Does Digitalization Improve Voluntary Tax Compliance? Evidence from MSME'S

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Abstract. The study examines the effects of digital transformation and digital literacy on voluntary tax compliance of Micro, Small and Medium Enterprises (MSMEs). This research extends the Technology Acceptance Model (TAM) to investigate the impact of usefulness (digital transformation) and ease of use (digital literacy). The research uses quantitative approach, with a sample of MSME taxpayers and a multiple linear regression analysis in SPSS. The results show that digital transformation has a positive effect on voluntary tax compliance ($p = 0.008$) and digital literacy also positively affects voluntary tax compliance ($p = 0.023$). This suggests that the success of digital tax reforms relies on both taxpayers' access to digital tax infrastructure and digital literacy. The findings of the research show that digital transformation programs will be more effective if they are complemented with the improvement of MSME digital literacy, and it provides important insights for tax policy and digital governance.

Keywords: Digital Transformation; Digital Literacy; Voluntary Tax Compliance; MSMEs; Technology Acceptance Model (TAM).

1 Introduction

Governments have embraced digital transformation as a priority area of tax reform, particularly given that the pandemic has sped up the digitisation of government services [1]. Governments have adopted e-filing, e-invoicing, real-time reporting and artificial intelligence (AI) compliance monitoring to improve efficiency and enhance revenue collection [2]. These are intended to increase tax efficiency and improve voluntary tax compliance and raise tax performance with low administrative costs [3].

However, there are problems with implementation, especially for Micro, Small and Medium Enterprise (MSMEs). Generally, MSMEs do not have strong accounting systems, informal accounting practices and regulatory understanding which restricts their capacity to be digital tax compliant [4]. Studies show that while digital reforms are in place, compliance is low because of the skills of users and rejection of technology [5].

MSMEs play an important role in GDP of many developing nations but less in tax collection because of compliance problems and informality [1]. Studies indicate that digital transformation does not always increase compliance if taxpayers are not familiar and skilled with the technology [6]. Thus, the effect of digital changes could be different

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for MSME stakeholders. In addition, digitalization of tax systems might escalate perceived compliance costs if taxpayers have problems with the interface or lack digital skills [7]. This poses a policy challenge: digitalization should simplify compliance but, if a proper digital readiness is not present, it might constitute a compliance burden. Second, a practical problem is trust and strategic vision. Although digitalization increases traceability and monitoring, some stakeholders in MSMEs see stricter monitoring as a compliance threat [3]. Therefore, behavioural and accounting explanations are useful for explaining why digitalization results in voluntary compliance.

Lastly, the empirical evidence is scattered. Existing research examines digital tax systems or digital literacy separately [5, 7]. Few studies examine the combined influence of these two constructs to predict voluntary tax compliance of MSMEs, especially from the accounting-theoretical perspective. Thus, this research examines the digital transformation and digital literacy affect voluntary tax compliance among MSMEs based on integrated accounting and behavioral theories.

2 Literature Review

Traditional ecological knowledge (TEK) has long been practiced in many Indonesian communities as a foundation for environmental conservation and sustainable economic development. As'ad et al. (2021) identified the success of a local conservation model in Lubuk Beringin Village, Jambi, where the community integrated Seloko Adat traditional Islamic-based moral expressions into village regulations to protect forest and river ecosystems [7]. The management of community forests and forbidden pools (restricted fishing zones) illustrates how customary law and state law can work together to maintain biodiversity and local livelihoods.

2.1 Technology Acceptance Model (TAM)

Technology Acceptance Model suggests that technology adoption is influenced by perceived usefulness and perceived ease of use [8]. Digital transformation enhances compliance only when users perceive that digital systems are useful and easy to use. Digital literacy improves perceived ease of use and alleviates anxiety [7]. Consequently, digital literacy has a positive impact on the digital transformation-compliance association.

2.2 Digital Transformation and Voluntary Tax Compliance

Digital transformation improves reporting and monitoring transparency, preventing opportunistic actions [1]. There is empirical evidence that electronic tax systems boost compliance among SMEs [5]. Electronic systems minimise the costs and inconveniences of compliance, affecting voluntary compliance [3].

H1: Digitalisation has a positive impact on voluntary tax compliance of MSMEs.

2.3 Digital Literacy and Voluntary Tax Compliance

Digital literacy enhances taxpayers' understanding of tax laws and their use of digital platforms [9]. Research shows that MSMEs with higher digital literacy have higher compliance intention and reporting accuracy [6]. Digital literacy decreases the complexity of tax, which leads to higher voluntary compliance [7].

H2: Digital literacy has a positive influence on voluntary tax compliance in MSMEs.

3 Methodology

This research uses a quantitative explanatory approach to study the effect of Digital Transformation (X1) and Digital Literacy (X2) on Voluntary Tax Compliance (Y) of MSMEs. The study adopts a theoretical framework based on Technology Acceptance Model (TAM), which assumes that perceived usefulness and perceived ease of use affect behavioural intention and system use [8]. In relation to tax compliance, digital transformation increases perceived usefulness of tax systems, while digital literacy boosts perceived ease of use, both of which will lead to voluntary tax compliance. This study uses a cross-sectional design, primary data are gathered using structured questionnaires from MSME taxpayers.

Digital transformation (X1) refers to the extent to which MSMEs utilize digital tax systems to fulfill their tax obligations. Table 1 shows the indicators of the Digital Transformation variable and the measurement of the variable.

Table 1. Digital transformation.

Code	Indicator	Measurement Item Example
DT1	Use of e-filing	"I regularly use e-filing for tax reporting."
DT2	Use of e-billing	"Digital payment systems make tax payment easier."
DT3	System efficiency	"Digital tax systems reduce compliance time."
DT4	System accessibility	"Online tax platforms are easily accessible."
DT5	Perceived integration	"Digital systems are integrated and user-friendly."

Digital Literacy (X2) refers to the MSME owner's ability to operate and understand digital technologies effectively. Table 2 shows that the Digital literacy variable can be measured through indicators from DL 1 to DL 5.

Table 2. Digital literacy.

Code	Indicator	Measurement Item Example
DL1	Ability to operate systems	"I can independently operate digital tax systems."
DL2	Understanding instructions	"I understand online tax guidelines."
DL3	Troubleshooting ability	"I can resolve minor technical problems."
DL4	Digital confidence	"I feel confident using digital platforms."
DL5	Information evaluation	"I can evaluate online tax information critically."

to test the hypotheses, the following regression model is estimated:

$$Y = \alpha + \beta_1 X1 + \beta_2 X2 + \varepsilon \quad (1)$$

Where:

(i). Y= Voluntary Tax Compliance
(ii). $X1$= Digital Transformation
(iii). $X2$= Digital Literacy
(iv). α= Constant
(v). β_1, β_2= Regression coefficients
(vi). ε= Error term

4 Results

The results of testing each variable in this study, using data from 79 MSME respondents, were analyzed using regression analysis, incorporating the results of respondents completing the questionnaire. The following are the test results obtained:

Table 3. Result of data processing.

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	2.401	.260		9.216	.000		
	X1	.233	.086	.355	2.707	.008	.478	2.094
	X2	.221	.095	.304	2.317	.023	.478	2.094

a. Dependent Variable: Y

From the results of the statistical tests, the results of the Tolerance and VIF values showed figures of 2.094 and 0.478, indicating that the value was below a score of 10, which means that there was no multicollinearity between the independent variables.

The sig value shows a score of 0.008 indicating that the first hypothesis is accepted, where the digitalization transformation variable has a positive effect on voluntary tax compliance carried out by MSME actors. Imam et al. (2021) showed that digital tax services reduced compliance costs for MSME taxpayers, which increased the likelihood that taxpayers would comply on time without external enforcement [10]. Likewise, Purnamasari & Rosyadi (2022) demonstrated that digital filing services improved MSME compliance rates by making tax reporting easier and more accessible By minimizing barriers to fulfilling tax obligations, digital systems increase taxpayers' *perceived usefulness* of the tax process in line with the Technology Acceptance Model (TAM) [11].

The second hypothesis test showed a sig. 0.023 value indicating that the hypothesis was accepted. This means that the digital literacy of MSMEs has a significant positive influence on the valuative tax compliance carried out by MSMEs. Lestari & Hidayat (2023) found that MSME owners with higher digital literacy demonstrate more accurate and timely tax reporting because they are more capable of navigating digital tax systems [7]. Putra & Sari (2022) reported that digital literacy significantly increases compliance intention among small business taxpayers because it reduces perceived complexity and anxiety associated with using digital platforms [6].

5 Conclusion and Recommendation

The effect of Digital Transformation and Digital Literacy on Voluntary Tax Compliance of MSMEs was tested using multiple regression analysis. The multicollinearity test (Tolerance = 0.478; VIF = 2.094) suggests that the independent variables are not affected by multicollinearity, with a VIF value less than 10. This shows that Digital Transformation and Digital Literacy explain the variability in Voluntary Tax Compliance.

The first hypothesis was confirmed (sig = 0.008), suggesting that Digital Transformation has a significant positive impact on Voluntary Tax Compliance among MSMEs. This implies that MSME actors use digital tax systems (such as e-filing and electronic payment systems) as a driver to voluntarily comply with tax obligations. The finding is consistent with previous evidence indicating that digital tax services reduce tax compliance costs and increase the likelihood of timely tax compliance among MSMEs.

In line with the Technology Acceptance Model (TAM), digital transformation increases perceptions of usefulness, which in turn affect behaviour. If MSMEs consider digital tax services to be useful, easy to use, and technologically advanced, they are more likely to comply voluntarily.

The second hypothesis holds (sig = 0.023), Digital Literacy has a positive effect on Voluntary Tax Compliance. So, the more digital skills of MSME actors, the better the actors can exploit the digital tax system, and the better their tax compliance. It has also been reported that MSME entrepreneurs with higher levels of digital literacy demonstrate greater accuracy and timeliness in tax reporting. Furthermore, digital literacy has been found to reduce the perceived complexity and anxiety associated with digital systems, thereby increasing the intention to comply among small-business taxpayers.

Overall, the study findings demonstrate that voluntary tax compliance is a product of system and user (digital transformation and digital literacy) factors. Digital infrastructure as well as taxpayer's competence is important in digital tax reform.

From the result and in line with previous studies, we propose the following policy implications: First, tax administrations need to further enhance digital tax infrastructure since digital systems are cost-saving and efficient for tax administration. But the development of digital systems should be simple and intuitive to increase perceived usefulness, according to TAM. Second, education on digital literacy for MSMEs should be increased. Given the impact of digital literacy on voluntary tax compliance, tax authorities should work together with MSME organisation, university and government to organise digital tax literacy programs.

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