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Digital Literacy, Tax Knowledge, and MSME Tax Compliance in the Era of Digital Taxation

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ABSTRACT



Purpose: The study tests the role of digital literacy and tax knowledge as antecedents to MSME tax compliance in digitally mediated taxation systems, integrating a conceptual divide in previous research.

Method: A thematic and structural analysis of the literature: Digital tax compliance studies Contributing to digital tax research, SLR proponents an analysis based on both thematic synthesis and bibliometric mapping to (1) provide a broad scope depiction by synthesizing empirical evidence, and (2) create insights into structural patterns.

Findings: The findings also show that digital literacy and tax knowledge positively influence on MSMEs tax compliance, but the relations are interdependent instead of independent. Digital literacy help the taxpayer in using electronic tax systems to reduce procedural complexities and operational mistakes and tax knowledge supports them in correct interpretation of tax rules. Enhancements in compliance are particularly significant when both these features present, which can account for the mixed results associated with digital tax reform reported in the literature. This bibliometric analysis shows a nascent move to capability-based theories of compliance and continued dichotomy between technical and cognitive viewpoints.

Novelty: This paper contributes to tax compliance literature by theorising digital literacy and tax knowledge as complementary competences which interact to shape compliance conduct in digital taxation contexts.

Implications: The results imply that digital tax reforms should be introduced as capacity-building programs, incorporating the enhancement of digital skills and adaptive tax education for inclusive and sustainable MSME tax compliance.

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1. Introduction

Small and medium enterprises (SMEs) are at the heart of economic growth, employment generation

and fiscal capacity in both developed and emerging economies. Being the dominant form of business structures in many countries and serving as a significant source of tax revenues, whether SMEs are



compliant or not is an urgent issue for all government revenue bodies around the world (OECD, 2022). Although they significantly contribute to the economy, MSMEs always present low mark of tax compliance arising partly from resource constraints, high relative cost of compliance and administrative burden (Azmi et al., 2016; K et al., 2025; Musah, 1970; Musimenta et al., 2017). In reaction to these problems, governments have shifted to digital tax administration tools (e.g electronic billing, online filing of taxes and automatic reporting) assuming that this would streamline the processes, decrease compliance costs and increase voluntary compliance (Adegbayibi & Ajape, 2025; Heinemann & Stiller, 2025; Hesami et al., 2023; Kotsogiannis et al., 2025; Kotsogiannis & Salvadori, 2024; Lee, 2016; Tumoro & Pandya, 2025). Yet, recent empirical findings show that efficiency of digitized tax systems continues to vary, especially among MSMEs, suggesting digitization on its own doesn't have their above anticipated benefits in terms of compliance (Al-Hattami et al., 2026; Dekoster et al., 2025; Qin et al., 2026; Roggeman et al., 2025).

Compliance rooms for digital tax reforms vary across countries. Digital platforms improve transparency, traceability, and administrative supervision but could at the same time constitute additional stumbling blocks for MSMEs with poor technological capacity. There is evidence that firms with low levels of digital literacy regard digital tax systems as complicated and cognitively demanding, and may resist to comply despite administrative infrastructure changes (Bellon et al., 2020; Oliva-Moreno & Peña-Longobardo, 2018; Polavieja et al., 2023). Cross-country comparisons also show that taxpayers' digital readiness is an important factor for compliance behavior and that the latter can vary across firm size and sector types (Dekoster et al., 2025; Kotsogiannis et al., 2025; Kotsogiannis & Salvadori, 2024; Roggeman et al., 2025). These results also raise concerns of digital tax transformation being implemented without accompanying support that will cause compliance gaps to become increased rather than to lessen, particularly in low resource MSMEs (OECD, 2022).

Although the literature has focused on tax compliance from economic, behavioural and institutional perspectives, little explanatory power has been provided regarding what happens in practice when tax transactions are conducted by taxpayers in the digital space. The literature generally focuses on deterrence. It also focuses on trust in tax authorities. Another focus is information asymmetry. These are seen as independent moderators. These provide a comprehensive picture of taxpayer reactions. This is when control measures become more technology-based. See Alm & Torgler (2011), Dezsó et al. (2022), Kirchler et al. (2008) research into digital taxation is mostly based on how systems are designed or how people comply with the rules. It does not look at how taxpayers understand tax rules or how they do their tax tasks online (Ramirez & Oliva, 2018; Kotsogiannis et al., 2025). Notably, the reciprocal relationship between taxpayers' comprehension of tax legislation and their technical aptitude in utilising electronic tax systems remains conceptualised and empirically under-researched. However, the behavioural processes that influence tax compliance in the digital age have not been thoroughly theorised, and there is a significant gap in understanding how digital transformation affects these compliance dynamics, especially among SMEs with limited resources (Belahouaoui & Attak, 2023, 2024; Dekoster et al., 2025; Polavieja et al., 2023).

There is mixed empirical evidence on the impact of digitisation on the quality of tax compliance. While some studies have found that switching from analogue to digital tax systems increases efficiency and compliance, others have suggested that technology-intensive processes may have little or even negative effects without adequate readiness factors (Kotsogiannis et al., 2025; Kotsogiannis & Salvadori, 2024; Ramírez Álvarez et al., 2022). This disagreement is particularly evident among SMEs, where resource constraints and skill requirements are more pronounced (Dekoster et al., 2025; Musah, 1970; Roggeman et al., 2025). Previous studies have focused on digitisation, tax knowledge and compliance as separate concepts, ignoring the possibility that they are all linked. This fragmented approach limits our ability to gain a deeper understanding of how electronic changes affect

compliance behaviour. By taking a close look at what has been discovered recently, this article provides something new by showing that how well people understand taxes is a factor that increases compliance, and this depends on how digitally skilled the taxpayer is. This highlights a conditional heuristic that has not been studied enough in the literature that already exists.

Therefore, this study aims to analyze how digital literacy and tax knowledge jointly influence MSME tax compliance in the context of broader digital tax transformation through a systematic synthesis of contemporary empirical research. This study contributes to the literature by synthesizing conflicting findings and offering an integrated explanation of compliance behavior in a digitally mediated tax environment. From a policy perspective, these findings provide globally relevant insights for tax authorities, emphasizing that digital tax reform must be supported by targeted digital capability development and effective tax education initiatives to foster inclusive, sustainable, and voluntary compliance among SMEs. The remainder of this paper is organized as follows: the next section discusses the conceptual foundations underlying this study, followed by a description of the methodological approach, a presentation of synthesized findings, and conclusions.

2. Literature Review

2.1 Theoretical background

Tax compliance has been systematically studied as a multidimensional behavior influenced by economic incentives, institutional settings and individual abilities. Previous researches stress that compliance decisions are determined not only by the degree of enforcement, but also by taxpayers' capacity to comprehend their tax duties and effectively interact with administrators (Kirchler et al., 2008; Alm & Torgler, 2011). Compliance in digitally induced tax systems not only relies on taxpayers' abilities to manipulate technology for handling with electronic systems but on mental knowledge of the tax norms (Ramirez & Oliva, 2018). There is empirical evidence that digital transformation changes the dynamics of compliance, creating efficiency improvements as well as additional obstacles especially for small

businesses (Kotsogiannis et al., 2025). Therefore, tax compliance in the today's digital age reflects both knowledge-based and capability-based determinants.

2.2 Digital Literacy and MSME Tax Compliance

MSMEs need to demonstrate a high level of digital literacy if they are to access the tools necessary for compliance, given the increasing use of digital tax administration platforms. Digital literacy helps ensure that taxpayers use electronic invoicing, filing and payments more accurately and confidently. Empirical literature shows that companies with higher digital literacy experience lower process complexity, fewer administrative errors, and lower perceived compliance costs, all of which help improve compliance behaviour (for more details, see Ramirez & Oliva, 2018; Lancee et al., 2023). Conversely, digital tax systems may be found to be complex and mentally challenging by SMEs with low digital capabilities, increasing the risk of delayed reporting or unintentional non-compliance.

Research also indicates that differences in digital readiness are the main reason for the varied compliance challenges faced by SMEs operating within similar regulatory frameworks (Kotsogiannis et al., 2025). These findings suggest that digital tax systems do not automatically improve compliance; it depends on what taxpayers can (or cannot) do with the system. This means that more digitally literate MSMEs are expected to interact easily with the tax system and, in this case, have a positive influence on MSME tax compliance.

H1: Digital literacy has a positive and significant effect on MSME tax compliance.

2.3 Tax knowledge and MSME tax compliance

Tax knowledge is a key factor in shaping compliance, with taxpayers who have good tax knowledge making fewer unintentional mistakes and being more likely to comply with the law in practice, as demonstrated by the following aspects of compliance behaviour: Empirically, it has been observed that micro, small and medium-sized enterprises (MSMEs) with higher tax knowledge tend to exhibit better compliance behaviour and

make fewer errors in reporting (Alm & Torgler, 2011; Musah et al., 2025).

Secondly, the knowledge of taxes makes things more certain and reduces the risks associated with taxes, which in turn reduces the costs of both psychological and administrative compliance. Research also shows that people who don't know much about taxes are more likely to use informal procedures or avoid paying tax, especially in small businesses where it's hard to get professional tax advice (Roggeman et al., 2025). Inadequate tax knowledge means that, even in a mature digital system, taxpayers may be unable to correctly interpret digital outputs or regulations, which could seriously hinder compliance. This means that greater awareness of taxes should result in significant improvements in the tax compliance of MSME.

H2: Tax knowledge has a positive and significant effect on MSME tax compliance.

2.4 Digital literacy and tax knowledge as joint determinants of compliance

The way taxpayers understand and use digital systems is now a bigger part of how well they comply with taxes online. Digital systems can only function effectively if taxpayers can use them and understand the tax implications of doing so. Empirical research demonstrates that digital platforms have the capacity to amplify the beneficial effects of tax knowledge, provided that users possess sufficient digital literacy skills when utilising them. Conversely, inadequate digital literacy skills can exert a detrimental influence (Kotsogiannis et al., 2025).

Research with MSMEs shows that digital assistance may not result in increased compliance if the system's output cannot be understood by taxpayers or digital procedures are not carried out correctly (Lancee et al., 2023). Conversely, when digital literacy and tax knowledge converge, compliance becomes more efficient and less susceptible to errors. An answer is provided by this interaction effect as to why mixed and conditional

results are produced by studies on the impact of digital forms. It is thought that the effect of the interaction between digital literacy and tax knowledge on MSME tax compliance will be much stronger than the effect of each of these factors on its own.

H3: Digital literacy and tax knowledge jointly have a positive and significant effect on MSME tax compliance.

2.5 Systematic literature review framework

A systematic literature review (SLR) was conducted by researchers in this study to identify, evaluate and synthesise empirical evidence on how digital literacy affects SME knowledge and behaviour in tax compliance. SLRs are a robust method for synthesising scattered empirical results and improving theoretical consistency in tax research (Tran-Nam et al., 2016; Padi et al., 2025). This review was conducted according to a predetermined protocol involving database selection, application of keywords, and eligibility screening, as well as thematic synthesis, to ensure clarity and repeatability. We used bibliometric analysis through VOSviewer software to map research trends, conceptual clusters and intellectual structures in the tax compliance literature. This work was in line with previous tax SLR work and was done for the systematic discovery of research gaps and emerging themes (e.g., Bornman & Ramutumbu 2019; Musah et al. 2024). The review's methodological quality is enhanced by this dual validation approach, resulting in conclusions that are supported by substantial evidence.

This visualization illustrates the intellectual structure of current research (2021–2025). The nodes represent high-frequency keywords, while the link thickness indicates the strength of association. The map reveals four distinct research clusters: Digital Literacy (Red), Tax Knowledge (Blue), Tax Compliance (Green), and the MSME Sectoral Context (Yellow). The centrality of the green cluster highlights "Tax Compliance" as the pivotal outcome variable connecting technological and cognitive antecedents.

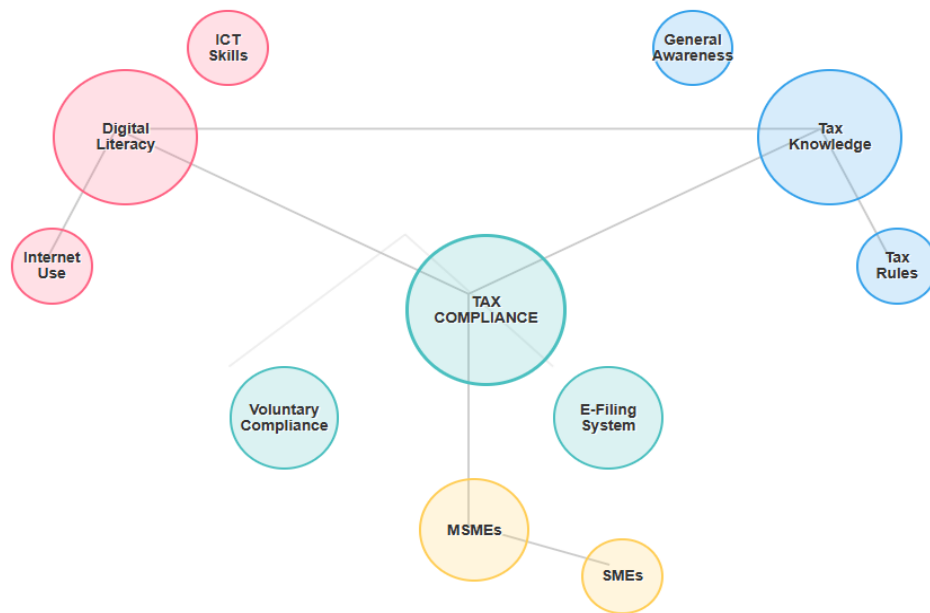


Figure 1. Bibliometric Network Visualization (Co-occurrence Map)

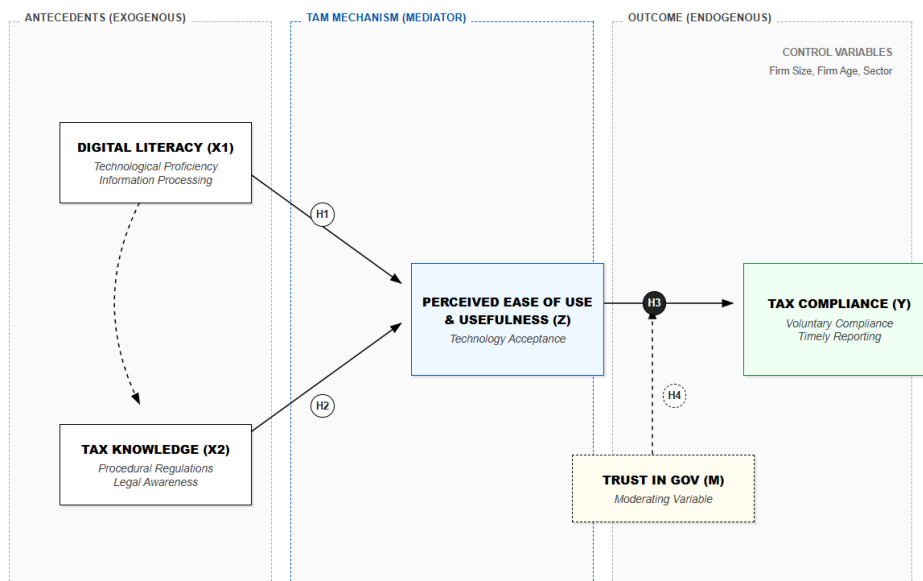


Figure 2. Proposed Moderated-Mediation Structural Model

The proposed conceptual framework integrates the Technology Acceptance Model (TAM) with institutional factors. Paths H1 and H2 indicate the influence of exogenous antecedents on the mediator (TAM mechanism). Path H3 represents the primary impact on tax compliance. The dashed path H4 illustrates the moderating effect of 'Trust in

Government,' posited to strengthen the relationship between system usability and compliance behavior to Figure 2.

3. Methods Innovation

3.1 Study design and methodological contribution

The methodological novelty of such a study is that the integrative SLR design allows for mixing qualitative synthesis and quantitative bibliometric analysis. Previous tax research has highlighted the role played by SLR in integrating scattered empirical work and enhancing theoretical consistency (Tran-Nam et al., 2016; Bornman & Ramutumbu, 2019). Recent high impact reviews also suggest that the practice of integrating SLR with bibliometrics has a richer analytical depth elucidating intellectual structures and thematic evolution in an area of research (Donthu et al., 2021). Through the adoption of such integrated approach, the study moves beyond descriptive aggregation and delivers a structured synthesis that would be beneficial in the development of theories in digital tax compliance research.

3.2 Search and data source strategy

A thorough and systematic search strategy was applied to achieve coverage, transparency, and replicability. The review was limited to peer-reviewed articles found in the Scopus database, which is known for its strong quality control and broad coverage of economics and public finance research (Mongeon & Paul-Hus, 2016). Search strings Boolean for digital literacy, tax knowledge, tax compliance MSME/SME the digital tax e-invoice and e-filing were created. The time frame (2021–2025) was chosen to reflect the latest phase of tax digitisation around the world in line with current review methodology advice (Snyder, 2019).

3.3 Selection and quality assessment of the studies

Literature selection was performed step by step as recommended in the best evidence-based practices for review. After removal of duplicates, relevance of titles/abstracts was screened for, and this was followed by assessment to full text according to predefined selection criteria. To improve the methodological robustness, quality assessment was prioritised in terms of clarity in research design, validity of data and consistency in variable measurement as recommended from prior SLRs on tax compliance and public finance (Bornman & Ramutumbu, 2019; Padi et al., 2025). Critical evaluation is essential for SLR computer-assisted tax

research to avoid bias and verify that the outcomes are based on sound empirical material (Tran-Nam et al., 2016).

3.4 Summary of findings and thematic synthesis

Extraction of data was done using a standardized template including authorship, year of publication, country setting, methodology, variables studied and main results. Finally, empirical findings were inductively thematically synthesized and systematised. This technique is especially useful in synthesizing disparate empirical evidence and establishing commonalities across studies (Thomas & Harden, 2008). Recent tax reviews demonstrate that thematic synthesis aids in theory-development by grouping findings, and comparing them in an organised manner across various institutional and economic settings (Musah et al., 2024; Padi et al., 2025).

4. Results of Innovation and Discussion

4.1 Characteristics of the studies reviewed (SLR Corpus)

The SLR generates a high-quality evidence base that can be used to answer research questions related to MSME tax compliance in the digitally mediated tax domain published between 2021 and 2025. Most of the selected studies also have significant implications for emerging economies due to the increasing relevance of digital tax reforms in countries with large SME sectors and limited administrative capacity (OECD, 2022; Musah et al., 2025). Most studies use quantitative methods, primarily survey and archival data analysis, with a smaller number using qualitative to mixed methods. The digital tax solutions analyzed include e-invoicing, e-filing, and electronic payment mechanisms. All tax compliance requirements are defined in the data based on the accuracy and timeliness of filing and payment behavior. The pattern of findings and the use of methodology and context indicate an increasing, albeit variable, availability of evidence, requiring a systematic synthesis to integrate the fragmented evidence in the literature (Bornman & Ramutumbu, 2017; Padi et al., 2025).

4.2 Bibliometric configuration of digital tax compliance research

VOSviewer bibliometric analysis shows that the central node (i.e., the one with the highest total strength) is tax compliance. This indicates that tax compliance is the most important intellectual theme in the reviewed literature. Figure 1 shows several overlapping clusters, including formal digitalization (ERP), MSMEs and digital taxation tools, tax regulation awareness, general prevention systems and sanctions, and digital culture learning. This framework also illustrates a shift from a view focused solely on law enforcement towards a more complex approach that considers institutional, behavioral, and capacity factors (van Eck & Waltman, 2014; Donthu et al., 2021). Digital literacy emerges as a separate but increasingly interrelated cluster, reflecting its growing importance in explaining compliance outcomes in the context of digital taxation systems. The idea that compliance behavior in the digital age is multidimensional is supported by bibliometric maps. Themes such as capacity are still less explored than classic deterrence constructs (Lancee et al., 2023).

4.3 Evidence on digital Literacy and MSME tax compliance

Thematic synthesis provides persistent evidence for H1 that digital literacy is positively related to the MSME tax compliance. Research has suggested that higher digital maturity facilitates the effectiveness of MSMEs in dealing with electronic tax (imposed) systems, thereby minimizing reporting errors and misleading bureaucracy stages (Ramirez & Oliva, 2018; Kotsogiannis et al., 2025). Digital literacy reduces the perceived complexity of and costs of compliance with the system – thus facilitating voluntary use of digital tax systems. Yet, research also indicates that the effect is contingent on system usability and digital

infrastructure. When digital platforms are unreliable or weakly supported, the effects of digital literacy on compliance get weaker (Lancee et al., 2023). Overall, the results suggest that digital literacy serves as an enabling capability leading to MSME's effectiveness of translating digital tax reforms into enhanced compliance outcomes.

4.4 Tax knowledge and MSME compliance with taxes

The findings strongly confirm H2, showing that tax knowledge is still a crucial factor in determining the level of MSMEs' compliance even in the digital age. Across studies, greater tax knowledge has been linked to better understanding of commitments, lower inadvertent non-compliance as well as lower costs of compliance (Alm & Torgler, 2011; Musah et al., 2025). Evidence suggests digital systems do not replace a need for tax knowledge but may exacerbate the impacts of lacking knowledge, such as inputting incorrect information or misunderstanding regulations (Roggeman et al., 2025). The longevity of tax knowledge as a motivator for compliance suggests that cognitive capability has enduring significance in the context where administrative elements are becoming automated and technological.

4.5 Combined results of digital literacy and tax knowledge

This synthesis confirms H3. It shows that the highest level of compliance is observed when MSMEs have adequate digital literacy. In addition, MSMEs also have adequate tax knowledge in both conditions. Research shows that there is a dual mechanism at play: digital literacy reflects the technical execution of compliance tasks, while tax knowledge ensures the accuracy of reporting content (Kotsogiannis et al., 2025; Padi et al., 2025). Without one of these factors, the benefits of digitization for

compliance are compromised. The inconsistent empirical results in previous studies can be explained by this general effect, which also shows why digital tax reforms have produced uneven effects across different SME

populations. From the available evidence, it is clear that strategies to build capacity that include digital skills training and tax education are necessary if we want to achieve inclusive and sustainable compliance improvements.

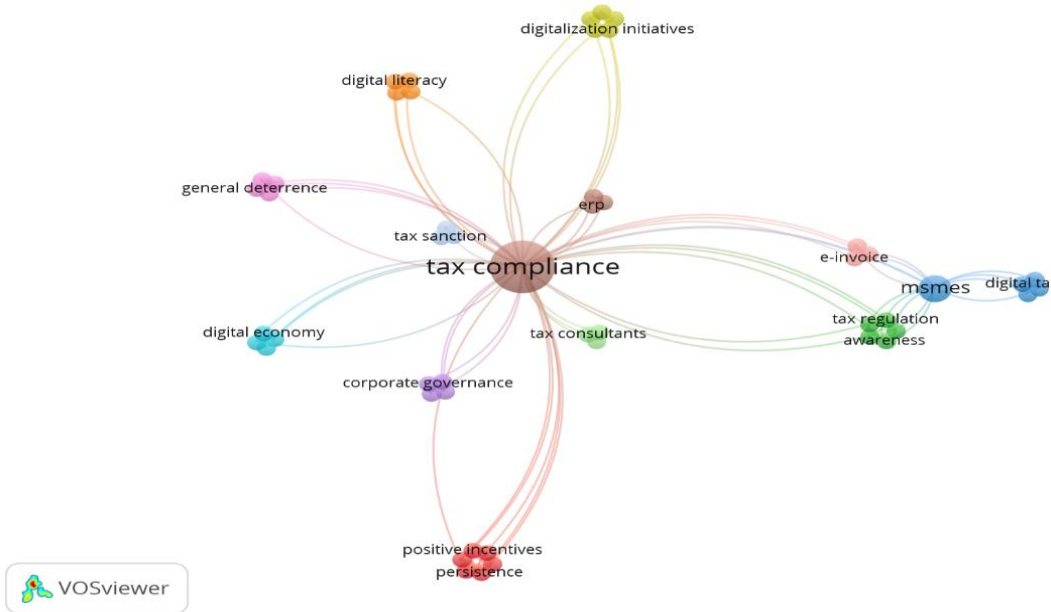


Figure 1. Co-occurrence Network of Tax Compliance Research in Digital Tax Contexts (VOSviewer)

Table 1. Study Characteristics

Dimension	Classification	Description
Publication period	Contemporary studies	The reviewed literature reflects the most recent phase of digital tax system implementation and transformation.
Research context	Predominantly emerging economies	Most studies focus on jurisdictions with large MSME sectors and ongoing digital tax reforms.
Unit of analysis	MSMEs / SMEs	The primary analytical focus is on small and medium-sized business taxpayers.
Research methods	Quantitative and mixed methods	Empirical analyses are mainly survey-based or archival, with limited qualitative integration.
Digital tax instruments	e-invoicing, e-filing, digital payment systems	These instruments represent the most frequently examined mechanisms of tax digitalization.
Core explanatory constructs	Digital literacy; tax knowledge	The dominant independent variables used to explain variation in tax compliance outcomes.

Source; author 2026

Table 2. Summary of Hypothesis Evidence

Dimension	Classification	Description
Publication period	Contemporary studies	The reviewed literature represents recent developments in digital tax administration and

Research context	Predominantly emerging economies	compliance research (OECD, 2022; Hesami et al., 2023). Most studies focus on economies with large MSME sectors and ongoing digital tax reforms (Musimenta et al., 2017; Belahouaoui & Attak, 2024). The primary analytical focus is on small and medium-sized business taxpayers (Azmi et al., 2016; Musah, 2025). Empirical evidence is mainly derived from surveys, archival tax data, and policy impact evaluations (Bellon et al., 2020; Tumoro & Pandya, 2025). These instruments dominate digital tax compliance research (Lee, 2016; Kotsogiannis et al., 2025; Heinemann & Stiller, 2025). Capability-based and knowledge-based variables are central to explaining compliance variation (Azmi et al., 2016; Alm & Torgler, 2011).
Unit of analysis	MSMEs / SMEs	
Research methods	Quantitative and mixed methods	
Digital tax instruments	e-invoicing, e-filing, automated reporting	
Core explanatory constructs	Digital literacy; tax knowledge	

Source; author 2026

4.6 Discussion

This Systematic Literature Review (SLR) integrates studies on MSME tax compliance in the context of digital tax transformation. From the existing synthesis, it appears that digital literacy and tax knowledge are interrelated skills. However, neither of them automatically determines tax compliance behavior separately. This shows that tax compliance is a multifaceted construct. Tax compliance can be influenced by cognitive, institutional, and technical factors. This is in line with claims often made in the modern tax compliance literature. Examples include the works of Kirchler et al. (2008) and Alm & Torgler (2011).

With regard to digital literacy, findings show that digitizing tax administration does not automatically increase compliance. Although digital technologies such as electronic invoicing and tax filing are intended to simplify the administrative burden, their effectiveness depends on the technical competence of taxpayers when interacting with these systems. Previous research shows that a lack of digital skills increases the perceived complexity of the system. It also increases operational errors. This reduces voluntary compliance (Ramirez & Oliva, 2018; Kotsogiannis et al., 2025). These findings are particularly relevant in Indonesia, where MSMEs show significant variation in digital readiness, infrastructure access, and human capital. If capacity constraints are not properly addressed, digital tax changes could have the unintended consequence of increasing compliance inequality.

The importance of tax expertise remains equally relevant in digitally facilitated tax landscapes, where

the need for specialist knowledge is as crucial as ever. Evidence shows that a high level of knowledge of tax legislations, rights and obligations can substantially reduce non-intentional non-compliance and compliance costs. Digital systems are important because, even though they do not replace tax knowledge, they can make the negative impacts of not having enough knowledge worse. This is because of things like putting in the wrong data, getting the wrong information from automated outputs, or not following the rules (Alm & Torgler, 2011; Musah et al., 2025). This result also demonstrates, at an international level, that in order to transform technological convenience into real compliance, it is necessary to implement a flexible tax policy alongside the digitalisation of taxes.

The key innovation of this work is its combined analysis of these results using an SLR-driven analytical model. We explain why there is an inconsistent finding in the existing evidence on the impact of digital tax reforms on MSME compliance by interweaving thematic synthesis and bibliometric mapping. Compliance gains are realised only when two forms of readiness intersect. These are technological readiness and cognitive readiness. Technological readiness is also known as digital literacy. Cognitive readiness is also known as tax knowledge. The different findings in different levels of government can be explained by this process, which is contingent on various factors. Research is advanced by generalising compliance to a digitally intense setting.

The policy implications of these findings are significant for Indonesia and other developing

countries. It is vital that digital tax interventions do not merely concentrate on the implementation of systems and the enforcement of regulations. It is also crucial that they encompass customised digital literacy development and tax education programmes. Successful tax compliance in the technology age and beyond depends on using technology to help taxpayers develop their capabilities. At the same time, it is vital to ensure that digitalisation enhances rather than weakens voluntary tax compliance in the MSME sector.

5. Conclusion

The paper's argument is based on recent empirical work on MSME tax compliance under digital tax transformation. It says that digital literacy and knowledge of taxes are complementary capabilities. Together, these capabilities define compliance outcomes. The findings imply that digital tax reforms do not inherently enhance compliance; their efficacy is contingent on MSMEs possessing the technical aptitude to utilise digital systems and a comprehensive grasp of tax legislation. The earlier research studies presented conflicting findings, but this integrative viewpoint clarifies them. It also advances tax compliance literature by highlighting the context-dependent nature of compliance in OM environments. From a policy standpoint, the research indicates that digital tax initiatives, particularly in developing countries like Indonesia, should extend beyond mere system implementation and enforcement. Instead, they could encompass targeted digital literacy development and customised tax education interventions. It is crucial to make sure that taxpayer capacity development is in line with technology innovation if we want to make sure that digital transformation underpins inclusive, sustainable, and voluntary compliance among MSMEs. An integrated approach to dealing with technological infrastructure, taxpayer education and administrative support mechanisms is suggested as being key to effective digital tax reform at an international level.

Theoretical Contributions

This study makes several contributions to the literature on tax compliance. Firstly, it builds on prior compliance work by providing a clearer understanding of taxpayers' behaviour in digitalised

tax environments. This in turn enables technical capacity to emerge as a key explanatory dimension. Evidence from up-to-date studies is being rapidly aggregated. The results suggest that digital literacy and tax knowledge should not be theorised as independent predictors of compliance. Instead, they should be theorised as skills that interact in complementary ways. The argument goes beyond compliance theory by pointing out that there's a process that depends on things like technical skills. This process is what happens when people become aware of tax rules and start acting in a way that follows the rules. Secondly, a methodological contribution is made by this research through the combination of thematic synthesis and bibliometric mapping in the context of Systems Literature Review, which facilitates an organised interpretation of the disparate empirical outcomes. The enhancement of theory-building research in digital taxation is achieved through this coherent conceptual explanation across institutional and national contexts, because the reasons for the inconsistent results of prior research studies are explained.

Limitations and Future Research Directions

However, there are several limitations to this study. These limitations may point to directions for future research. First, because this is a systematic literature review, the results depend on existing empirical work, which varies in terms of regional context and approach. Further research using primary data, longitudinal study designs, or mixed approaches is needed to test the causal mechanisms explored in this review. Second, because most of the studies reviewed focus on emerging economies, they may not be directly applicable to advanced tax administrations. Therefore, cross-country comparative research would be beneficial. Potential future research lies in exploring moderating or mediating factors, such as trust in tax authorities, ease of use of the system, and institutional quality. This exploration aims to deepen our understanding of compliance behavior in a digital environment. Finally, as digitalization in taxation advances, additional empirical research should investigate how new technologies cause changes over time in

taxpayers' skills, as well as the dynamics of their compliance with tax obligations.

CRedit Author Statement

Sherly Adellya: Conceptualization; Literature review; Methodology; Data curation; Formal analysis; Visualization; Writing – original draft, Writing – review & editing. **Umtun Markhumah:** Supervision; Conceptualization; Methodology validation; Theoretical framing ideas; Writing – review & editing; Critical revision for intellectual content.

Declaration of Competing Interest

The authors state that they do not have any known competing financial interests or personal relationships which may have influenced the work reported in this paper.

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References

- Adegbayibi, A. T., & Ajape, M. K. (2025). *Integration of Artificial Intelligence into Taxation Processes BT - Artificial Intelligence in Accounting, Auditing and Finance: A Guide for Implementation and Use* (M. Adelowotan & C. A. Leke (eds.); pp. 103–125). Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-87368-3_7
- Al-Hattami, H. M., Mady, K., & Al-Bukhrani, M. A. (2026). Green digital accounting and sustainable entrepreneurship in emerging economies: impacts on financial sustainability and performance. *Cogent Business & Management*, 13(1), 2601944. <https://doi.org/10.1080/23311975.2025.2601944>
- Alm, J., & Torgler, B. (2011). Do Ethics Matter? Tax Compliance and Morality. *Journal of Business Ethics*, 101(4), 635–651. <https://doi.org/10.1007/s10551-011-0761-9>
- Azmi, A., Sapiei, N. S., Mustapha, M. Z., & Abdullah, M. (2016). SMEs' tax compliance costs and IT adoption: the case of a value-added tax. *International Journal of Accounting Information Systems*, 23, 1–13. <https://doi.org/https://doi.org/10.1016/j.accinf.2016.06.001>
- Belahouaoui, R., & Attak, E. H. (2023). The importance of perceived fairness regarding tax burden in compliance behavior: a qualitative study using the Delphi method in Morocco. *Journal of Financial Reporting and Accounting*, ahead-of-p(ahead-of-print). <https://doi.org/10.1108/JFRA-04-2023-0213>
- Belahouaoui, R., & Attak, E. H. (2024). Exploring the relationship between taxpayers and tax authorities in the digital era: evidence on tax compliance behavior in emerging economies. *International Journal of Law and Management*, ahead-of-p(ahead-of-print). <https://doi.org/10.1108/IJLMA-02-2024-0064>

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Data Availability Statement

There is no primary data available with this paper. All data used are based on published academic literature. The datasets used and/or analyzed during the current study, such as bibliometric data and extraction matrices are available from the corresponding author on reasonable request.

- Bellon, M., Dabla-Norris, E., Khalid, S., & Lima, F. (2020). Digitalization to Improve Tax Compliance. *Proceedings. Annual Conference on Taxation and Minutes of the Annual Meeting of the National Tax Association*, 113, 1–42.
- Dekoster, K., Verleyen, I., & Roggeman, A. (2025). Reduced recruitment success as a deterrent to tax aggressiveness: evidence from tax and nontax students' job pursuit intentions. *Accounting Research Journal*, 38(5–6), 630–645. <https://doi.org/10.1108/ARJ-11-2024-0395>
- Dezsó, L., Alm, J., & Kirchler, E. (2022). Inequitable wages and tax evasion. *Journal of Behavioral and Experimental Economics*, 96, 101811. <https://doi.org/https://doi.org/10.1016/j.socec.2021.101811>
- Heinemann, M., & Stiller, W. (2025). Digitalization and cross-border tax fraud: evidence from e-invoicing in Italy. *International Tax and Public Finance*, 32(1), 195–237. <https://doi.org/10.1007/s10797-023-09820-x>
- Hesami, S., Jenkins, H. P., & Jenkins, G. P. (2023). Emerging Digital Technologies to Improve Tax Compliance and Administration Efficiency: A Systematic Literature Review. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.4580004>
- K, R., Padhi, S. S., & Bai, C. (2025). Policy analysis in agrochemical supply chain: a system dynamics approach. *Annals of Operations Research*, 344(1), 533–561. <https://doi.org/10.1007/s10479-024-06113-2>
- Kirchler, E., Hoelzl, E., & Wahl, I. (2008). Enforced versus voluntary tax compliance: The “slippery slope” framework. *Journal of Economic Psychology*, 29(2), 210–225. <https://doi.org/https://doi.org/10.1016/j.joep.2007.05.004>
- Kotsogiannis, C., & Salvadori, L. (2024). Symposium on Fiscal Capacity, Tax Compliance, and Development. *CESifo Economic Studies*, 70(4), 486–489. <https://doi.org/10.1093/cesifo/ifae028>
- Kotsogiannis, C., Salvadori, L., Karangwa, J., & Murasi, I. (2025). E-invoicing, tax audits and VAT compliance. *Journal of Development Economics*, 172, 103403. <https://doi.org/https://doi.org/10.1016/j.jdeveco.2024.103403>
- Lee, H. C. (2016). Can Electronic Tax Invoicing Improve Tax Compliance? A Case Study of the Republic of Korea's Electronic Tax Invoicing for Value-Added Tax. *Can Electronic Tax Invoicing Improve Tax Compliance? A Case Study of the Republic of Korea's Electronic Tax Invoicing for Value-Added Tax*, March. <https://doi.org/10.1596/1813-9450-7592>
- Musah, A. (1970). The Moderating Role of Entrepreneurial Orientation in the Relationship between Digital Transformation, Corporate Tax Reputation, and Tax Compliance Among Smes. *SSRN Electronic Journal*, 0–3. <https://doi.org/https://dx.doi.org/10.2139/ssrn.5265477>
- Musimenta, D., Nkundabanyanga, S. K., Muhwezi, M., Akankunda, B., & Nalukenge, I. (2017). Tax compliance of small and medium enterprises: a developing country perspective. *Journal of Financial Regulation and Compliance*, 25(2), 149–175. <https://doi.org/10.1108/JFRC-08-2016-0065>
- OECD. (2022). Tax Administration 2022. In *Tax administration (Paris, France)*.
- Oliva-Moreno, J., & Peña-Longobardo, L. M. (2018). Labour productivity loss caused by premature deaths associated with breast cancer: results from Spain over a 10-year period. *Breast Cancer Research and Treatment*, 172(3), 571–576. <https://doi.org/10.1007/s10549-018-4963-z>

- Polavieja, J. G., Lancee, B., Ramos, M., Veit, S., & Yemane, R. (2023). In your face: a comparative field experiment on racial discrimination in Europe. *Socio-Economic Review*, 21(3), 1551–1578. <https://doi.org/10.1093/ser/mwad009>
- Qin, Z., Ali, Z., Ali, A., & Abdul, Q. (2026). The impact of R&D expenditure, capital investment, and green subsidies on green innovation efficiency: evidence from Pakistani manufacturing enterprises. *Environment, Development and Sustainability*. <https://doi.org/10.1007/s10668-025-07254-5>
- Ramírez Álvarez, J., Oliva, N., & Andino, M. (2022). Cumplimiento tributario y facturación electrónica en Ecuador: evaluación de impacto. *Problemas Del Desarrollo. Revista Latinoamericana de Economía*, 53(208), 97–123. <https://doi.org/10.22201/iiiec.20078951e.2022.208.69712>
- Roggeman, A., Aro-Sati, L., & Verleyen, I. (2025). Compliance with base erosion and profit shifting action 13: Insights from tax consultants and tax officials. *European Research on Management and Business Economics*, 31(1), 100267. <https://doi.org/https://doi.org/10.1016/j.iedeen.2024.100267>
- Tumoro, D. T., & Pandya, H. (2025). Exploring Factors Influencing Tax Compliance in Sub-Saharan Africa: A Review of Articles Using the PRISMA Approach. *International Journal of Public Administration*, 1–13. <https://doi.org/10.1080/01900692.2025.2478983>