., 2021).

It can be obvious that Vietnam is undergoing the 4.0 revolution, building a digital society, based on a digital economy and a digital government. Digital transformation brings many benefits such as reducing social costs, improving service quality, increasing the efficiency of the public administration system, improving business efficiency. Similarly, to the reality of digital transformation in other developing countries, the digital transformation process of organizations and enterprises in Vietnam is still slow compared to expectations, due to many obstacles such as: 1) technical infrastructure, 2) technology, 3) finance, 4) awareness of business leaders and 5) traditional operating habits. According to Cisco (2020) on the level of digital maturity of small and medium-sized enterprises (SMEs) in the Asia-Pacific (APAC) region, Vietnam ranks 14th out of 14. Especially the Mekong River Delta region, which has a natural area of 39.7 thousand km² accounting for 12.2% of the country's area, with a population of about 18 million, accounting for 19% of the country's population. It makes a large contribution to the country's agricultural gross domestic product (GDP): accounting for 31.37% of the agricultural sector's GDP, contributing to 50% of rice production, 65% of aquatic product cultivation, and 70% of fruits; 95% of rice exports and 60% of fish exports — the digital transformation process in this region is even more limited than other regions in the country in terms of capital, technology, and education level. How to overcome these challenges and limitations and promote digital transformation in the Mekong River Delta region is a challenge for the government, local authorities, and the business community in the region.

Many authors have studied the topics of DT, such as the impact of information technology (IT) on DT (Nwankpa & Roumani, 2016), exploring the motivation, goals, and success factors of DT (Osmundsen et al., 2018; Sahu et al., 2018), the role of organizational culture (OC) in DT (Hartl & Hess, 2017), and the impact of DT on operational effectiveness (Nwankpa & Roumani, 2016; Popović-Pantić et al., 2019; Chen et al., 2016; Avirutha, 2018).

The research conducted by Han (2012), Hartnell et al. (2011), and analogous studies have shown success using the competitive value framework (CVF) to approach organizational culture. However, this approach can often overlook the synergistic interactions among the values that shape an organization's culture by focusing predominantly on the culture type. Unger et al.'s (2015) research indicates that only the value of an enterprise's innovation culture positively impacts investment activities.

In contrast, organizational culture can be viewed as a composite of beliefs, values, norms, and behaviors, which offers a broader theoretical scope and additional insights into complex social phenomena, as proposed by Hartnell et al. (2011). Further, Hartl and Hess, (2017) adopted a value-centered approach to define organizational culture, identifying three critical value sets for successful digital transformation.

While this method, which employs the Delphi technique with the aim of discovery, has offered promising results, these findings need to be corroborated through a quantitative study. This approach could provide an empirical basis to support or refine our understanding of these relationships and their impacts on organizational performance.

It can be stated that the competencies and leadership styles of organization managers play a decisive role in the success of digital transformation, as they help to identify and shape issues to promote innovation, create favorable conditions for interaction among employees, and encourage participation in innovation activities, allowing employees to have a greater say in the decision-making process for change (Curry, 1992; Gray, 2009). The shared leadership (SL) model, which involves the participation of organizational members in leadership, helps to improve the effectiveness of organizational and team operations (Fransen et al., 2018), and is an appropriate model to drive digital transformation. Although there have been many studies on shared leadership models, there are few studies on the role of shared leadership in the digital transformation of organizations.

Addressing both theoretical gaps and practical issues, our research group has embarked on the current investigation. We aim to provide a comprehensive exploration of how organizational culture and shared leadership impact digital transformation and overall business performance. Our research objectives include:

- investigating the influence of organizational culture and shared leadership on digital transformation;
- assessing the effect of digital transformation on business performance.

Proposing implications based on the research results, aimed at fostering enterprise development.

The structure of our paper is as follows. Section 2 presents a review of pertinent literature, providing the academic backdrop against which our study is positioned. Section 3 discusses the methodology utilized for this empirical study, explaining the research design, data collection, and analytical tools employed. Section 4 reports the results of our study in this section, presenting key findings in an organized and interpretable manner. Section 5 delves into a discussion of the research results, connecting the findings to the existing literature, examining their implications, and suggesting potential avenues for future research. Section 6 concludes our study, summarizing key insights, acknowledging limitations, and highlighting the study's contribution to the field.

2. LITERATURE REVIEW

2.1. Organizational culture

Culture encompasses a fundamental system of beliefs regarding behaviors, relationships, and reality. These beliefs are expressed through values, which manifest in tangible aspects such as: 1) behaviors, 2) languages, and 3) technological factors (Schein, 1990; Deal & Kennedy, 1982; Ortega-Parra & Ángel Sastre-Castillo, 2013). Organizational culture refers to the standards experienced and described by members of an organization as their work norms (Schneider et al., 2013). It represents the way members interact within the organization and with other stakeholders (Simoneaux & Stroud, 2014). Organizational culture serves as a competitive resource (Barney, 1986). According to Hartl and Hess (2017), the cultural values of an organization can be defined as the common beliefs held by members regarding what is desirable, ideal, and normative. These values impact members' behavior by setting expectations and boundaries for appropriate conduct. Hartl and Hess (2017) identify three groups of values critical to a company's success: 1) externally-oriented cultural values, 2) flexibility and adaptability-oriented cultural values, and 3) internally-oriented cultural values. Building upon the research conducted by Hartl and Hess (2017), our study provides a more nuanced understanding of the values that hold particular relevance in contemporary organizational contexts.

Based on the hypothesis that organizational culture and its values drive the success of digital transformation, we propose the following hypotheses:

H1a: The external orientation culture has a positive impact on an enterprise's digital transformation.

H1b: The flexible and adaptive culture has a positive impact on an enterprise's digital transformation.

H1c: Internal orientation culture has a positive impact on an enterprise's digital transformation.

2.2. Shared leadership

Shared leadership is a concept defined in various ways, but it generally refers to the distribution of

leadership responsibilities among group members while acknowledging the possibility of vertical leadership (Pearce & Conger, 2003; Fransen et al., 2018). Fisher and Bibo (2000) provide a more specific description of shared leadership through a three-dimensional (3D) model, which incorporates the two dimensions of the traditional leadership model (relationship orientation and task orientation) and adds a third dimension of representation/participation orientation. The representation/participation orientation is evident through participation behaviors, where subordinates exert influence over decisions related to their work. These changes go beyond the scope of existing rules and regulations.

Our research builds upon the study conducted by Fisher and Bibo (2000) on the analysis of shared leadership based on the three-dimensional model. Research by D'Innocenzo et al. (2016) and Kim and Han (2019) has demonstrated that shared leadership has a positive impact on team performance. Additionally, teams with higher levels of awareness perform better under shared leadership (Fransen et al., 2018). Shared leadership indirectly affects company and group activities in a positive manner (Hmieleski et al., 2012). Based on these findings, we propose the following hypotheses:

H2a: The task-oriented leadership has a positive impact on an enterprise's digital transformation.

H2b: The relationship-oriented leadership has a positive impact on an enterprise's digital transformation.

H2c: The participation- and relationship-oriented leadership has a positive impact on an enterprise's digital transformation.

2.3. Digital transformation

Digital transformation refers to a significant organizational change that is driven, constructed, or enabled by digital technology, fundamentally altering the way businesses operate (Hartl & Hess, 2017). It entails utilizing digital technology as a foundation for creating unique changes in business activities and processes, thereby generating value (Libert et al., 2016). In this study, we define digital transformation in the context of the business as the integration and application of digital technologies such as: 1) big data, 2) analytics, 3) cloud computing, 4) mobile devices, and 5) social media platforms to create new values that enhance business efficiency, improve management effectiveness, strengthen capability, and increase the competitiveness of the enterprise.

The implementation of information technology and cloud computing has a significant impact on organizational performance (Chen et al., 2016). By leveraging technology and cloud computing, businesses can enhance the efficiency and effectiveness of their operations (Lozić & Čiković, 2021). Building upon this understanding, we propose the following hypothesis:

H3: Digital transformation has a positive impact on business performance.

2.4. Firm performance

The firm performance of a company is a measure of the degree to which a company can meet its objectives and be competitive with its rivals,

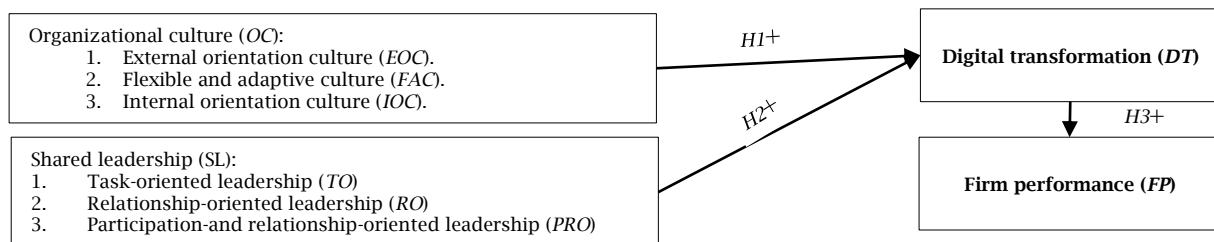
characterized by profitability, growth, and market value (Ali et al., 2022; Konstantinidis et al., 2022; Nwankpa & Roumani, 2016). By adopting the balanced scorecard approach, enterprises can evaluate their operational performance by incorporating metrics related to finance, customer satisfaction, operational processes, learning, and employee growth (Chen et al., 2016; Avirutha, 2018).

This study examines the firm performance of enterprises from the perspectives of profitability, growth, and market value.

2.5. Research model

Based on the research models of Nwankpa and Roumani (2016) and Avirutha (2018), we propose the research model as illustrated in Figure 1.

Figure 1. Proposed research model



With this model, we expect the positive impact of an appropriate and proactive organizational culture and a collaborative leadership style on the digital transformation process and the effectiveness of business operations.

3. RESEARCH METHODOLOGY

3.1. Research process

Statistical techniques traditionally used for analyzing complex models, such as linear regression, correlation, and variance analysis, have limitations as they can only examine the model piece by piece. In light of this, for the current study, we opted to utilize covariance-based structural equation modeling (CB-SEM) with Amos software to comprehensively analyze the relationships within the model. CB-SEM provides a more integrated and holistic approach, allowing for the examination of interdependencies among variables and latent constructs in a unified framework. This choice of methodology enables a more robust and comprehensive analysis of the research model.

The research process consists of two steps:

1. Based on the theory of previous studies, build theoretical hypotheses, models, and measurement scales. Conduct formative research to explore, adjust, and supplement measurement variables for the measurement concepts.

2. Quantitative research is conducted to assess measurement scales using tools such as Cronbach's alpha, exploratory factor analysis (EFA), confirmatory factor analysis (CFA), test theoretical hypotheses, and research models using the linear SEM tool.

3.2. Research sample

According to Hair et al. (2010), the minimum sample size should be five times the number of observed variables. In this study, the number of observed variables is 34, so the minimum sample size should be 170. Unlike simulation studies, this study was conducted at businesses.

The study used random sampling with stratification by geographic location of businesses located in the Mekong Delta region. However, during the survey process, due to concerns about disease transmission, face-to-face interviews were not feasible as planned. The study used a convenient sample of random sampling by sending a questionnaire to businesses (which businesses responded using that data) until the required number of samples was reached. This method reduced the reliability of the study, so to ensure the reliability of the research, the number of survey samples was increased to 245.

The sample consisted of 245 people from 49 businesses, including managers and IT personnel (of which 51.4% were male and 48.6% were female; 42.85% of businesses had revenue of less than 5 billion Vietnamese dongs (VND), 22.45% had revenue of 5 billion VND to less than 20 billion VND, 4% had a revenue of 20 billion VND to 40 billion VND, 12.2% had revenue of 40 billion VND to 60 billion VND, and 18.5% had revenue of more than 60 billion VND). The surveyed subjects filled out the questionnaire directly and returned it immediately to the surveyor. The questionnaire used a seven-point Likert scale (one — corresponding to completely opposed, seven — corresponding to completely agree).

3.3. Scale

The measurements of concepts inherited from the previous studies: 1) the organizational culture measurement consists of three second-level measures (external-oriented culture with four observation variables, flexible and adaptive culture with four observation variables, internal-oriented culture with five observation variables) based on Hartl and Hess's (2017) measurement; 2) the shared leadership measurement consists of three second-level measures (task-oriented leadership with three observation variables, relationship-oriented leadership with four observation variables, representation and participation-oriented leadership with five observation variables) based on Fisher and Bibo's (2000) measurement; 3) the digital

transformation measurement with five observation variables and the business performance measurement with four observation variables are based on Nwankpa and Roumani's (2016) measurement.

3.4. Quality research results

A paired discussion was conducted with a group of 10 management officials and a focus group discussion was conducted with 10 IT officials from various companies to construct the measurement and model, the respondents agreed on the model

and measurement with 33 observation variables. They agreed to eliminate the observation variable *IOC5* due to its incompatibility with the actual conditions of the Mekong Delta businesses.

4. RESULTS

4.1. An analysis of reliability and factor analysis exploration

The analysis of reliability using Cronbach's alpha and the EFA are presented in Table 1.

Table 1. Reliability and exploratory factor analysis (Part 1)

Observable variables	Loading factors > 0.5								Corrected item-total correlation > 0.3	
	1	2	3	4	5	6	7	8		
External orientation culture (EOC)										
<i>EOC1.</i> The organization's all activities to meet customer needs.				0.824						0.750
<i>EOC2.</i> The organization's pursuit of improvement and growth through the development of innovations.				0.815						0.817
<i>EOC3.</i> The organization's intention to promote the empowerment of its members to act proactively and independently, and take responsibility.				0.798						0.822
<i>EOC4.</i> The organization's positive stance towards teamwork, cross-functional collaboration, and readiness for cooperation with external partners.				0.946						0.873
Internal orientation culture (IOC)										
<i>IOC1.</i> The organization's pursuit of continuous advancement through the acquisition of new skills and knowledge.			0.650							0.672
<i>IOC2.</i> The Firm refers to the mutual trust between the organization, its leadership, and members, as well as the organization's trust in its external partners.			0.964							0.764
<i>IOC3.</i> The organization's tolerant attitude towards reasonable mistakes and support of learning from failure.			0.659							0.653
<i>IOC4.</i> The organization's support of open, non-hierarchical discussion and democratization of decision processes.			0.581							0.641
Flexible and adaptive culture (FAC)										
<i>FAC1.</i> The organization's openness towards new ideas.						0.626				0.701
<i>FAC2.</i> The organization's readiness to accept, implement and promote change.						0.839				0.793
<i>FAC3.</i> The organization's willingness to work, act and re-structure and be flexible and adaptable in order to react to change.						0.787				0.819
<i>FAC4.</i> The organization's willingness to take risks and make decisions under uncertainty.						0.616				0.761
Participation and relationship-oriented leadership (PRO)										
<i>PRO1.</i> He backs up group members in their actions.					0.779					0.722
<i>PRO2.</i> He acts without consulting the group.					0.871					0.756
<i>PRO3.</i> He puts suggestions made by the group into operation.					0.720					0.706
<i>PRO4.</i> He gets group approval on important matters before going ahead.					0.751					0.741
<i>PRO5.</i> He encourages suggestions from group members.					0.697					0.690
Relationship-oriented leadership (RO)										
<i>RO1.</i> He does little things to make it pleasant to be a member of the group.		0.817								0.761
<i>RO2.</i> He is friendly and approachable.		0.883								0.819

Table 1. Reliability and exploratory factor analysis (Part 2)

Observable variables	Loading factors > 0.5								Corrected item-total correlation > 0.3	
	1	2	3	4	5	6	7	8		
RO3. He looks out for the personal welfare of group members.		0.847								0.835
RO4. He is understanding of individuals' personal problems.		0.709								0.709
Task-oriented leadership (TO)										
TO1. He lets group members know what is expected of them.								0.585		0.504
TO2. He sees to it that group members are working to capacity.								0.855		0.664
TO3. He maintains definite standards of performance.								0.692		0.580
Digital transformation (DT)										
DT1. Our firm is driving new business processes built on technologies such as big data, analytics, cloud, mobile, and social media platform.									0.558	0.764
DT2. Our firm is integrating digital technologies such as social media, big data, analytics, cloud, and mobile technologies to drive change.									0.699	0.704
DT3. Our firm operations are shifting toward making use of digital technologies such as big data, analytics, cloud, mobile, and social media platform.									0.705	0.768
DT4. Our firm is driving customer service through the application of digital technologies such as social media, big data, analytics, cloud, and mobile technologies.									0.719	0.723
DT5. Our firm operations are embracing technologies such as big data, analytics, cloud, mobile, and social media platforms									0.671	0.746
Firm performance (FP)										
FP1. Our firm profits increased in the past three years.	0.812									0.823
FP2. Customers are always loyal to our company, the size of customers has increased in the past three years.	0.932									0.873
FP3. Our firm ROI increased over the past three years.	0.931									0.881
FP4. Our firm sales increased over the past three years.	0.861									0.831
Number of observable variables	4	4	4	4	5	4	3	5		
Cronbach's $\alpha > 0.7$	0.938	0.901	0.845	0.919	0.885	0.895	0.752	0.894		
Eigenvalue > 1	12.882	2.915	2.101	1.918	1.815	1.421	1.036	1.012		$\Sigma = 33$
Cumulative % > 50%	66.046									
Kaiser-Meyer-Olkin (KMO) > 0.7	0.911									

The requirements for Cronbach's alpha analysis require an alpha coefficient ≥ 0.7 , a total variable correlation coefficient greater than or equal to 0.3, and the results in Table 1 show that the alpha coefficients of the measures have values greater than 0.7 and the total variable correlation coefficients of all measures in the range (0.504 to 0.881) > 0.3 , which ensure reliability. Requirements for EFA require a corresponding number of factors to the model, a factor weight $\lambda \geq 0.5$; the total variance extracted must be greater than or equal to 50%, and the eigenvalue coefficient must be greater than one. The results in Table 1 show that:

the eigenvalue coefficient is $1.012 > 1$, eight factors were extracted that are consistent with the model, the factor weights range from 0.558 to 0.964 and are greater than 0.5, the total variance extracted is $66.046\% > 50\%$, indicating that the measures ensure convergent validity and discriminant validity.

4.2. Confirmatory factor analysis

The evaluative indices of model fit for confirmatory factor analysis is presented in Table 2.

Table 2. An assessment of model fitting in confirmatory factor analysis (CFA)

Indicators	χ^2/df	GFI	TLI	CFI	RMSEA	Conclusion
Estimated (CFA)	1.806	0.831	0.935	0.927	0.057	Accepted

Note: GFI – goodness-of-fit index, TLI – Tucker-Lewis index, CFI – comparative fit index, RMSEA – root mean square error of approximation.

A model is deemed to be adequate when χ^2/df is less than two, the Tucker-Lewis index (TLI) and comparative fit index (CFI) indices are greater than

0.9, and the root mean square error of approximation (RMSEA) is less than 0.08. The analysis results presented in Table 2 indicate

that all of the evaluative indices meet the requirement for an adequate model, thus enabling further analysis steps to be undertaken. The results of the CFA analysis, as presented in Table 3, reveal that the loading factors of all

the observed variables are greater than 0.5. Furthermore, all of the P_c and P_{vc} values are greater than 0.7 and 0.5, respectively, providing evidence of the unidirectional nature, convergent validity, discriminant validity, and reliability of the measures.

Table 3. A table of the CFA results system

Conceptual groups	Concepts	Observatory variables	Reliability		Residual variance P_{vc}	Factor loading
			Cronbach alpha	P_c		
OC	EOC	4	0.919	0.921	0.745	0.772 ÷ 0.931
	FAC	4	0.895	0.897	0.686	0.760 ÷ 0.874
	IOC	4	0.845	0.848	0.584	0.699 ÷ 0.838
SL	TO	3	0.752	0.763	0.525	0.580 ÷ 0.867
	RO	4	0.901	0.903	0.702	0.751 ÷ 0.909
	PRO	5	0.885	0.885	0.608	0.749 ÷ 0.806
DT	DT	5	0.894	0.894	0.630	0.749 ÷ 0.835
FP	FP	4	0.938	0.938	0.791	0.849 ÷ 0.929

Source: The authors' analysis results.

4.3. Structural equation model analysis

The results of evaluating the SEM model, as depicted in Figure 2, indicate that all of the indices meet the requirements, with $R^2_{DT} = 0.74$ showing that 74% of the variance of DT is explained by

the independent variables, and $R^2_{FP} = 0.49$ showing that 49% of the variance of FP is explained by the DT factor. The model is deemed appropriate for hypothesis testing.

The results of the hypothesis testing of the model are illustrated in Table 4.

Figure 2. Research model verification results

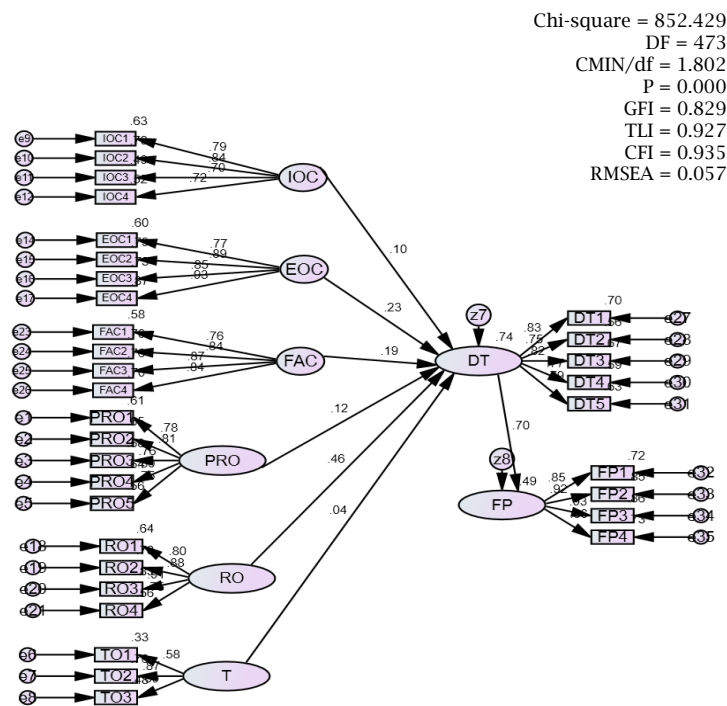


Table 4. A synthesis of hypothesis testing results

Hypotheses	Correlation	Hypothesis (β)	Bias/SE-bias	p	Conclusion
H1a	DT <- EOC	0.232	2	0.000	Accepted
H1b	DT <- FAC	0.192	1	0.026	Accepted
H1c	DT <- IOC	0.097	2	0.209	Rejected
H2a	DT <- TO	0.044	-2	0.356	Rejected
H2b	DT <- RO	0.462	1	0.000	Accepted
H2c	DT <- PRO	0.119	-2	0.056	Accepted
H3	FP <- DT	0.700	-1	0.000	Accepted

Source: The authors' analysis results.

5. DISCUSSION

The results of SEM analysis confirm the hypotheses for the estimates in the model are presented in Table 4. The bootstrap method with $N = 5000$ replications (Hair et al., 2017) is used to test the estimates in the model, and coefficients of bias/SE-bias ≤ 2 indicate that the estimates in the model are reliable. The results assert that external-oriented cultural values ($\beta_{EOCDT} = 0.232$, $p = 0.000$) promote decentralization, facilitate autonomy, innovation, and cooperation, and accelerate successful digital transformation. Flexible and adaptive culture in enterprises ($\beta_{FACDT} = 0.192$, $p = 0.026$) promotes a willingness to change, creates conditions for new ideas and initiatives, courageously accepts risks, and accelerates the digital transformation process. Leaders with a relationship-oriented direction are always concerned about the interests of employees, understand and listen to them, resolve difficulties, and are friendly to them, which motivates employees and fosters their loyalty to the company, especially during the restructuring process accompanying digital transformation ($\beta_{RODT} = 0.462$, $p = 0.000$). Leaders with participation and representation-oriented direction ($\beta_{PRODT} = 0.119$, $p = 0.056$) always consult with members, create conditions for them to participate in decision-making, highly value and respect the role of employees, thus employees understand the company's goals and voluntarily work together with the company to implement innovation and development. Digital transformation has a positive impact on the business efficiency of the enterprise ($\beta_{DTFP} = 0.700$, $p = 0.000$), demonstrating that when the company undergoes digital transformation, beneficial changes occur in the areas of operation, which increase customer confidence in the company and its products, thus increasing the business efficiency of the company. Hypotheses $H1c$ and $H2a$ are not statistically significant in the survey sample, indicating that internal-oriented cultural values and task-oriented leadership styles are not well developed or are unevenly formed in the surveyed companies, as evidenced by the $IOC5$ variable being excluded in qualitative interviews. However, further testing in other samples is necessary to fully assess the role of these cultural values and leadership styles.

6. CONCLUSION

The results of testing hypotheses and theoretical model using CB-SEM and bootstrap with $N = 5000$, show that the theoretical model fits the market data;

digital transformation positively affects a firm's business performance ($\beta = 0.399$), which is consistent with studies by Avirutha (2018), Popović-Pantić et al. (2019), Nwankpa and Roumani (2016), and Chen et al. (2016). External-oriented and flexible and adaptive organizational culture positively impact digital transformation that confirms the Delphi research results of Hartl and Hess (2017) to be accurate. The values of the internal-oriented culture in the surveyed firms are not found to have an impact on business performance and digital transformation, which are new values of organizational culture for the Mekong Delta firms that need a wider sample for a complete assessment.

Leadership styles that emphasize relationship-oriented and participative/representation-oriented approaches have been found to have a positive impact on digital transformation. On the other hand, a task-oriented leadership style does not demonstrate statistical significance. Consequently, out of the seven research hypotheses proposed, five have been accepted, while two ($H1c$ and $H2a$) have not been supported by the data. As a result, it can be concluded that the research has successfully achieved its initial objectives.

Based on the findings of the study, commercial enterprises operating in the Mekong Delta region should focus on developing organizational culture values that prioritize an external-oriented culture and foster flexibility and adaptability. Additionally, it is advisable to adopt a leadership style characterized by a strong emphasis on relationship orientation and participation/representation orientation. This approach will facilitate the acceleration of digital transformation initiatives, thereby enhancing business efficiency and promoting long-term business sustainability.

It is important to note that the process of building cultural values and cultivating shared leadership styles is a long-term endeavor. Therefore, it should be approached with caution and persistence, avoiding haste, as rushing such efforts can lead to potential failures. The data collection for the study was carried out in the Mekong Delta area, but the convenience sampling method used may limit the representativeness of the study, and expanding the study area is necessary to increase its generalizability. The study was only conducted in the case of commercial enterprises, and testing other business sectors is necessary to confirm the generalizability of the research findings. These are the limitations of the study and also directions for further research.

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