

Research Article

# The Implementation of Tax Administration Digitalization Policy on Tax Compliance in Manufacturing Industry Companies

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**Abstract.** This study aims to analyze the impact of the implementation of digitalization policy in tax administration through e-Invoice, e-SKP, and e-Bupot systems on tax compliance in manufacturing industry companies, as well as to identify determinants of its effectiveness in enhancing compliance behavior in the era of digital transformation. A descriptive narrative literature review approach was employed, drawing on 52 articles published between 2014 and 2024 from international academic databases such as Google Scholar, ProQuest, and JSTOR. Thematic analysis was conducted to identify recurring patterns and theoretical connections related to digital tax administration and compliance in the manufacturing sector. The findings indicate that digitalization of tax administration has a significant positive impact on compliance, with compliance rates increasing by 42% and non-compliance decreasing from 28% to 12%. Five main pathways were identified: efficiency pathway, transparency pathway, integration pathway, technology acceptance pathway, and trust pathway. These pathways highlight how digital platforms streamline processes, strengthen accountability, facilitate data integration, improve user adoption, and enhance trust between taxpayers and authorities. Furthermore, digital literacy and infrastructure readiness emerged as critical moderators. Companies with high levels of digital literacy experienced a 58% improvement in compliance, whereas those with limited capabilities showed only a 23% increase. Theoretically, the study contributes to the development of a Digital Tax Compliance Model that integrates the Technology Acceptance Model with Tax Compliance Theory, offering a comprehensive framework to explain the complex interactions between technological, organizational, and environmental factors in the success of digital transformation. Practically, the results provide valuable insights for policymakers and tax authorities in designing responsive strategies that strengthen compliance in the manufacturing industry through sustainable digitalization initiatives.

**Keywords:** tax administration; digitalization; tax compliance; manufacturing industry; digital transformation.

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## 1. INTRODUCTION

The Industrial Revolution 4.0 era has created fundamental disruptions in governance and public administration paradigms worldwide, driving a comprehensive digital transformation in government administration systems to achieve optimal effectiveness, efficiency, and accountability. Digital transformation in the tax sector has become a strategic imperative in the era of global digitalization, where tax authorities in various countries are reforming and modernizing their tax administration and service systems to improve tax compliance, administrative efficiency, and revenue collection performance (Kumar & Singh, 2023). The digitalization of tax administration systems through integrated electronic platforms such as e-Filing, e-Invoice, and automated tax processing systems has been proven to have a significant impact on improving the quality of public services, reducing compliance costs, and increasing transparency in tax administration.

The implementation of digital technology in tax administration is a strategic response to various structural challenges facing conventional tax systems, including high administrative costs, complex procedural compliance, slow verification and validation processes, and the risk of human error, which can lead to inefficiencies and losses for both the government and taxpayers (OECD, 2022). According to the World Bank (2021), countries that have adopted comprehensive digital tax systems have shown significant increases in tax compliance rates of up to 35% and administrative efficiency of up to 50%, indicating the transformative potential of digitalization in improving tax system effectiveness and optimizing state revenues. This global phenomenon demonstrates that digital transformation is not merely technological

modernization, but a fundamental shift in governance approaches that integrate technology-enabled solutions with policy objectives to achieve sustainable public finance management.

In the Indonesian context, the Directorate General of Taxes has implemented various digital innovations as an integral part of its bureaucratic reform and tax administration modernization program, which began in the last decade. The e-Invoice system, launched in 2014, was a milestone in tax digitalization, followed by the systematic implementation of e-SKP (Electronic Tax Assessment Letter) and e-Bupot (Electronic Withholding Tax Proof) to integrate all tax administration processes into a coherent and interoperable digital ecosystem (DGT, 2023). These three digital systems were designed with a user-centric design approach to simplify tax administration processes while improving taxpayer compliance through automation, real-time processing, transparency, and enhanced accessibility to accurate and up-to-date tax information (Pudjiarti & Winarni, 2025; Rini Werdingingsih et al., 2023).

The manufacturing sector has unique characteristics that make tax digitalization highly relevant and strategic in the context of compliance enhancement and operational efficiency. The complexity of the production process, which involves multiple stages, an extensive and cross-jurisdictional supply chain, a high transaction volume with various counterparties, and the diversity of tax types that must be reported periodically, make tax reporting and compliance in this sector significantly more complex than in other economic sectors (Chen et al., 2022). The implementation of integrated digital systems in tax administration is expected to address this inherent complexity through seamless data integration, automated calculation processes, real-time monitoring capabilities, and comprehensive reporting mechanisms that facilitate enhanced tax compliance and operational transparency.

The concept of tax compliance in contemporary tax literature is defined as the level of willingness and ability of taxpayers to fulfill their tax obligations voluntarily and accurately in accordance with the applicable regulatory framework without requiring coercive enforcement action from the tax authorities (James & Alley, 2024). In the context of digital transformation, tax compliance is influenced not only by traditional deterrence factors such as audit probability and penalty severity, but also by technological factors including system usability, information quality, process efficiency, and optimal user experience (Technology Acceptance Model). Previous empirical research shows that the adoption of digital technology in tax administration can improve compliance behavior through various mechanisms, including a significant reduction in compliance costs, enhanced transparency and accountability, improved accessibility to tax information and services, and strengthened trust relationships between taxpayers and tax authorities.

A literature review of studies on tax digitalization reveals that although research in this domain has grown substantially over the past decade, comprehensive systematic analysis of its impact on tax compliance behavior, particularly in the manufacturing sector, which has unique characteristics and challenges, remains relatively limited and fragmented. Existing studies focus more on technical aspects of implementation and administrative perspectives from tax authorities, while in-depth analysis of behavioral impacts on taxpayer compliance from a user perspective has not received adequate attention in academic discourse (Martinez & Rodriguez, 2023). This research gap is particularly important given that the success of digital tax transformation depends heavily on the level of adoption and voluntary compliance from taxpayers, the primary end-users of implemented digital tax systems.

The research problem is identified by the lack of empirical and comprehensive knowledge of the extent to which the implementation of digital tax administration policies through integrated systems such as e-Invoice, e-SKP, and e-Bupot provides a measurable impact on enhancing tax compliance levels in companies in the manufacturing sector. There is a theoretical and empirical gap between normative expectations that digitalization will automatically improve tax compliance and the practical realities regarding the adoption patterns and utilization effectiveness of digital tax systems by manufacturing companies, which are influenced by the complex interplay of technological, organizational, and environmental factors that require systematic and comprehensive analysis.

This study uses a narrative literature review approach to analyze and synthesize evidence regarding the impact of the implementation of tax administration digitalization policies on tax compliance in manufacturing companies based on a systematic analysis of the body of knowledge accumulated in the tax and information technology literature. The narrative review method was chosen because it allows for comprehensive exploration of the complexity of relationships between digital tax transformation and compliance behavior from multidisciplinary perspectives, integrating theoretical frameworks from the fields of public

administration, information systems, organizational behavior, and tax policy to produce a holistic understanding of the phenomenon under investigation.

The novelty and contribution of this research lies in the development of an integrated conceptual framework that combines Digital Service Quality Theory with Tax Compliance Theory in the context-specific manufacturing industry sector, where technological factors and organizational capabilities have a critical influence on the successful adoption and effective utilization of digital tax systems. Through a systematic analysis of comprehensive literature from reputable academic databases, both international and national, covering the period 2014-2024, this research seeks to identify consistent patterns in the relationship between digitalization initiatives and compliance outcomes, critical success factors that influence implementation effectiveness, and knowledge gaps that still need to be explored in future research to advance understanding in the domain of digital tax administration.

Based on the background and problem identification that have been described, this study attempts to answer the major research questions: How does the implementation of the digitalization policy of tax administration through the e-Invoice, e-SKP, and e-Bupot systems affect the level of tax compliance in manufacturing industry companies, and what factors determine the effectiveness of digitalization in improving tax compliance behavior in the context of the digital transformation era?

## **2. LITERATURE REVIEW**

### **A. Theoretical basis**

This research is built on the integration of three main theoretical foundations that form a comprehensive conceptual framework for understanding the phenomenon of digitalization of tax administration and its impact on tax compliance. New Public Management Theory provides the foundation for bureaucratic modernization through the adoption of digital technology in public services. The Technology Acceptance Model (TAM) and the development of the UTAUT model explain the mechanisms of adoption and utilization of digital technology by taxpayers. Tax Compliance Theory integrates Economic Deterrence Theory, Theory of Planned Behavior, and the Slippery Slope Framework to understand the determinants of tax compliance in the context of digital transformation. These three theoretical foundations interact to form an analytical framework that enables a holistic understanding of how digitalization of tax administration affects taxpayer compliance behavior through the mediation of technological, organizational, and environmental factors within the digital tax ecosystem.

### **B. Digitalization of Tax Administration**

Tax administration digitalization is a fundamental transformation of the conventional tax administration system toward an integrated digital platform that integrates information and communication technology to improve effectiveness, efficiency, and transparency in tax services (Al-Rahmi et al., 2023). This concept goes beyond the simple digitization of physical documents into electronic formats and encompasses comprehensive business process reengineering, system integration, and a paradigm shift in interactions between tax authorities and taxpayers through technology-mediated services. Tax digitalization is based on the New Public Management Theory, which advocates the adoption of private sector management practices in government to improve service efficiency and public responsiveness (Osborne & Gaebler, 2022).

The tax administration digitalization framework operationalizes digital transformation through five core components: robust digital infrastructure, seamless system integration, intuitive user interface design, comprehensive data management, and continuous performance monitoring (García-Moreno et al., 2021). This framework guides the systematic implementation of digital systems such as e-Faktur, e-SKP, and e-Bupot as concrete manifestations of digitalization that connect technological aspects, regulatory compliance, and service delivery within an integrated tax ecosystem. The Technology-Organization-Environment (TOE) Framework developed by Tornatzky & Fleischer (1990) is relevant for understanding the multidimensional factors influencing the successful adoption of tax digitalization, encompassing technological readiness, organizational capabilities, and environmental pressures that interact to determine implementation success.

### **C. Integrated Digital Tax System**

The integrated digital tax system encompasses three primary platforms that form a comprehensive ecosystem: e-Invoice, e-SKP, and e-Bupot, designed to create a seamless digital experience in tax administration. The e-Invoice system is defined as a sophisticated

digital platform that facilitates the electronic creation, validation, and reporting of tax invoices through direct integration with the Directorate General of Taxes (DGT) administration system, replacing manual invoice processes with automation that reduces error risks and increases transaction transparency (Kumar & Sharma, 2023). This system is based on Digital Invoice Theory, which integrates electronic commerce principles with tax regulations to facilitate compliant digital transactions.

E-SKP (electronic Tax Assessment Letter) is an advanced digital system for the delivery and management of tax assessment letters, enabling real-time communication between tax authorities and taxpayers regarding tax obligations and assessments (Johnson & Brown, 2022). E-Bupot (electronic Withholding Certificate) is a comprehensive platform for the electronic creation, management, and reporting of income tax withholding certificates, automating tax withholding processes and minimizing calculation errors (Patel et al., 2024). These three digital systems adopt the Digital Service Quality Theory, which identifies reliability, responsiveness, assurance, empathy, and tangibles as critical determinants of digital tax service quality, influencing user satisfaction and long-term adoption rates in the tax compliance ecosystem.

#### **D. Tax Compliance in the Digital Age**

Tax compliance in the context of digital administration is defined as a comprehensive measure of taxpayers' willingness and ability to fulfill tax obligations accurately, timely, and voluntarily, in accordance with an evolving regulatory framework that is increasingly integrated with digital platforms (Fischer et al., 2023). This concept encompasses two dimensions: voluntary compliance based on moral consciousness and social responsibility, and enforced compliance driven by sophisticated deterrence mechanisms and technological monitoring capabilities. Digital transformation has significantly altered traditional compliance paradigms by introducing new variables such as system usability, digital literacy requirements, and technology-mediated interactions with tax authorities.

The Economic Deterrence Theory developed by Allingham & Sandmo (1972) explains tax compliance as a rational calculation between the benefits of non-compliance and the expected costs of detection and sanctions. However, in a digital context, calculation parameters become more complex with increased detection capabilities and real-time monitoring systems. The Theory of Planned Behavior developed by Ajzen (1991) broadens understanding by incorporating attitudes toward tax compliance, subjective norms from peer groups, and perceived behavioral control, which in the digital environment are strongly influenced by technological self-efficacy and system accessibility (Kirchler et al., 2008). The Slippery Slope Framework integrates a deterrence approach with a trust-based approach, where digitalization can simultaneously increase tax authority power through enhanced monitoring capabilities and build trust through improved transparency, service quality, and taxpayer-centric digital experiences.

#### **E. Technology Acceptance in Tax Administration**

The Technology Acceptance Model (TAM) developed by Davis (1989) serves as a foundational framework for understanding taxpayer adoption of digital tax systems, identifying perceived usefulness and perceived ease of use as primary determinants of technology acceptance behavior. In the context of digital taxation, perceived usefulness relates to the extent to which taxpayers believe that digital systems will enhance their tax compliance efficiency and reduce administrative burdens, while perceived ease of use reflects the degree to which taxpayers expect digital platforms to be effortless and user-friendly in operation (Venkatesh et al., 2003).

The Unified Theory of Acceptance and Use of Technology (UTAUT) developed by Venkatesh et al. (2003) integrates multiple technology acceptance theories to identify four core determinants: performance expectancy, effort expectancy, social influence, and facilitating conditions, with moderating factors such as gender, age, experience, and voluntariness of use. The Extended TAM for Digital Tax Systems developed by Lee et al. (2021) specifically adapts TAM for the tax administration context by adding trust, security concerns, and system quality as additional antecedents. The Digital Tax Compliance Model, built on the integration of TAM with Tax Compliance Theory, explains that technology adoption influences compliance through two pathways: direct effects through improved system efficiency and indirect effects through enhanced attitude and trust toward tax authorities, creating a comprehensive framework for understanding technology-mediated compliance behavior in the digital tax ecosystem.

## F. Determining Factors of Tax Digitalization

A systematic analysis of the determinants of tax digitalization identifies three primary categories that form a comprehensive success framework: technological factors, organizational factors, and environmental factors, which interact within a complex ecosystem. Technological factors include system quality related to reliability, scalability, and user-friendliness; information quality, which encompasses data accuracy, completeness, and timeliness; and service quality, which encompasses responsiveness, assurance, and technical support effectiveness (DeLone & McLean, 2016). These factors directly influence user experience and subsequent adoption rates, with high-quality technological infrastructure becoming a prerequisite for sustainable digital transformation in tax administration.

Organizational factors include top management support which determines resource allocation and organizational commitment; organizational readiness related to human resource capabilities, organizational culture, and structural adaptability; as well as IT infrastructure that supports seamless technology integration (Rogers, 2019). Environmental factors include government regulations that create compliance imperatives; competitive pressures that drive efficiency improvements; and trading partner influences that facilitate technology adoption across supply chains (Tornatzky & Fleischer, 1990). Understanding these multi-dimensional factors is critical for designing effective digital tax implementation strategies to maximize adoption rates and optimize compliance outcomes in the context of the manufacturing industry, where complex organizational structures and regulatory requirements create unique challenges and opportunities for digital transformation success in the tax administration ecosystem.

## 3. RESEARCH METHODS

This study uses a descriptive narrative literature review approach to analyze the impact of the implementation of tax administration digitalization policies on tax compliance in manufacturing companies. The descriptive narrative method was chosen because it allows for a comprehensive exploratory analysis of the complex phenomenon of tax digitalization by integrating multiple theoretical perspectives and empirical findings from various related disciplines (Green et al., 2006). Unlike systematic reviews that use rigid search protocols, the descriptive narrative approach provides flexibility to explore literature from interdisciplinary sources that include public administration, information systems, organizational behavior, and tax policy studies (Rother, 2007).

The data collection process was conducted through Google Scholar, ProQuest, and JSTOR using predetermined keyword combinations: digital tax administration, e-tax systems, tax compliance, manufacturing industry, technology acceptance, and tax digitalization within the publication timeframe of 2014-2024 (Booth et al., 2016). The search strategy adopted a modified PICO framework adapted for policy research with a focus on Population (manufacturing companies), Intervention (digital tax systems), Comparison (traditional vs. digital administration), and Outcomes (tax compliance behavior). Inclusion criteria included peer-reviewed articles, authoritative reports from international organizations, and policy documents that specifically address digital tax transformation, while exclusion criteria included publications irrelevant to the manufacturing sector context and studies without an empirical foundation (Hart, 2018). Data analysis was conducted thematically by identifying recurring patterns, emerging themes, and theoretical connections to build a comprehensive understanding of the relationship between tax digitalization and compliance behavior in the manufacturing industry context (Braun & Clarke, 2019).

## 4. RESEARCH RESULTS AND DISCUSSION

Based on a thematic analysis of 52 articles that met the inclusion criteria, 15 primary studies were identified that comprehensively explore the relationship between the implementation of tax administration digitalization and tax compliance in the manufacturing sector. The findings demonstrate a consistent pattern where the adoption of digital technology in tax administration has a multidimensional impact on taxpayer compliance behavior. The variability in research results reflects the complexity of contextual factors such as technological infrastructure, organizational capacity, and government regulations that influence the effectiveness of tax digitalization implementation. The analysis identified five main themes that address the research question of the impact of digitalization on tax compliance in the manufacturing industry context.

### **A. Digital Transformation as a Catalyst for Improving Tax Compliance Performance**

Key findings reveal a consistent and significant positive relationship between the implementation of tax administration digitalization and tax compliance levels in manufacturing companies. Chen & Wang's (2023) study of 1,200 manufacturing companies in Malaysia showed that implementing a digital tax system increased tax compliance by 42% compared to the conventional system, with a strong correlation coefficient ( $r=0.734$ ,  $p<0.001$ ). This finding is confirmed by Johnson & Smith's (2024) three-year longitudinal study of 800 multinational manufacturing companies, which showed a decrease in non-compliance rates from 28% to 12% through automation, real-time monitoring, and simplified compliance procedures.

Digital transformation creates a fundamental shift in the compliance paradigm by eliminating error-prone manual processes and introducing automated validation systems that ensure accuracy and timeliness. The efficiency dimension significantly impacts tax compliance through a substantial reduction in compliance costs. In a comprehensive meta-analysis of 25 international studies, Rodriguez et al. (2023) found that digitizing tax administration can reduce compliance costs by up to 40%, with an average time saving of 65% in the tax reporting process. This cost and time reduction creates a positive incentive structure for taxpayers to increase voluntary compliance because the perceived benefits significantly outweigh the compliance costs.

### **B. System Integration and Ecosystem Approach in Digital Tax Administration**

Digital transformation in tax administration has proven to be a powerful catalyst for comprehensively modernizing the tax system and enhancing service quality through an integrated ecosystem approach. In a comparative study of 15 countries with varying levels of digital tax maturity, García-López et al. (2024) found that implementing a comprehensive and integrated digital tax system increased overall tax administration efficiency by up to 55%, with significant improvements in processing time, accuracy rate, and measurable and sustainable taxpayer satisfaction scores.

Zhang et al. (2023) identified that seamless integration of digital tax systems with companies' enterprise resource planning (ERP) systems is a critical success factor in improving compliance rates in the complex manufacturing sector. An empirical study of 950 manufacturing companies in China showed that companies with fully integrated systems had a 73% higher compliance rate than those with fragmented or standalone systems ( $r=0.812$ ,  $p<0.001$ ). Integration capability significantly reduces manual data entry requirements, increases data accuracy and consistency, and facilitates proactive real-time compliance monitoring. This ecosystem approach creates synergistic effects where multiple stakeholders can collaborate effectively in maintaining compliance standards and sharing best practices for continuous improvement in tax administration effectiveness.

### **C. Technology Acceptance and User Experience as Mediating Mechanisms**

System quality and ease of use have been shown to play crucial mediating mechanisms in the complex relationship between tax digitalization implementation and actual compliance behavior outcomes. Anderson & Brown (2023) identified a comprehensive sequential mediation pathway: system quality → perceived usefulness → positive attitude toward the digital tax system → compliance intention → actual compliance behavior. This pathway analysis indicates that high-quality technology infrastructure systematically facilitates positive perceptions of benefits, which subsequently shape favorable attitudes toward digital systems and ultimately encourage sustained compliance behavior.

Lee & Park (2024) strengthened these empirical findings by demonstrating that perceived ease of use significantly mediates the relationship between system design quality and overall user satisfaction in the context of complex digital tax systems. A comprehensive study of 1,500 tax professionals in the South Korean manufacturing sector showed that ease of use has a stronger indirect effect ( $\beta=0.421$ ) than the direct effect ( $\beta=0.287$ ) on long-term system adoption success. Thompson et al. (2023) explored the information quality dimension as an additional mediator in the relationship between digital tax system capabilities and decision-making quality in tax compliance processes. Their research showed that the accuracy, timeliness, and completeness of information presented by sophisticated digital systems significantly increase confidence levels in tax-related decision-making, which in turn increases compliance accuracy by up to 84% and reduces compliance-related errors substantially.

#### **D. Digital Literacy and Technological Infrastructure as Critical Moderators**

Digital literacy levels and technological infrastructure readiness have been shown to act as significant moderators that critically influence the effectiveness of tax digitalization implementation and subsequent compliance outcomes. Miller & Davis (2024) identified that organizational digital literacy levels substantially influence the relationship strength between digital system implementation and measurable compliance outcomes. Companies with high digital literacy capabilities showed a remarkable 58% improvement in compliance, while companies with limited digital literacy only showed a modest 23% improvement (interaction effect:  $\beta=0.347$ ,  $p<0.01$ ), indicating the critical importance of digital capacity building.

Wang & Liu (2023) found that comprehensive IT infrastructure readiness plays a fundamental moderator in technology adoption process success. A longitudinal study of 600 manufacturing companies with varying infrastructure capabilities showed that companies with advanced IT infrastructure experienced significantly faster adoption rates (8.2 months vs. 14.6 months) and substantially higher compliance rates (87% vs. 64%) compared to companies with limited infrastructure capabilities. Santos & García (2024) provide a comprehensive perspective by identifying organizational digital maturity as an overarching meta-moderator that influences the effectiveness of the entire digitalization process ecosystem. The digital maturity framework encompasses an integrated digital strategy, supportive digital culture, comprehensive digital skills, and robust digital governance, which synergistically determine the long-term success of digital tax system implementation and the sustainability of compliance improvements.

#### **E. Barriers and Challenges in Digital Tax Implementation.**

Despite showing substantial positive impacts, the implementation of digitalization of tax administration faces diverse challenges and multi-dimensional barriers that can significantly reduce implementation effectiveness and sustainable outcomes. Wilson et al. (2024) identified five critical categories of main obstacles: technical barriers, including complex system integration challenges, problematic data migration issues, and persistent cybersecurity concerns; organizational barriers, including widespread resistance to change and insufficient top management support; regulatory barriers related to regulatory ambiguity and lack of standardization; financial barriers, including high implementation costs and limited ROI visibility; and human resource barriers, including inadequate digital skills and insufficient training programs.

Clark & Johnson (2023) demonstrated that organizational factors disproportionately influence implementation success rates, with their research showing that 67% of digital tax system implementation failures were caused by organizational resistance and change management inadequacies rather than pure technical factors. Comprehensive change management strategies include effective communication, stakeholder engagement, and systematic training programs, which become critical success factors in overcoming implementation barriers. Taylor & White (2024) identify regulatory harmonization as a persistent challenge, where the lack of synchronization between existing tax regulations and emerging digital system capabilities, coupled with interpretation ambiguities and cross-jurisdictional standardization gaps, can create significant compliance uncertainties that undermine digital transformation effectiveness. Addressing these multifaceted barriers requires a holistic approach that integrates technical solutions with organizational development, regulatory reforms, and comprehensive capacity-building initiatives to ensure sustainable digital tax transformation success.

### **5. CONCLUSION**

Based on a comprehensive analysis of 52 articles that met the inclusion criteria, this study successfully answered the main research question: the implementation of the digitalization policy for tax administration through the e-Invoice, e-SKP, and e-Bupot systems significantly and positively affects the level of tax compliance in manufacturing companies. Empirical evidence shows an increase in tax compliance of up to 42% and a decrease in the level of non-compliance from 28% to 12%, confirming the hypothesis that digital transformation creates a fundamental shift in the compliance paradigm through enhanced efficiency, transparency, and user experience. Determinants of digitalization effectiveness include system quality, organizational digital maturity, infrastructure readiness, and regulatory support, which synergistically influence adoption success and sustainable compliance outcomes.

The research findings identified five main pathways of digitalization's influence on tax compliance: the efficiency pathway through a substantial reduction of compliance costs of up to 40% and time savings of 65%; the transparency pathway through real-time monitoring and enhanced information access; the integration pathway through seamless connectivity with enterprise systems, which increases the compliance rate by 73%; the technology acceptance pathway through improved user experience and perceived usefulness; and the trust pathway through enhanced confidence in tax administration systems. Sequential mediation analysis revealed that system quality influences compliance behavior through perceived usefulness, positive attitude formation, and compliance intention, with indirect effects being stronger than direct effects.

Digital literacy and technological infrastructure have been shown to play critical moderators in implementation effectiveness, with companies with high digital literacy demonstrating a 58% improvement in compliance compared to 23% in companies with limited digital capabilities. Organizational digital maturity, encompassing digital strategy, culture, skills, and governance, serves as a meta-moderator determining the long-term success of digitalization initiatives. An ecosystem approach, through the integration of multiple stakeholders and collaborative compliance mechanisms, creates sustainable synergistic effects in maintaining high compliance standards.

Despite showing substantial positive impacts, digitalization implementation faces multidimensional challenges, including technical barriers (system integration complexity), organizational barriers (resistance to change), regulatory barriers (standardization gaps), financial barriers (implementation costs), and human resource barriers (digital skills inadequacy). Analysis shows that 67% of implementation failures are caused by organizational factors rather than technical factors, indicating the critical importance of comprehensive change management strategies and stakeholder engagement in ensuring implementation success.

The research's theoretical contribution lies in the development of a Digital Tax Compliance Model that integrates the Technology Acceptance Model with Tax Compliance Theory in the specific context of tax digitalization. This model identifies complex interactions between technological, organizational, and environmental factors in determining digitalization success and its impact on compliance behavior. Practical implications include the urgent need for a holistic implementation approach that integrates technical solutions with organizational development, capacity building programs, and regulatory harmonization to optimize digital transformation benefits and tax administration effectiveness.

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