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Determinants of Taxpayer Compliance: The Moderating Role of Digital Literacy

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ABSTRACT

This research is motivated by Indonesia's low tax ratio, which remains below the average for ASEAN and OECD countries. Therefore, optimizing taxpayer compliance is necessary amidst the digital transformation of the tax system. Therefore, the purpose of this study is to examine the influence of tax knowledge, morality, and tax awareness on taxpayer compliance. Digital literacy clarifies the role of digital competencies in shaping the direction and intensity of these effects, thereby enriching conceptual understanding of the interaction between technology and user behaviour and its implications for performance and decision-making. Using a quantitative approach, this study involved 95 individual taxpayer respondents at the Gresik Medium Tax Office (KPP Madya) selected through purposive sampling. Data were analyzed using multiple linear regression and Moderated Regression Analysis (MRA). The results concluded that tax knowledge, morality, and tax awareness had a positive and significant effect on taxpayer compliance. As for the moderating variable, digital literacy was shown to strengthen the influence of morality and tax awareness on compliance. However, digital literacy did not moderate the influence of tax knowledge, as understanding the rules is a fundamental factor whose effect remains stable across levels of digital capability.

Keywords: Taxpayer Compliance, Tax Knowledge, Tax Morality, Tax Awareness, Digital Literacy

INTRODUCTION

Taxes play a vital role in a country's life, especially in Indonesia, as they are the largest source of revenue supporting the continuity of the government system and a measure of economic success (Rachmawan et al., 2020). Revenue from the tax sector is used to finance the government's general activities and to support the welfare and prosperity of the community (Fitria & Muiz, 2021). In line with the increase in state financing and expenditure, tax revenue targets also continue to increase every year.

In implementing tax collection in Indonesia, the government uses a self-assessment system that requires taxpayers to take an active role and exercise independence (Rusmawati & Wardani, 2015). Taxpayers are required to calculate, deposit, fill out, and report their own tax obligations. Therefore, taxpayer compliance is a key factor in achieving revenue targets. This compliance can arise from coercion or self-awareness (Andriani, 2021).

Over the last five years (2020–2024), tax revenue in Indonesia has increased significantly, especially after the COVID-19 pandemic. Tax revenue realization has consistently exceeded targets since 2021, with the highest achievement in 2022 at 115.7% of the target. This reflects improvements in the tax administration system, economic recovery, and increased taxpayer participation.

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Table 1 Indonesia's Tax Revenue Targets and Realisation (2020–2024)

Year	Tax Revenue Target (Rp Trillion)	Tax Revenue Realization (Rp Trillion)	Percentage of Realization (%)
2020	1,198.80	1,070.00	89
2021	1,229.60	1,277.50	104%
2022	1,485.00	1,716.80	116%
2023	1,718.00	1,869.20	109%
2024	2,111.40	2,309.90	109%

Source: Ministry of Finance, DGT, BPS (2024)

Although Indonesia's tax revenue realization in the last five years has shown a positive trend and exceeded targets, structural challenges still loom over the effectiveness of the national taxation system. One important indicator of a country's fiscal capacity is the tax ratio, the ratio of tax revenue to Gross Domestic Product (GDP). In 2024, Indonesia's tax ratio was 10.08%, down from 10.31% the previous year. (news.ddtc.co.id). This figure is far below the average for ASEAN and G20 countries, and lags far behind the average tax ratio of OECD member countries, which reaches 34%.

Table 2. Table of Indonesia's Tax Ratio (2020 – 2024)

Year	*Tax Ratio* (%)	Key Notes
2020	8.33	Impact of the COVID-19 pandemic, significant economic contraction
2021	9.11	Early economic recovery and tax reforms begin to be rolled out.
2022	10.39	Significant increase, driven by recovery and digitalization.
2023	10.31	Stable but slightly declining, with challenges in expanding the tax base
2024	10.08	Target not yet achieved, still below the ASEAN and OECD averages.

Source: Indonesian Ministry of Finance, DGT, State Budget (2024)

The low tax ratio indicates that tax contributions to Gross Domestic Product (GDP) remain minimal, and the tax base has not been fully exploited. One of the leading causes is suboptimal tax compliance, especially among individual taxpayers and SMEs. Tax compliance is influenced not only by structural factors such as regulations and supervision, but also by taxpayers' psychological and behavioural factors, namely tax knowledge, morality, and tax awareness. This low ratio reflects complex tax compliance issues, influenced by intrinsic factors such as taxpayer morality, tax awareness, and understanding of regulations (Alm, 2019).

To overcome low compliance and achieve revenue targets, the government, through the Directorate General of Taxes (DGT), continues to innovate through tax reforms and the modernization of the administrative system (Hendrawati & Pramudianti, 2018). This reform includes a shift to the technology and digitalization sector, such as the use of an e-tax system (e.g., e-registration, e-filing, e-billing), which aims to provide more efficient services and make it easier for taxpayers to understand and fulfil their tax obligations (Ermanis et al., 2021). These digitalisation efforts are crucial, given the tremendous potential of the current digital economy to drive national financial development (www.cnbcindonesia.com).

Currently, Indonesia is undergoing a digital transformation of its taxation system through various innovations, including Coretax (Core Tax Administration System), launched in early 2025. This system aims to improve efficiency, transparency, and accountability in tax management.

Coretax integrates all taxation services into a single electronic platform, enabling real-time tax registration, reporting, and payment.

Under the self-assessment system, Tax Knowledge is a fundamental factor, as taxpayers are required to calculate, report, and pay their own taxes (Tanjung, 2020). Tax knowledge includes understanding general provisions, taxation procedures (KUP), how to submit tax returns, payment deadlines, and penalties. Taxpayers with good knowledge are predicted to be more voluntarily compliant (Albab & Suwardi, 2021).

In addition to knowledge, compliance is influenced by social psychological factors, as explained by the slippery slope theory framework. Tax Morale is an important motivation stemming from moral obligations and individual beliefs about social contribution through tax payment (Alasfour et al., 2016). High morality will encourage taxpayers to comply voluntarily and to minimize tax avoidance. Tax Morale is understood as the moral principles or individual values regarding the payment of taxes (Pihany & Andriani, 2022). Empirical studies show that tax morality (ethical belief in paying taxes) is the foundation of voluntary compliance (Kirchler, 2007).

Although knowledge, morality, and awareness are internal determinants, compliance implementation now depends heavily on taxpayers' digital capabilities. Since the DGT reformed its administrative system (e-tax system), taxpayers are required to be able to use technology-based systems, such as e-filing and e-billing (Ermanis et al., 2021). According to Firmansyah (2021), digital literacy, namely the ability to use technology and digital media, is critical. Taxpayers must understand digital literacy to facilitate online reporting of tax obligations (Adhayati, 2021). If taxpayers have high levels of knowledge, morality, and awareness but lack adequate digital literacy, they will find it challenging to fulfil their tax obligations in a modernized system, thereby hindering compliance (Ermanis et al., 2021). Therefore, this study views digital literacy as a crucial moderating variable.

Many empirical studies support a positive relationship between Tax Knowledge and Tax Compliance. Research results show that the higher the level of tax knowledge, the higher the voluntary awareness of taxpayers (Fitria & Muiz, 2021). However, contradictory results have also been found, with some studies showing that tax knowledge does not significantly affect taxpayer compliance. Previous studies conducted by Asfa & Meiranto (2017) and Kemala (2015) found that tax knowledge has a positive effect on taxpayer compliance, while Damajanti (2015) found that tax knowledge has no effect on taxpayer compliance. In addition to tax knowledge, the rationality of taxpayers is considered to play an important role in increasing tax compliance.

Tax Morale was found to have a significant effect on Individual Taxpayer Compliance (WPOP). The higher the tax morale, the higher the compliance (Pihany & Andriani, 2022). Similarly, Tax Awareness was also found to have a positive and significant effect on compliance (Imeldan & Santioso, 2021).

Previous studies have examined various moderating and mediating variables related to compliance. Trust in tax authorities was found to mediate the influence of Tax Knowledge and Tax Digitalisation on voluntary tax compliance (Andriani & Mufidah, 2021). On the other hand, research by Lailiyah and Andriani (2023) found that tax sanctions were unable to moderate the relationships among tax morale, tax knowledge, the e-tax system and taxpayer compliance.

Although the e-tax system and digitalization have been shown to influence compliance significantly (Indrianti & Masitoh, 2017), research on Digital Literacy as a moderating variable remains limited. In the research results, Husein (2018), as cited in Izzah (2022), used "Internet Understanding" or "Digital Literacy" as a moderator, often only testing its relationship with e-filling or e-systems. The limitations in existing research include relatively short sampling periods or sampling only in certain regions, which do not represent the entire population (Imelda & Santioso, 2021). In addition, research examining how digital capabilities (digital literacy) influence the relationships among internal psychological factors (morality and awareness), cognitive factors (knowledge), and compliance in a comprehensive manner remains rare.

There is an inconsistency that becomes a research gap in the influence of Tax Knowledge on compliance (Raharjo, Majidah, Kurnia, 2020). Furthermore, although non-economic factors such as Tax Morality, Knowledge, and Awareness are recognised as important, how these three internal factors are actualised in the context of modern digital taxation is complex and not yet fully

explained (Rusmawati & Wardani, 2015). If taxpayers have good intentions (high morality) and know what to do (knowledge), barriers to digital implementation can prevent actual compliance.

LITERATURE REVIEW

Compliance Theory

Compliance Theory explains how and why individuals or groups comply with rules and norms set by authorities. This theory was first developed by Herbert C. Kelman in 1958 within the frameworks of sociology and social psychology to understand the mechanisms of compliance with social and legal authorities.

Kelman (1958) identified three forms of compliance:

1. Compliance (instrumental compliance): Individuals comply because of incentives or threats of punishment.
2. Identification: Compliance arises because individuals want to be associated with a particular group or figure.
3. Internalization: Individuals comply because they believe in the values of the rules.

The theory of compliance is very relevant because it bridges the relationship between Tax Morality, which is a form of internalization of values (normative compliance), Tax Awareness, which is motivation for compliance based on social and national responsibility, Tax Knowledge, which is a reflection of rationality and mastery of rules (instrumental compliance), and Tax System Digitalization as an enabler that strengthens or moderates motivation into concrete action. In other words, compliance theory places tax compliance as the result of the interaction between individual internal motivation and external convenience facilitated by digital systems.

The concept of taxpayer compliance with reference to the economic approach was developed by Allingham & Sandmo (1972). Based on the economic approach, taxpayer compliance can be defined as a decision in which taxpayers disclose their actual income to tax authorities under conditions of uncertainty. This means that taxpayers can choose to disclose the actual amount of tax owed or report a lower amount, depending on the risk of being audited, fined, or criminally prosecuted (Allingham & Sandmo, 1972). However, empirical research attempting to predict taxpayer compliance using this approach has not found sufficient evidence (Taing & Chang, 2020).

Tax Knowledge

Tax knowledge is a fundamental foundation in understanding the dynamics of tax compliance. Sujatmiko & Nurfirmansyah (2021) define tax knowledge as taxpayers' comprehensive understanding of the tax system, regulations, rights, and obligations that influence compliance behaviour. Alm (2019) identifies the dimensions of comprehensive tax knowledge: substantive knowledge (taxation material), procedural knowledge (reporting mechanisms), and conceptual knowledge (taxation philosophy).

The OECD study (2022) identified that countries with high levels of tax knowledge have comprehensive tax education systems, ongoing tax literacy programs, and open access to information. Richardson (2006) in cross-country research shows that tax knowledge is influenced by the quality of the education system, the complexity of tax regulations, access to digital information, a culture of transparency, and the social psychology perspective developed by Bobek & Hatfield (2003) explains that tax knowledge is formed through a process of socialization, individual experience, access to information, and the social environment.

Tax Morality

Tax morality is a fundamental concept that explains individuals' intrinsic motivation to pay taxes, grounded in ethical and moral considerations. Torgler (2011) defines tax morality as an internal moral belief that encourages taxpayers to fulfil their tax obligations beyond mere legal considerations or sanctions.

The OECD (2022) identifies that countries with high levels of tax morality have transparent taxation systems, accountable use of tax funds, and effective communication about the benefits of taxation. Bobek & Hatfield (2003) explain that the educational social environment, individual experience, and cultural context influence tax morality. Richardson's (2006) cross-country research

shows that the system of government influences tax morality, the level of corruption, the quality of public services, and the theoretical implications of morality in tax compliance are very significant. According to Braithwaite (2009), a morality-based approach is more effective than mere law enforcement. He emphasizes the importance of building moral awareness that encourages voluntary compliance. Moral theory provides a strong philosophical and psychological foundation for understanding the complexity of tax compliance. The digitization of the taxation system acts as a catalyst, strengthening moral considerations and creating a more transparent, fair, and dignified taxation ecosystem.

Tax Awareness

Tax awareness is a complex psychological construct that explains taxpayers' deep understanding of the importance of tax contributions to national development. Nugroho et al. (2020) define tax awareness as an intrinsic motivation that encourages individuals to understand, appreciate, and fulfil their tax obligations as a form of social participation. Alm (2019) identifies that tax awareness is influenced by several fundamental factors: education level, experience interacting with the tax system, perceptions of tax fairness, and trust in government institutions. Tax morality interacts closely with tax awareness. Torgler (2011) shows that individuals with high moral values tend to have greater tax awareness. They do not merely fulfil their obligations; they also understand the substantive meaning of tax contributions to social development.

Braithwaite (2009), in his theory of responsive regulation, emphasizes that tax awareness develops through a persuasive approach, continuous education, and the creation of a conducive environment. A comparative study by the OECD (2022) found that countries with high levels of tax awareness have transparent tax systems, comprehensive tax education programs, and mechanisms for taxpayer participation. Richardson (2006), in his cross-country study, shows that tax awareness is influenced by the system of government, organisational culture, the level of corruption, and the quality of public services.

The social psychology perspective developed by Bobek & Hatfield (2003) explains that tax awareness is shaped by socialisation, individual experience, and social context, and that these factors have significant theoretical implications. According to Alm (2019), an awareness-based approach is more effective than mere law enforcement. Focusing on building critical awareness will encourage sustainable voluntary compliance.

Digital Literacy

Digital literacy is a person's ability to use digital technology and media. According to Firmasnyah (2021), digital literacy can also be viewed as knowledge about the internet and how to use it. This concept consists of several components, including knowledge, techniques, and attitudes, that work together to provide information. Digital literacy is expected to improve a person's cognitive and communicative abilities.

Digital literacy is an individual's ability to use digital technology, digital media, and internet-based communication tools effectively and efficiently to obtain, manage, and convey information (Firmansyah, 2021). In the context of taxation, digital literacy is crucial because it enables taxpayers to access tax information, understand the latest regulations, and file taxes online through systems such as e-filing (Adhayati & Sulistyowati, 2021). The rapid development of digital technology has made digital literacy a key asset for taxpayers in improving compliance due to the ease of access and real-time management of tax data.

As a moderating variable, digital literacy influences the strength of the relationship between tax knowledge, morality, and tax awareness and taxpayer compliance. High digital literacy enables taxpayers not only to have sufficient tax knowledge but also to apply it in using digital tax reporting technology. Thus, digital literacy makes it easier for taxpayers to fulfil their obligations in a compliant and timely manner, thereby increasing the effectiveness of tax knowledge in encouraging compliance (Burhanudin & Octaviani, 2022).

Furthermore, digital literacy also influences morality and tax awareness. With adequate digital literacy skills, taxpayers can more easily access information on tax obligations and benefits, and see transparently how the government uses taxes for national development. This not only increases

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social awareness and the morality of paying taxes but also motivates taxpayers to comply with their social responsibility (Qonaah et al., 2023). Therefore, digital literacy can strengthen the relationship between morality and tax awareness with taxpayer compliance, making the tax payment process easier and more transparent.

Moreover, Digital literacy is theoretically more robust because it reflects multidimensional abilities to access, understand, evaluate, and use digital information effectively. Compared to tax knowledge, ethics, and tax awareness which are more specific digital literacy has a broader scope and is more adaptable to technological change. This variable moderates the relationship between cognitive and behavioural factors, thereby explaining variations in taxpayer compliance more comprehensively. With a high level of digital literacy, individuals not only understand the rules but also apply them through digital tax systems, thereby improving accuracy, efficiency, and compliance on an ongoing basis.

The balance between psychological variables—tax knowledge, ethics, and tax awareness and technological variables, such as digital literacy, is crucial for explaining taxpayer compliance. Psychological factors shape individuals' intentions, values, and understanding of tax obligations, while digital literacy equips them with the technical ability to access, understand, and use technology-based tax systems. The integration of these two factors results in more consistent compliance behaviour, as taxpayers possess not only motivation and awareness but also the practical skills to fulfil their obligations effectively. Thus, this approach creates a comprehensive framework that balances internal and external factors in enhancing taxpayer compliance.

Conceptual Framework

This conceptual framework maps out how Tax Knowledge, Tax Morale, and Tax Awareness as independent variables that influence Tax Compliance (Figure 1).

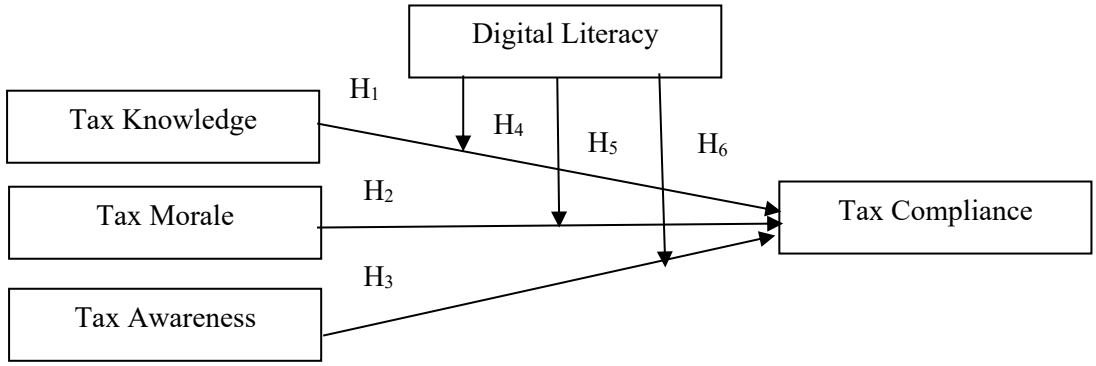

Figure 1.
Conceptual Framework

Tax Knowledge and Taxpayer Compliance

In compliance theory, tax knowledge is a crucial component that influences both voluntary and forced compliance. Taxpayers who understand regulations, reporting procedures, and tax rights and obligations are better able to fulfill their obligations in a timely and accurate manner. This knowledge reduces uncertainty, increases efficiency, and reduces the risk of administrative errors, thereby systematically strengthening compliance.

Research by Imelda and Santioso (2021) shows that tax knowledge significantly influences individual taxpayers' compliance, reinforcing the idea that understanding the tax system is the foundation of compliant behaviour. Research by Palar et al. (2024) also confirms that understanding the digitisation of the tax administration system is important for increasing compliance, especially among non-employee groups with more complex compliance characteristics. Thus, tax knowledge is not only a technical aspect but also an educational and structural instrument that strengthens compliance by increasing trust, reducing administrative barriers, and improving understanding of the legal consequences within the tax system.

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H_1: Tax knowledge has a positive effect on taxpayer compliance

Tax Morality and Taxpayer Compliance

Morality is an important motivation for paying taxes, stemming from a moral obligation to participate in the state by fulfilling one's tax obligations. Theory of Compliance, introduced by Herbert Kelman in 1958, divides compliance into three forms: compliance (compliance due to external pressure), identification (compliance due to a sense of social attachment), and internalization (compliance due to belief in the value of rules). In this case, tax morality falls within the realm of internalization, where individuals pay taxes because they consider it a moral obligation and a contribution to the state. Thus, the higher a person's morality, the stronger their internalization of tax obligations, thereby increasing voluntary compliance.

Individuals comply with state leaders and voluntarily fulfil their tax obligations (Pihany & Andriani, 2022). Therefore, the more compliant individuals are with their state leaders, the more voluntarily they fulfil their tax obligations. Research by Pihany & Andriani (2022) shows that morality affects taxpayer compliance, with tax morale positively and significantly influencing compliance. Therefore, tax morale positively affects taxpayer compliance.

H_2: Tax morality has a positive effect on taxpayer compliance

Tax Awareness and Taxpayer Compliance

Tax awareness, defined as a person's knowledge, acknowledgement, and strong desire to fulfil their tax obligations, correlates positively with taxpayer compliance. The higher the tax awareness, the more likely taxpayers are to report and pay their taxes on time voluntarily.

In compliance theory, tax awareness is an important element in shaping voluntary compliance, because taxpayers who understand the role of taxes in contributing to development and public services tend to have a normative commitment to fulfilling their tax obligations. Tax awareness theory emphasises that understanding the benefits of taxes, rights and obligations as citizens, and the consequences of noncompliance will encourage rational and socially compliant behaviour.

Research by Rahmad Hidayat et al. (2025) shows that tax awareness significantly influences taxpayer compliance, especially when combined with religious values as an intervening variable. Research by Gabby Imelda and Linda Santioso (2021) also reinforces that tax awareness is a major predictor of compliance, especially among individual taxpayers. Thus, tax awareness is not only a cognitive aspect but also an ethical and social foundation that strengthens compliance by increasing trust, understanding, and responsibility towards the taxation system.

H_3: Tax awareness has a positive effect on taxpayer compliance

Digital Literacy as a Moderator

In the digital age, the ability to access and manage tax information through technology has become a significant additional factor. Digital literacy, as a moderating variable, enhances individuals' cognitive capacities in fulfilling their obligations, thereby strengthening the influence of tax knowledge on compliance, in line with compliance theory's emphasis on awareness and understanding of the rules. Digital literacy strengthens the perception of control, namely the belief among taxpayers that they can fulfil their tax obligations independently through digital systems such as e-filing and DJP Online. Research by Agusetiawati et al. (2024) shows that digital literacy significantly affects compliance and enhances the effectiveness of tax education. Therefore, digital literacy is expected to moderate the influence of tax knowledge on compliance by increasing taxpayers' actual abilities and perceptions of control in implementing their knowledge through taxation technology.

Tax morality reflects taxpayers' ethical values and social responsibility in fulfilling their tax obligations. Individuals with high levels of morality tend to view tax payments as a form of contribution to national development and community welfare (Alasfour et al., 2016). However, in the context of tax digitalisation, morality alone is insufficient to encourage compliance unless it is accompanied by the technical ability to access and use digital tax systems. Digital literacy serves as a moderator, enabling highly moral taxpayers to express their compliance through digital channels such as e-filing, e-billing, and the DJP Online application. Research by Lailiyah and

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Andriani (2023) shows that the e-tax system has a positive influence on compliance, but tax sanctions as a moderator are ineffective. This indicates that value-based approaches, such as morality, need to be supported by digital literacy in order to be implemented optimally. Thus, digital literacy can strengthen the influence of morality on taxpayer compliance by enabling individuals to channel their ethical values through an efficient, transparent taxation system.

Digital literacy plays a role in strengthening the perception of control, the belief that taxpayers can fulfil their tax obligations independently through digital systems. Research by Firmansyah (2021) shows that digital literacy improves the efficiency and transparency of public services, including taxation services. Meanwhile, Hidayat et al. (2023) found that tax awareness positively affects compliance, but religiosity does not moderate this effect. This indicates that a value-based approach needs to be supported by a technological approach to achieve optimal compliance. Therefore, digital literacy is predicted to moderate the influence of tax awareness on taxpayer compliance by strengthening taxpayers' ability to implement their intention to comply through the digital taxation system.

H_4: Digital literacy positively moderates the influence of tax knowledge on taxpayer compliance

H_5: Digital literacy positively moderates the influence of morality on taxpayer compliance

H_6: Digital literacy positively moderates the influence of tax awareness on taxpayer compliance

METHOD

The approach used in this study is quantitative. The research population consists of registered individual taxpayers with a Coretax account at the Madya Gresik Tax Office (KPP). The sampling technique used in this study is purposive sampling. The purposive sampling method was chosen because the researcher selected samples based on criteria relevant to the research objectives: individual taxpayers who had activated Coretax and were registered at the Madya Gresik Tax Office (KPP). The researcher has collected data indicating that, as of July 2025, 2,072 individual taxpayers meet these criteria.

The use of the Slovin formula with a 10% error margin is based on considerations of efficiency and research resource constraints, particularly when the population size is known, but its characteristics are relatively homogeneous. The Slovin formula allows researchers to determine a representative sample size through a simple calculation without requiring information on the population variance. A 10% error rate is generally used in exploratory or social research that is still of a general nature, so a higher tolerance for error is still acceptable without significantly diminishing the meaning of the analysis (Slovin, 1960). Additionally, this error rate helps balance data accuracy with time constraints, costs, and respondent accessibility. Thus, the use of the Slovin formula at a 10% error rate remains relevant for producing sufficiently reliable estimates that proportionally represent the population.To determine the sample size, the researcher used the Slovin formula with an error rate (e) of 10% and a confidence level of 90%.

The Slovin formula is as follows:

$$n = \frac{N}{1+N\,(e)^2}$$

where:

n = sample size
N = number of taxpayers in the study area
E = tolerable error rate (10%)
N = 2,072 / 1+(2,072x$(0.1)^2$
= 2,072 / 21,72
= 95

Using this formula, the researcher obtained a representative sample size for statistical analysis, namely 95 respondents from Individual Taxpayers at the Madya Gresik Tax Office (KPP). Table 3 presents the operational definitions of the independent, dependent, and moderating variables.

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Table 3. Operational Definitions of Variables

No	Variable	Indicators	Operational Statement	Questionnaire Statements	Scale
1	Tax Knowledge (TK)	Understanding of tax types	Knowing the types of taxes that must be paid	I know the types of taxes that apply to me as a taxpayer.	Likert 1–5
		Understanding of procedures	Knowing the procedures for reporting and paying taxes	I understand the correct tax reporting and payment procedures.	Likert 1–5
		Information regarding tax penalties	Knowing that there are penalties for tax noncompliance	I am aware that there are penalties if I do not comply with tax payments.	Likert 1–5
2	Tax Morality (TM)	The value of honesty in paying taxes	Individuals feel guilty if they do not pay taxes	I feel guilty if I avoid my tax obligations.	Likert 1–5
		Concern for the country	Taxes are considered a form of contribution to national development	I pay taxes because I am contributing to the country's development.	Likert 1–5
		Personal ethics towards the law	Tax evasion is considered unethical	Tax evasion is unethical.	Likert 1–5
3	Tax Awareness (TA)	Understanding the role of taxes for the country	Individuals understand the importance of taxes for the country	I am aware that taxes are significant for government operations.	Likert 1–5
		Willingness to fulfill tax obligations	Individuals are willing to fulfill their tax obligations on time	I always try to fulfil my tax obligations promptly.	Likert 1–5
		Responsibility as a citizen	Paying taxes is considered a form of civic responsibility	Paying taxes is my responsibility as a good citizen.	Likert 1–5
4	Tax Compliance (TC)	Compliance in reporting	Always report taxes on time and in accordance with applicable regulations	I always report taxes on time in accordance with applicable regulations.	Likert 1–5
		Compliance in payment	Pay taxes according to the specified amount and schedule	I pay taxes according to the specified amount and schedule.	Likert 1–5
		Avoiding violations	Not manipulating data or information in tax reporting	I have never attempted to manipulate tax data in order to	Likert 1–5

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No	Variable	Indicators	Operational Statement	Questionnaire Statements	Scale
				reduce the amount paid.	
5	Digital Literacy (DL)	Ability to use tax applications	Taxpayers are able to use the DJP Online application, e-filing, e-billing	I am able to use the DJP Online application to report taxes	Likert 1–5
		Understanding the benefits of taxation technology	Taxpayers understand the benefits of digitization in facilitating tax reporting	I feel that the digital system makes it easier for me to report and pay taxes.	Likert 1–5
		Access to digital tax information	Taxpayers can access tax information through digital media	I can easily access tax information through the official DGT website	Likert 1–5

Source: processed data from previous research (2025)

Validity and reliability tests were used to examine the quality of data in this study. The validity test in this study used *Pearson's correlation*, which measures the association between the values obtained from the questions. If the Pearson correlation of an instrument is said to be valid, it is when all values are well above the minimum limit of 0.30 and significant at the 1% level. This indicates that each question item accurately represents respondents' tax compliance behaviour (meets the validity requirements) (Ghozali, 2011). After all items were declared valid, the next step was to test reliability using Cronbach's Alpha. An instrument is declared reliable if the Cronbach's Alpha value is ≥ 0.70. Meanwhile, the data analysis technique in this study used descriptive statistical analysis, covering descriptive statistical tests, classical assumption tests, and hypothesis testing (regression analysis) and Moderating Analysis Regression (MRA) testing.

RESULT

Descriptive statistics in this section describe the general trends in respondents' responses to the research variables: Tax Compliance (Y), Tax Morality (X1), Tax Awareness (X2), Tax Knowledge (X3), and Digital Literacy (Z). The presentation includes the minimum, maximum, mean, and standard deviation as measures of data dispersion. This approach aligns with Ghozali's (2021) recommendation that descriptive statistics provide an initial overview of the data distribution before inferential analysis is conducted.

Table 4. Results of Descriptive Statistical Analysis

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Tax Compliance (TC)	95	2,000	5,000	4,347	0.680
Tax Knowledge (TK)	95	1,000	5,000	4,271	0.853
Tax Morality (TM)	95	2,000	5,000	4,151	0.766
Tax Awareness (TA)	95	1,000	5,000	4,250	0.750
Digital Literacy (DL)	95	1,000	5,000	4,120	0.925

Source: Statistical test data processed, (2025)

The table above shows that all variables have high mean values above 4.0, close to the maximum of 5. This indicates that, on average, respondents gave relatively high ratings across all measured aspects, including compliance, tax morality, tax awareness, tax knowledge, and digital literacy. Meanwhile, the results of the validity and reliability tests are presented in Tables 5 to 14 as follows:

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Table 5. Results of the Tax Compliance Variable (TC) Validity Test

Correlations					
		TC1	TC2	TC3	TC
TC1	Pearson Correlation	1	.753**	.474**	.876**
	Sig. (2-tailed)		.000	.000	.000
	N	95	95	95	95
TC2	Pearson Correlation	.753**	1	.592**	.909**
	Sig. (2-tailed)	.000		.000	.000
	N	95	95	95	95
TC3	Pearson Correlation	.474**	.592**	1	.791**
	Sig. (2-tailed)	.000	.000		.000
	N	95	95	95	95
TC	Pearson Correlation	.876**	.909**	.791**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	95	95	95	95
**. Correlation is significant at the 0.01 level (2-tailed).					

Source: SPSS test results processed, (2025)

The three items in the Tax Compliance variable (Y) show extreme correlation values, ranging from 0.791 to 0.909. All values are well above the minimum limit of 0.30 and are significant at the 1% level. This indicates that each question item accurately represents respondents' tax compliance behaviour (meets the validity requirements).

Table 6. Validity of Tax Knowledge Variable (TK)

Correlations					
		TK1	TK2	TK3	TK
TK1	Pearson Correlation	1	.829**	.632**	.905**
	Sig. (2-tailed)		.000	.000	.000
	N	95	95	95	95
TK2	Pearson Correlation	.829**	1	.748**	.950**
	Sig. (2-tailed)	.000		.000	.000
	N	95	95	95	95
TK3	Pearson Correlation	.632**	.748**	1	.869**
	Sig. (2-tailed)	.000	.000		.000
	N	95	95	95	95
TK	Pearson Correlation	.905**	.950**	.869**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	95	95	95	95
**. Correlation is significant at the 0.01 level (2-tailed).					

Source: SPSS test results processed (2025)

All three indicators—knowledge of tax types, payment and reporting procedures, and knowledge of tax penalties—showed high validity with correlations above 0.869 (meeting the validity requirements).

Table 7.Results of Tax Morality Variable (TM) Validity Test

Correlations					
		TM1	TM2	TM3	TM
TM1	Pearson Correlation	1	.566**	.710**	.864**
	Sig. (2-tailed)		.000	.000	.000
	N	95	95	95	95
TM2	Pearson Correlation	.566**	1	.599**	.841**

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	Sig. (2-tailed)	.000		.000	.000
	N	95	95	95	95
TM3	Pearson Correlation	.710**	.599**	1	.892**
	Sig. (2-tailed)	.000	.000		.000
	N	95	95	95	95
TM	Pearson Correlation	.864**	.841**	.892**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	95	95	95	95
**. Correlation is significant at the 0.01 level (2-tailed).					

Source: SPSS test results processed, (2025)

The correlation coefficient for the Tax Morality (TM) variable ranges from 0.841 to 0.892, indicating that all items are strongly related to the total variable score. This indicates that indicators related to honesty, ethical attitudes towards tax obligations, and concern as citizens truly describe the tax morality of respondents (meeting validity requirements).

Table 8. Results of Tax Awareness Variable (TA) Validity Test

Correlations					
		TA1	TA2	TA3	TA
TA1	Pearson Correlation	1	.742**	.645**	.896**
	Sig. (2-tailed)		.000	.000	.000
	N	95	95	95	95
TA2	Pearson Correlation	.742**	1	.717**	.918**
	Sig. (2-tailed)	.000		.000	.000
	N	95	95	95	95
TA3	Pearson Correlation	.645**	.717**	1	.871**
	Sig. (2-tailed)	.000	.000		.000
	N	95	95	95	95
TA	Pearson Correlation	.896**	.918**	.871**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	95	95	95	95
**. Correlation is significant at the 0.01 level (2-tailed).					

Source: SPSS test results processed (2025)

All items in the Tax Awareness variable (TA) exhibit strong, significant correlations. The range of values from 0.871 to 0.918 indicates that respondents' perceptions of the importance of taxes, their obligations as citizens, and their commitment to complying with tax regulations have clear conceptual consistency (meeting validity requirements).

Table 9. Results of the Digital Literacy (DL) Variable Validity Test

Correlations					
		LD1	LD2	LD3	LD
DL1	Pearson Correlation	1	.786**	.756**	.926**
	Sig. (2-tailed)		.000	.000	.000
	N	95	95	95	95
DL2	Pearson Correlation	.786**	1	.749**	.918**
	Sig. (2-tailed)	.000		.000	.000
	N	95	95	95	95
DL3	Pearson Correlation	.756**	.749**	1	.909**
	Sig. (2-tailed)	.000	.000		.000
	N	95	95	95	95

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DL	Pearson Correlation	.926**	.918**	.909**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	95	95	95	95
**. Correlation is significant at the 0.01 level (2-tailed).					

Source: SPSS test results processed, (2025)

All digital literacy items show a robust correlation, ranging from 0.909 to 0.926. Indicators such as the ability to use tax applications, understanding the benefits of digitisation, and access to tax information through digital platforms are closely related to the total digital literacy score.

Table 10. Reliability Test Results for Tax Compliance Variables (TC)

Statistics	Value	Description	
Cronbach's Alpha	0.82	Reliable	
Number of Items	3		

Source: SPSS test results processed (2025)

An alpha value of 0.821 indicates that variable Y has high internal consistency. This means that the three tax compliance items support one another in measuring aspects of compliance behaviour. According to Ghozali's (2021) criteria, this value falls into the strong reliability category.

Table 11. Results of Tax Knowledge Variable Reliability Test (TK)

Statistics	Value	Description
Cronbach's Alpha	0.89	Reliable
Number of Items	3	

Source: SPSS test results processed (2025)

An alpha value of 0.896 indicates strong internal consistency among tax knowledge indicators. Thus, the PP variable can be confirmed as reliable and stable for use in analysis.

Table 12. Results of Tax Morality Variable Reliability Test (TM)

Statistics	Value	Description
Cronbach's Alpha	0.83	Reliable
Number of Items	3	

Source: SPSS test results processed (2025)

The alpha value of 0.830 indicates very high reliability. This indicates that the three tax morality items have excellent conceptual stability. This value supports the high validity in the previous section.

Table 13. Results of Tax Awareness (TA) Variable Reliability Test

Statistics	Value	Description
Cronbach's Alpha	0.875	Reliable
Number of Items	3	

Source: SPSS test results processed, (2025)

With an alpha value of 0.875, the tax awareness variable is categorised as reliable. This indicates that respondents' perceptions of tax awareness are consistently measured across the three indicators.

Table 14. Results of the Digital Literacy Variable Reliability Test (DL)

Statistics	Value	Description
Cronbach's Alpha	0.906	Reliable
Number of Items	3	

Source: SPSS test results processed, (2025)

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The alpha value of 0.906 indicates that the digital literacy variable is also reliable. High consistency indicates that all digital literacy indicators describe the respondents' digital competencies in a stable, homogeneous manner.

While, the results of the normality test (table 15) using the One-Sample Kolmogorov-Smirnov Test indicate that the residual data are normally distributed. It is evident from the Asymp. Sig. (2-tailed) value of 0.079, which is greater than the significance level of 0.05. Thus, the null hypothesis stating that the data are normally distributed cannot be rejected. The test statistic of 0.085 for a sample size of 97 also indicates no significant deviation from normality.

Furthermore, the mean residual of 0.0000000 and the standard deviation of 0.24189381 suggest that the residuals are evenly distributed around the mean. The maximum absolute difference of 0.085 is also relatively small, thereby reinforcing the conclusion that the data satisfy the assumption of normality. Therefore, the regression model used is suitable for further analysis**.**

Table 15. Results of Normality Test

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		97
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	.24189381
Most Extreme Differences	Absolute	.085
	Positive	.085
	Negative	-.048
Test Statistic		.085
Asymp. Sig. (2-tailed)		.079[c]
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		

Source: Statistical test data processed (2025)

The results of the multicollinearity test (table 16) on the regression model indicate that there is no multicollinearity among the independent variables. This is evident from the Tolerance values for the TK variable (0.379), the TM variable (0.523), and the TA variable (0.276), all of which exceed the minimum threshold of 0.10. Additionally, the Variance Inflation Factor (VIF) values for TK are 2.640, for TM are 1.911, and for TA are 3.627, all of which remain below the maximum threshold of 10. These results indicate that the independent variables do not exhibit high correlation and thus do not interfere with one another in the model. Thus, each variable can explain the dependent variable independently. Furthermore, the significance values of each variable also indicate a significant influence on taxpayer compliance, making the regression model suitable for further analysis.

Table 16.
Results of Multicollinearity Test

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.869	.155		5.600	.000		
	TK	.247	.048	.374	5.167	.000	.379	2.640
	TM	.133	.045	.182	2.948	.004	.523	1.911
	TA	.333	.064	.444	5.228	.000	.276	3.627

a. Dependent Variable: KEP

Source: Statistical test data processed (2025)

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Table 17. Results of the Heteroscedasticity Test

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.350	.093		3.779	.000
	TK	.000	.028	-.002	-.012	.990
	TM	-.033	.027	-.170	-1.208	.230
	TA	-.005	.038	-.026	-.135	.893
a. Dependent Variable: abs_res						

Source: Statistical test data processed (2025)

The results of the heteroscedasticity test (Table 17) using the Glejser method indicate that the regression model does not exhibit heteroscedasticity. It can be seen in the significance values for each independent variable: TK at 0.990, TM at 0.230, and TA at 0.893, all of which exceed the significance level of 0.05. Thus, these variables do not significantly affect the absolute residual value (abs_res). This condition indicates that the residual variance is constant or homoscedastic. Additionally, the relatively small regression coefficients also indicate the absence of any specific pattern in the distribution of the residuals. Therefore, it can be concluded that the regression model satisfies the classical assumption of homoscedasticity, making the estimated results more reliable and suitable for further analysis without bias due to unequal variances.

Table 18. Goodness-of-Fit Test Results

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	36.359	6	6.060	460.304	.000[b]
	Residual	1.185	90	.013		
	Total	37.543	96			
a. Dependent Variable: TC						
b. Predictors: (Constant), TC_DL, TM, TK, TC, TK_DL, TM_DL						

Source: Statistical test data processed (2025)

The goodness of fit results (Table 18) in the ANOVA table indicate that the regression model used has excellent fit. This is evident from the F-value of 460.304 with a significance level of 0.000, which is less than 0.05. It means that all independent variables—namely TK, TM, TA, and the interaction terms (TK_DL, TM_DL, TA_DL)—simultaneously have a significant effect on the dependent variable of taxpayer compliance (TC). The Sum of Squares value in the regression of 36.359 is much larger than the residual of 1.185, indicating that most of the variation in the dependent variable can be explained by the model. Furthermore, the Mean Square of the regression, which is 6.060, compared to the residual of 0.013, reinforces that the model has high explanatory power. Therefore, the regression model is deemed to fit well and is suitable for further analysis.

Table 19. Coefficient of Determination Test Results

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.984[a]	.968	.966	.114737
a. Predictors: (Constant), TA_DL, TM, TK, TA, TK_DL, TM_DL				

Source: Statistical test data processed (2025)

The results of the coefficient of determination test in the Model Summary table 19 indicate that the model has a very strong explanatory power. An R value of 0.984 indicates a very strong

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relationship between the independent variables and the dependent variable, namely, taxpayer compliance (TC). An R-squared value of 0.968 indicates that 96.8% of the variation in taxpayer compliance can be explained by the variables TK, TM, TA, as well as the interaction terms TK_DL, TM_DL, and TA_DL. Meanwhile, the Adjusted R-Square value of 0.966 confirms that after adjusting for the number of variables in the model, the explanatory power remains very high, at 96.6%. Other factors outside the model influence the remaining 3.4%. Furthermore, the Standard Error of the Estimate of 0.114737 indicates a relatively small prediction error, making the model accurate and suitable for use in analysis.

Table 20. Moderating Regression Analysis (MRA) Test Results

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.031	.097		10,643	.000
	TK	.246	.120	.336	2,060	.042
	TM	.372	.153	.456	2,436	.017
	TA	.879	.187	1,054	4,691	.000
	TK_DL	.045	.028	.405	1,585	.116
	TM_DL	.095	.035	.779	2.715	.008
	TA_DL	.133	.045	1,182	2,971	.004
a. Dependent Variable: KEP						

Source: SPSS test results processed (2025)

The Tax Knowledge (TK) variable has a significance value (Sig.) of 0.042 and an Unstandardized Coefficients (B) value of 0.246. Because the significance value is less than 0.05, $H_1$is accepted. The Morality variable (TM) has a significance value (Sig.) of 0.017 and an Unstandardized Coefficients value (B) of 0.372. Because the significance value is < 0.05, $H_2$is accepted. The Tax Awareness (TA) variable has a significance value (Sig.) of 0.000 and an Unstandardized Coefficients (B) value of 0.879. With a significance value < 0.05, $H_3$is accepted.

Meanwhile, the Interaction of Tax Knowledge and Digital Literacy (TK_DL) has a significance value of 0.116 and Unstandardized Coefficients (B) of 0.045. Because the significance value is above 0.05, H_4 is rejected, indicating that Digital Literacy is unable to moderate the influence of Tax Knowledge on Tax Compliance. Morality and Digital Literacy (TM_DL) has a significance value of 0.008 and an Unstandardized Coefficients (B) value of 0.095. Because the significance value is below 0.05, $H_5$is accepted. Tax Awareness and Digital Literacy (TA_DL) has a significance value of 0.004 and an Unstandardized Coefficients (B) value of 0.133. Because the significance value is below 0.05, $H_6$is accepted.

DISCUSSION

Tax Knowledge (TK) has a positive and significant effect on tax compliance. This shows that any increase in taxpayers' understanding of tax regulations and procedures will significantly improve their compliance. This finding supports Stanley Milgram's (1963) Theory of Compliance, which states that knowledge is an essential cognitive factor in helping individuals understand their obligations and feel compelled to obey the rules. In addition, this aligns with Alm's (2019) view that increasing knowledge through a comprehensive approach will encourage sustainable voluntary compliance. These findings support the theory of tax behaviour, which states that a good understanding can reduce uncertainty, increase perceptions of control, and encourage compliance behaviour (Alm, 2019). Tax knowledge acts as a cognitive factor that helps taxpayers assess fiscal consequences and obligations more rationally.

Furthermore, empirically, this positive influence indicates that the greater a taxpayer's understanding of tax rules, procedures, and benefits, the more likely they are to comply. Knowledge reduces uncertainty, reporting errors, and the risk of penalties, thereby rationally increasing

compliance. However, the strength of this relationship often does not stand alone. Knowledge without the support of other factors such as ethics, awareness, or system ease does not always lead to compliance. Taxpayers who understand the rules may actually exploit regulatory loopholes to avoid taxes (tax avoidance). This means that TK has two sides: it enhances formal compliance, but it also has the potential to increase strategic behavior.Furthermore, statistical significance does not always reflect practical significance. If the coefficient is relatively small compared to other variables (such as awareness or digital literacy), then TK serves more as a supporting factor rather than a primary driver. Therefore, TK's contribution should be positioned as an effective cognitive foundation when reinforced by psychological and technological factors.

These results reinforce the research of Imelda and Santioso (2021) and Palar et al. (2024), which states that understanding the tax system and the digitisation of administration are the foundations of compliant behaviour. Previous studies have also shown similar patterns. Fitria and Muiz (2021) found that taxpayers' level of understanding of tax regulations is directly related to increased voluntary compliance. Handoko et al. (2020) made a similar statement, emphasising that understanding tax penalties and procedures strengthens taxpayers' ability to fulfil their obligations. Thus, this study's results confirm that tax knowledge is a key determinant of taxpayer compliance.

Tax Morality (TM) also has a positive and significant effect on tax compliance. This shows that internal commitment, honesty, and a sense of responsibility as citizens are strong drivers of voluntary compliance among taxpayers. These results are in line with Herbert Kelman's Theory of Compliance (1958), particularly at the internalisation stage, where individuals comply because they believe the rules embody moral obligations. This is also supported by Torgler's (2011) Tax Morale theory, which defines morality as an internal belief that drives compliance beyond mere consideration of legal sanctions. These findings are consistent with the concept of tax morale outlined by Torgler (2011), that individual morality, including values of honesty, ethics, and social responsibility, is one of the main drivers of compliance. When individuals view tax payment as an ethical act and a moral contribution, the tendency to avoid or delay obligations becomes lower.

Unlike cognitive knowledge, tax morality reflects an individual's values, norms, and sense of responsibility toward the state. Positive findings indicate that the threat of sanctions does not solely drive compliance, but also by an ethical awareness to contribute to the public interest. However, the influence of TM must be interpreted critically. Morality is contextual and can be influenced by perceptions of the tax system's fairness, government transparency, and the level of trust in institutions. If taxpayers perceive the system as unfair or corrupt, morality may weaken, even among individuals with high ethical values. Furthermore, statistical significance does not automatically indicate a dominant influence; TM may be weaker than other variables, such as awareness or the ease of digital systems. Thus, TM serves as an important internal driver, but its effectiveness depends heavily on the institutional environment. Sustainable compliance emerges when a credible, fair, and accessible system reinforces individual morality.

Tax awareness has a positive and highly significant effect on tax compliance. These results support the theory that awareness motivates compliance through a sense of national responsibility. This finding revises the initial narrative in your draft, which mentioned that awareness was insignificant; the latest laboratory data prove that awareness is a vital element in shaping voluntary compliance. These results support the research of Rahmad et al. (2025) and Imelda and Santioso (2021), which position tax awareness as a major predictor of compliance among individual taxpayers. These findings confirm that understanding the vital role of taxes in development and public services actually encourages socially and rationally compliant behaviour. This awareness is a form of recognition and respect for applicable tax regulations.

Tax awareness reflects the internalisation of the meaning of taxes that paying taxes is not merely an administrative obligation, but a tangible contribution to development. The very high level of significance indicates that this variable has strong and consistent explanatory power for compliance. However, these results must be interpreted with caution. "Highly significant" does not always mean the most dominant in practice; it is important to consider the magnitude of the coefficient relative to other variables. Furthermore, awareness often overlaps with morality, so there is a potential for conceptual redundancy if the two are not clearly distinguished in the research instrument. On the other hand, tax awareness without support from an easily accessible system can

create an "intention–behavior gap," in which the intention to comply is not realised. Therefore, the power of tax awareness will be optimal when supported by digital literacy and an efficient tax system, enabling such intentions to be translated into actual compliant behaviour.

Digital literacy is unable to moderate the influence of tax knowledge on taxpayer compliance. These results reject the initial theory underlying the hypothesis, which assumed that digital capabilities would strengthen the application of tax knowledge in modern taxation systems. Tax authority has designed digital platforms with very simple interfaces. This ease of use allows even low-level digital literates to fulfil their obligations, provided they possess adequate tax knowledge. Thus, digital literacy no longer functions as a catalyst but merely as a standardised technical tool.

Moreover, many taxpayers with high tax knowledge but limited technological skills choose to use the services of tax consultants or administrative staff to operate digital systems. The existence of this assistance eliminates the moderating role of personal digital literacy, as compliance is still achieved through intermediaries. Tax compliance is driven more by legal awareness and sanctions than by technological sophistication. Knowledge of the magnitude of fines and moral obligations is far more powerful in influencing the intent to comply than the ability to operate digital devices. If a taxpayer already possesses strong tax knowledge but lacks the intention to comply, a high level of digital literacy can be used to exploit loopholes in the system, thereby failing to strengthen compliance consistently.

Widodo's (2020) view that tax knowledge is a foundational factor. This means that understanding tax rules is sufficient to influence compliant behaviour without relying on technological literacy as an intermediary. Knowledge of sanctions and procedures remains the key to compliance, even though the administrative medium has shifted to digital.

Digital literacy can moderate (strengthen) the influence of morality on tax compliance. This finding supports the hypothesis development theory linking digital literacy to perceived behavioural control in the Theory of Planned Behaviour (TPB). Digital literacy serves as a technical mechanism that enables high-morality taxpayers to express their good intentions on digital platforms effectively. These results are supported by research by Lailiyah and Andriani (2023), which shows that digital taxation systems (e-tax systems) have a positive impact, especially when supported by adequate literacy, thereby minimising implementation barriers. Digital literacy enables individuals of high moral integrity to fulfil their ethical obligations through transparent and efficient digital channels such as coretax.

Conceptually, tax morality provides an internal drive to comply, while digital literacy provides the practical ability to realise that intention through technology-based tax systems. When both are high, the effect is synergistic: taxpayers not only want to comply but can also execute it efficiently, accurately, and on time. However, the claim of "strengthening" must be tested in terms of the direction and magnitude of the interaction coefficient. If the moderating effect is significant but small, digital literacy acts more as a facilitator than as the primary driver. Additionally, there is potential for an ambivalent effect: individuals with high tax morality and high digital literacy might use their technical knowledge to engage in legally aggressive tax planning (tax avoidance), meaning substantive compliance does not always increase. Contextual factors are also crucial. In complex or less user-friendly systems, digital literacy becomes the primary differentiator; conversely, in simple systems, its role may diminish. Thus, digital literacy effectively strengthens morality when the system supports transparency, ease of use, and accountability.

Digital literacy significantly moderates the relationship between Tax Awareness and Compliance. This finding strongly supports the hypothesis development theory, which states that awareness will be more effective in encouraging compliance when supported by a system that facilitates access to information and eases reporting. Digital literacy serves as a "bridge" for taxpayers who are aware of their obligations, enabling them to execute these actions through modern systems. This finding aligns with the research by Hama (2023) and Muvidah & Andriani (2022), which confirms that the use of digital systems can strengthen the effect of awareness on compliant behaviour. Firmansyah's (2021) study also supports the idea that digital literacy improves the quality of public services and transparency, which, in turn, optimises the impact of awareness on compliance. This proves that a technological approach is essential to support a value-based approach.

Tax awareness fosters the awareness and willingness to comply, but without digital skills, such intentions often remain at the cognitive level. It is where digital literacy acts as an "enabler," translating awareness into actual behaviour through the use of electronic tax systems. However, the significance of moderation requires further analysis. If the interaction coefficient is positive, then higher digital literacy is associated with a stronger influence of awareness on compliance. Conversely, if it is small, its role is more as technical support than as a primary driver. Additionally, there is a potential for conceptual bias: taxpayers with high digital literacy are typically also better educated, so the moderating effect may overlap with other variables such as knowledge. Another criticism is that, in a system already very simple and user-friendly, the role of digital literacy may diminish because technical barriers are virtually nonexistent. Thus, digital literacy truly serves as a strong moderator, particularly in complex systems, where technological proficiency becomes a distinguishing factor in translating awareness into actual compliance.

CONCLUSION

The conclusions of this study confirm that cognitive and moral factors play a direct and consistent role in improving taxpayer compliance, while the role of technology is conditional. Tax Knowledge, Tax Morality, and Tax Awareness were found to influence compliance, but only Tax Morality and Tax Awareness are reinforced by Digital Literacy. This suggests that digital literacy functions more as a bridge between intention and action than as an enhancer of the main variables.

However, this study has several limitations. First, the use of cross-sectional data limits the ability to capture dynamic changes in taxpayer behaviour over time. Second, the variables used remain limited, so they do not yet capture other external factors, such as trust in the government or the complexity of the tax system. Third, questionnaire-based measurements may introduce respondent subjectivity bias. Therefore, future research is advised to adopt a longitudinal design, incorporate contextual variables, and combine quantitative and qualitative methods to yield more comprehensive, in-depth results.

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