THE IMPACT OF DIGITAL TRANSFORMATION ON TAX ACCOUNTING SYSTEMS IN SMALL AND MEDIUM-SIZED ENTERPRISES

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Abstract: ***This study focuses on analyzing and assessing the level of digital transformation adoption in tax accounting practices within small and medium-sized enterprises (SMEs). In addition, the paper examines the factors through which digital transformation influences the operational efficiency of tax accounting systems. Based on the research findings, the study proposes several recommendations and solutions aimed at enhancing the effectiveness of digital transformation in the field of tax accounting for SMEs.***

• Keywords: *digital transformation; tax accounting system; small and medium-sized enterprises.*

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1. Introduction

In recent years, digital transformation has become an inevitable trend and a key driver of economic growth in Vietnam, exerting profound impacts on corporate governance practices, particularly in the fields of accounting and taxation. The rapid development of technologies such as cloud computing, artificial intelligence, and big data is fundamentally reshaping the ways in which tax accounting information is collected, processed, and reported within enterprises.

For SMEs, digital transformation offers opportunities to enhance operational efficiency, transparency, and tax compliance, while simultaneously posing significant challenges related to investment costs, human resource capabilities, and information security. In the context of Vietnam's accelerated implementation of electronic invoicing and e-taxation, examining the impact of digital transformation on SMEs' tax accounting systems is both necessary and of substantial practical significance.

2. Theoretical Framework and Research Methodology

2.1. Theoretical Framework

This study is grounded in three main theoretical frameworks, including the Technology-Organization-Environment (TOE) framework, Institutional Theory, and the Resource-Based View (RBV), to explain the determinants and mechanisms through which digital transformation affects tax accounting systems in SMEs.

According to the TOE framework (Tornatzky & Fleischer, 1990), technology implementation depends on technological readiness, organizational capability, and the regulatory environment. Meanwhile, Institutional Theory (DiMaggio & Powell, 1983) emphasizes the role of coercive and normative pressures particularly mandatory regulations on electronic invoicing and e-taxation in driving SMEs to digitalize their tax accounting systems. Complementing these perspectives, the RBV (Barney, 1991) posits that technological capability and digital accounting competence constitute strategic resources that enable enterprises to enhance tax accounting effectiveness and reduce compliance costs.

The integration of these theoretical perspectives suggests that digital transformation in SMEs' tax accounting systems results from the interaction between technological conditions, organizational capabilities, and the institutional environment, and directly influences information quality, tax compliance efficiency, and corporate tax governance capacity.

2.2. Research Methodology

This study adopts a mixed-methods approach, integrating both qualitative and quantitative methods to ensure the comprehensiveness and reliability of the research findings. Qualitative methods are employed to explore and systematize the factors through which digital transformation affects tax accounting systems in small and medium-sized enterprises, as well as to examine the suitability of the proposed research model within the Vietnamese context. Quantitative

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methods are applied to measure the extent to which digital transformation influences the operational effectiveness of tax accounting systems, based on the analysis of survey data collected from SMEs.

3. Research Content and Findings

3.1. Concept of Digital Transformation in Enterprises

Digital transformation refers to the process of integrating digital technologies into all organizational activities in order to enhance operational efficiency, create new value, and optimize management practices (Westerman et al., 2014). According to the Ministry of Information and Communications of Vietnam (2021), digital transformation in enterprises is built upon three core pillars: the digitalization of operational processes, the transformation of business models, and the transformation of corporate culture. In the field of tax accounting, digital transformation is manifested through the adoption of electronic accounting software, electronic invoicing, online tax filing portals, cloud-based data storage systems, and artificial intelligence (AI) technologies to automate the recording, processing, and reporting of information.

Digital transformation is not merely the deployment of technological tools but rather a comprehensive restructuring of tax accounting systems to adapt to a modern regulatory and management environment. The application of digital technologies enables enterprises to improve the transparency, accuracy, and timeliness of tax-related financial information, minimize errors in tax declaration and payment, and enhance the effectiveness of regulatory oversight by tax authorities. However, digital transformation also poses significant challenges related to investment costs, data security, and the capacity of accounting personnel to effectively operate digital tools.

3.2. Tax Accounting Systems in SMEs

A tax accounting system comprises a set of processes, tools, and policies designed to collect, process, and report financial information for the purposes of determining tax obligations and supporting managerial decision-making (Horngren et al., 2019). In SMEs, such systems are typically characterized by limited scale, constrained accounting staff, and a low level of automation. Consequently, tax recording, aggregation, and filing activities often rely on stand-alone software or manual procedures, which increases the risk of errors and delays in providing information to tax authorities.

According to the General Statistics Office of Vietnam (2024), SMEs account for over 97% of the total number of enterprises in Vietnam, contributing more than 45% of GDP and approximately 31% of total state budget revenues. Despite their significant economic contribution, most SMEs face difficulties in accessing advanced technologies and lack the financial capacity to invest in digitalized tax accounting systems. Therefore, the implementation of digital transformation solutions in tax accounting is of substantial practical importance, as it enables enterprises to enhance labor productivity, reduce compliance costs, and improve financial transparency.

3.3. Factors affecting the effectiveness of Tax Accounting Systems in SMEs

The operational effectiveness of tax accounting systems in SMEs in the context of digital transformation is influenced by five key factors. First, the enterprise's digital technological capability, including IT infrastructure, accounting software, and data connectivity, serves as a fundamental determinant of system effectiveness. Second, digital accounting capability and human resource skills directly affect the ability to operate, utilize, and apply digital tools in tax accounting. Third, the legal environment and government support policies may facilitate or constrain the digitalization process through regulations on electronic taxation and digital transformation incentives. Fourth, the degree of automation in accounting-tax processes enhances accuracy and timeliness while reducing errors in tax declaration and payment. Finally, technology investment costs may negatively affect system effectiveness, particularly for SMEs with limited financial resources.

3.4. Current Status and Level of Digital Transformation Adoption in Tax Accounting among SMEs

The survey results from 118 small and medium-sized enterprises across three major economic centers Hanoi, Da Nang, and Ho Chi Minh City indicate that the adoption of digital transformation in tax accounting has achieved certain progress, albeit with substantial disparities across implementation dimensions. Specifically, approximately 78% of surveyed enterprises reported using electronic invoicing, and 64% had adopted accounting software integrated with tax declaration functions, reflecting a relatively high level of compliance with existing regulations. However, only about 38% of enterprises reported having online data connectivity between their accounting systems and tax authorities or internal management systems, suggesting that digitalization

remains largely fragmented rather than integrated and synchronized.

In addition, the proportion of enterprises applying data analytics tools or artificial intelligence to forecast tax liabilities or support tax cost optimization remains relatively low, accounting for only around 25% of the total sample. These findings reflect a common pattern among the surveyed SMEs, whereby digital transformation in tax accounting is primarily driven by compliance objectives rather than by managerial support or decision-making enhancement. Overall, the level of digital transformation in tax accounting among Vietnamese SMEs can be classified as moderate, with a predominant focus on meeting mandatory requirements such as electronic invoicing and online tax filing rather than on the automation of tax management processes.

The underlying causes of this situation stem mainly from constraints related to financial resources, the professional capacity of accounting personnel, and the absence of a clear strategic orientation toward digital transformation. Further analysis by firm size reveals that small enterprises (with fewer than 50 employees) exhibit significantly lower levels of digital technology adoption compared to medium-sized enterprises. Meanwhile, firms operating in the service and trade sectors tend to demonstrate higher levels of digital adoption, attributable to their frequent engagement in electronic transactions and the availability of extensive customer data systems.

3.5. Research Results

3.5.1. Research Model and Hypotheses

Based on the theoretical foundations of digital accounting, the Resource-Based View (RBV), and prior empirical studies (Nguyen et al., 2022; Sadri, 2025; Vial, 2019), this study proposes a research model to identify and measure the factors influencing the operational effectiveness of tax accounting systems in small and medium-sized enterprises (SMEs) in the context of digital transformation. According to the RBV, the effectiveness of tax accounting system operations depends on the firm's ability to mobilize and integrate internal resources—such as technological, human, and financial capabilities—with external environmental conditions, including regulatory and policy frameworks. Accordingly, the proposed research model comprises five independent variables and one dependent variable, proposed research model:

• Digital technological capability of the enterprise (X1)

• Digital accounting capability and human resource skills (X2)

• Legal environment and government support policies (X3)

• Degree of automation in accounting-tax processes (X4)

• Technology investment costs (X5)

→ Operational effectiveness of the accounting-tax system (Y)

Each construct is measured using multiple observed variables based on a five-point Likert scale, ranging from 1 ("Strongly disagree") to 5 ("Strongly agree"). The operational effectiveness of the accounting-tax system (Y) is assessed using criteria such as accuracy, timeliness, data connectivity, compliance, and system operating costs.

Based on the proposed model, the following research hypotheses are formulated:

• **H1:** Digital technological capability of the enterprise has a positive effect on the operational effectiveness of the tax accounting system.

• **H2:** Digital accounting capability and human resource skills have a positive effect on the operational effectiveness of the tax accounting system.

• **H3:** The legal environment and government support policies have a positive effect on the operational effectiveness of the tax accounting system.

• **H4:** The degree of automation in accounting-tax processes has a positive effect on the operational effectiveness of the tax accounting system.

• **H5:** Technology investment costs have a negative effect on the operational effectiveness of the tax accounting system.

Hypotheses H1-H5 are tested using Ordinary Least Squares (OLS) regression and Partial Least Squares Structural Equation Modeling (PLS-SEM). The empirical results will determine the magnitude and statistical significance of each factor's impact, thereby providing practical evidence to support policy recommendations and managerial solutions aimed at enhancing the effectiveness of digital transformation in tax accounting among Vietnamese SMEs.

4.2. Results of Research Model Testing

The survey data were collected from 118 small and medium-sized enterprises (SMEs) operating in the manufacturing, trade, and service sectors across three key economic regions: Hanoi, Da Nang, and Ho Chi Minh City.

The reliability analysis of the measurement scales indicates that all observed variables achieved Cronbach's Alpha values greater than 0.7, and factor loadings exceeding 0.6, thereby confirming the internal consistency of the scales. The results of the Exploratory Factor Analysis (EFA) reveal that five distinct independent factor groups were clearly identified, jointly explaining 68.5% of the total variance in the model.

The Ordinary Least Squares (OLS) regression results demonstrate that the model is statistically significant, with an R^2 value of 0.63 and an F-statistic of 47.82 (Sig. = 0.000). Specifically, the standardized regression coefficients (Beta) are presented in Table 1:

Influencing factors	Standardized Beta coefficient	Significance (Sig.)	Level of impact
Digital technological capability of the enterprise	0.41	0.000	Strong
Digital accounting capability and human resource skills	0.33	0.001	Moderate-strong
Legal environment and support policies	0.28	0.005	Moderate
Degree of automation in tax accounting processes	0.21	0.009	Moderate
Technology investment costs	-0.19	0.014	Negative impact

The results of the PLS-SEM analysis further confirm that the model satisfies both convergent and discriminant validity criteria, with Average Variance Extracted (AVE) values exceeding 0.5 and Composite Reliability (CR) values greater than 0.7. The model explains 61.2% of the variance in the operational effectiveness of tax accounting systems ($R^2 = 0.612$), indicating a relatively high explanatory power. Hypotheses H1, H2, H3, and H4 are supported at the 1% significance level, while H5 is supported at the 5% level, consistent with the initial expectations.

The empirical findings reveal that digital technological capability of the enterprise (H1) exerts the strongest influence on the effectiveness of tax accounting systems ($\beta = 0.41$). This result underscores that digital infrastructure readiness, electronic accounting software, and data integration between enterprises and tax authorities constitute the foundational determinants of successful digital transformation. This finding is consistent with prior studies by Nguyen et al. (2022) and Sadri (2025), which emphasize that technological investment is a prerequisite for realizing the benefits of digitalization.

Digital accounting capability and human resource skills (H2) also demonstrate a significant positive effect ($\beta = 0.33$), highlighting the central role of human capital in the digital transformation process. Enterprises with accounting staff who are proficient in digital tools, capable of data utilization, and skilled in using accounting software tend to achieve higher levels of efficiency in tax management and compliance.

The legal environment and government support policies (H3) show a moderate yet positively moderating effect. Enterprises benefiting from tax authority support or participating in government-led digital transformation programs exhibit operational effectiveness levels approximately 1.3 times higher than those without such support.

The degree of automation in tax accounting processes (H4) contributes to reducing errors and shortening document processing time; however, its impact has not yet reached an optimal level due to limitations in system integration and data security.

In contrast, technology investment costs (H5) have a statistically significant negative effect ($\beta = -0.19$), indicating that financial constraints remain a substantial barrier, particularly for smaller SMEs. This finding aligns with the Vietnamese context, where the costs of implementing accounting software and cloud infrastructure remain relatively high compared to enterprises' financial capacity.

Overall, the results suggest that digital transformation exerts a positive but uneven impact on tax accounting systems in SMEs. To achieve higher effectiveness, enterprises need to simultaneously enhance technological capabilities, develop human resource skills, and fully leverage government support policies, thereby moving toward a more efficient, transparent, and sustainable digital tax accounting system.

4.4. Recommendations and Policy Implications for Enhancing the Effectiveness of Digital Transformation in Tax Accounting Systems of SMEs

The research findings indicate that digital transformation has a clear positive impact on the operational effectiveness of tax accounting systems in small and medium-sized enterprises (SMEs); however, the magnitude of this impact depends largely on technological capabilities, human resource skills, and the legal and regulatory environment. To promote a sustainable and effective digital transformation process, a set of coordinated solutions should be implemented, as outlined below.

(1) Enterprise-level solutions

First, SMEs should develop a comprehensive digital transformation strategy for tax accounting. Enterprises need to clearly define their objectives, implementation roadmap, and allocated resources for

digital transformation, thereby avoiding fragmented or trend-driven investments. This strategy should be embedded within the overall business plan and aligned with financial management, sales operations, and supply chain management.

Second, enterprises should make selective and strategic investments in digital tax accounting infrastructure and software. Priority should be given to cloud-based platforms and accounting systems that enable data connectivity with tax authorities through application programming interfaces (APIs), electronic invoicing, and online tax filing. Software selection should emphasize key criteria such as data security, scalability, integration with management systems (e.g., ERP, CRM), and cost-effectiveness.

Third, enhancing digital accounting capabilities and data-related skills of human resources is essential. SMEs should regularly organize in-house training programs or collaborate with accounting and auditing training institutions to update employees' skills in software utilization, data analytics, and information security. Human capital remains the critical determinant of success in digital transformation initiatives.

Fourth, enterprises should strengthen internal control mechanisms and ensure the security of tax accounting information. SMEs need to establish access control procedures, perform regular data backups, and clearly define user authorization levels to mitigate the risks of fraud and data leakage in digital environments.

(2) Government and tax authority-level solutions

First, it is essential to further improve the legal framework governing electronic tax accounting and digital transactions. The Ministry of Finance and the General Department of Taxation should harmonize regulations related to data standards, system connectivity, security, and electronic document storage, while eliminating overlapping or inconsistent provisions that create barriers for enterprises adopting digital accounting software.

Second, government agencies should expand support programs for SMEs' digital transformation. These initiatives may include financial support packages (such as concessional loans, tax incentives, and software subsidies), technical consulting services, and digital skills training programs for enterprise accountants. Scaling up pilot models of "standard electronic accounting systems" at the local level would also facilitate knowledge transfer and faster adoption among SMEs.

In addition, strengthening data connectivity and information sharing between tax authorities and enterprises is crucial. Electronic tax management systems should be further synchronized to enable real-time data exchange, thereby reducing the time required for tax declaration and payment while minimizing errors. This represents a critical foundation for advancing toward a "Digital Government-Digital Enterprise" ecosystem in the accounting and taxation domain.

In summary, enhancing the effectiveness of digital transformation in tax accounting systems of SMEs requires not only internal efforts from enterprises but also coordinated support from the government, tax authorities, and the broader technology ecosystem. A balanced integration of technological resources, human capital, and institutional frameworks will be the key to enabling Vietnamese enterprises to successfully undergo digital transformation and achieve transparency, efficiency, and sustainable development in the digital era.

Conclusion

This study examines the impact of digital transformation on tax accounting systems in Vietnamese small and medium-sized enterprises (SMEs). The results indicate that technological capability, digital accounting competence, human resource skills, legal environment, and investment costs significantly affect system effectiveness. Among these factors, digital technological capability and human capital play the most critical roles in driving successful digital transformation. Supportive legal frameworks and government policies facilitate the adoption of digital tax accounting practices. However, high technology investment costs remain a major barrier for smaller SMEs. Based on these findings, the study proposes multi-level solutions to enhance the effectiveness of digital tax accounting systems. These recommendations support the development of a transparent and efficient tax accounting ecosystem aligned with Vietnam's National Digital Transformation Program toward 2030.

References:

Barney, J. (1991). Firm resources and sustained competitive advantage. Journal of Management, 17(1), 99-120.

Li, X., & Wang, Y. (2020). Digital transformation and accounting information systems: A systematic review. Accounting Research Journal, 33(4), 567-586.

Pham, H. M., & Nguyen, T. T. (2022). Digital technology adoption in accounting and taxation in Vietnamese enterprises. Journal of Accounting and Auditing, (12), 25-33.

Tornatzky, L. G., & Fleischer, M. (1990). The processes of technological innovation. Lexington Books.

Prime Minister of Vietnam. (2020). National digital transformation program toward 2030, with a vision to 2045 (Decision No. 749/QD-TTg). Government of Vietnam.