



Understanding What Drives Crypto Tax Reporting in Indonesia: Knowledge and Demographic Factors

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Abstract: This study examines the influence of tax knowledge related to digital transactions and demographic factors—measured by educational level and income level—on individual compliance in reporting cryptocurrency assets in Indonesia's Annual Tax Return. Data were collected through a structured questionnaire distributed to cryptocurrency investors on platforms such as Tokocrypto, Indodax, and Stockbit Crypto. The findings indicate that tax knowledge regarding digital transactions, educational level, and income level all positively and significantly impact cryptocurrency reporting compliance. These results suggest that improving taxpayers' understanding of digital tax regulations and strengthening demographic factors such as education and income can enhance compliance behaviour.

Keywords: Tax Knowledge; Educational Level; Income Level; Cryptocurrency; Compliance.

Abstrak: Penelitian ini bertujuan untuk menguji pengaruh pengetahuan perpajakan terkait transaksi digital dan faktor demografis—yang diukur melalui tingkat pendidikan dan tingkat pendapatan—terhadap kepatuhan individu dalam melaporkan aset cryptocurrency pada Surat Pemberitahuan Tahunan (SPT) di Indonesia. Data diperoleh melalui survei menggunakan kuesioner terstruktur yang disebarakan kepada investor cryptocurrency pengguna platform Tokocrypto, Indodax, dan Stockbit Crypto. Hasil penelitian menunjukkan bahwa pengetahuan perpajakan terkait transaksi digital, tingkat pendidikan, dan tingkat pendapatan berpengaruh positif dan signifikan terhadap kepatuhan pelaporan aset cryptocurrency. Temuan ini menegaskan bahwa peningkatan literasi pajak di bidang aset digital dan penguatan faktor-faktor demografis seperti pendidikan dan pendapatan dapat mendorong perilaku pelaporan yang lebih patuh.

Kata Kunci: Pengetahuan Pajak; Tingkat Pendidikan; Tingkat Pendapatan; Cryptocurrency, Kepatuhan.

INTRODUCTION

Recent data show a consistent and significant rise in the number of cryptocurrency investors in Indonesia. 2020 there were approximately 4 million investors, which climbed to 11.2 million in 2021. This growth continued, reaching 16.550 million investors by November 2022 (Noor et al., 2023). According to Hasan Fawzi, Chief Executive of the Supervision for Financial Sector Technology Innovation, Digital Financial Assets, and Crypto Assets from the Financial Services Authority (OJK), the number of crypto asset investors had reached 20.900 million by August 2024—an increase from 20.500 million in July 2024. By September 2024, the total rose further to 21.270 million investors.

This rapid growth reflects the strong enthusiasm among the public for digital asset investment and highlights the vast potential of Indonesia's cryptocurrency industry. The rapid growth of cryptocurrency investors in Indonesia has prompted the government to strengthen regulatory oversight. The Indonesian government established the Commodity



Futures Trading Regulatory Agency (BAPPEBTI) to supervise crypto asset trading and license futures exchanges that deal in cryptocurrencies.

As cryptocurrency has increasingly become a primary source of income for some individuals, the government has introduced tax regulations to govern these transactions. On May 1, 2022, the Minister of Finance issued Regulation No. 68/PMK.03/2022, mandating the application of Value Added Tax (VAT) and Income Tax (PPh) on crypto trading. To ensure compliance with tax laws, cryptocurrency traders and investors in Indonesia must report income from crypto transactions in their Annual Income Tax Return (SPT Tahunan PPh). This requires maintaining complete and accurate transaction records. Penalties apply for late tax payments to encourage compliance. The taxation policy reflects the government's effort to regulate digital assets within a clear legal framework. By understanding their tax obligations, market participants can make informed decisions when leveraging cryptocurrency opportunities in Indonesia and globally.

Despite these efforts, the taxation system for cryptocurrencies remains underdeveloped and faces significant challenges. Crypto assets are subject to final income tax, similar to stock trading. However, limited tax literacy among crypto users continues to hinder effective compliance. The Directorate General of Taxes (DJP) must ensure its tax framework evolves in line with the rapidly growing crypto ecosystem. According to Article 9 of Regulation No. 68/PMK.03/2022 licensed Physical Crypto Asset Traders (PFAK) are authorised to issue tax invoices and withholding receipts, providing a mechanism for compliance monitoring. Poor understanding, supervision, and regulatory ambiguity undermine effective tax enforcement. Since the implementation of Regulation No. 68/PMK.03/2022, tax compliance related to crypto transactions in Indonesia has remained low (Peraturan Menteri Keuangan, 2022).

As of March 2024, tax revenue from crypto transactions stood at only IDR 539.7 billion, well below expectations considering the sector's size. While cryptocurrency is gaining popularity on social media, clear regulations and public understanding of crypto-related tax obligations are still lacking. Many individuals do not fully understand the applicable tax rules for cryptocurrency transactions, leading to tax avoidance, inaccurate reporting, and difficulties in fulfilling tax obligations. These challenges have made many investors hesitant to invest in cryptocurrency (Wardani & Pesirahu, 2023). One key contributing factor is demographics—particularly educational and income levels—significantly influencing tax compliance.

While it is commonly assumed that higher education correlates with better tax compliance due to increased tax literacy, empirical evidence presents a more nuanced picture. (Wardani & Pesirahu, 2023) emphasise that tax literacy is often developed through formal education, particularly in fields that include taxation in their curriculum. Theoretically, education is vital in disseminating tax knowledge and promoting compliance (Nugraha et al., 2024). However, (Nichita et al., 2019) found that a higher level of education does not necessarily guarantee accurate tax reporting. Uncertainty may persist even among educated individuals due to a lack of information or distrust in the tax system. The Indonesian education system has not fully incorporated tax education or instilled core values like integrity and civic responsibility. Income level, another key demographic factor, also impacts tax compliance. Higher income tends to be associated with better compliance, as individuals with sufficient financial capacity are more likely to fulfil their tax obligations (Wea, 2022). Awareness of tax duties and the consequences of non-compliance further enhances this likelihood. Supporting this view, (Pandiangan et al.,



2023) found that individual tax compliance generally increases with rising income, suggesting that education and income play interconnected roles in shaping taxpayer behaviour.

Based on the discussion above, this study aims to examine the influence of tax knowledge related to digital transactions—particularly cryptocurrency transactions—along with educational level and income level, on compliance in reporting cryptocurrency assets. While prior research on tax compliance in Indonesia and internationally has broadly examined general taxpayer populations or focused on conventional income sources such as salaries, business income, and stock trading (e.g., Al-Ttaffi et al., 2020; Oladipo et al., 2022; Appiah et al., 2024), empirical studies that specifically address the reporting compliance of cryptocurrency assets in the Annual Tax Return (SPT) remain scarce. This gap is notable given the rapid growth of cryptocurrency adoption and its emerging role as an income source in Indonesia. Existing literature has emphasised variables such as income, education, and overall tax literacy, yet these have seldom been analysed within the unique regulatory and behavioural context of crypto transactions.

The novelty of this research lies in two main aspects. First, it explicitly examines tax compliance behaviour among respondents who are active cryptocurrency investors, thereby capturing patterns, challenges, and motivations unique to this demographic. Second, it focuses on crypto asset reporting within the Indonesian tax framework, a domain that remains underexplored despite its increasing economic relevance. Integrating demographic and knowledge-based factors into the analysis offers fresh insights into compliance behaviour in the digital asset sector. The findings are expected to inform tax authorities and policymakers in designing targeted strategies that enhance voluntary compliance and align with the evolving dynamics of the digital economy.

THEORETICAL REVIEW

The Theory of Planned Behaviour. The Theory of Planned Behaviour (TPB), developed by (Ajzen, 1991), is one of the most influential behavioural theories. It explains that an individual's intention to perform a behaviour is determined by three main components: attitude toward the behaviour, subjective norms, and perceived behavioural control. This study examines the influence of tax knowledge and demographic factors—measured through educational and income levels—on the compliance of cryptocurrency asset reporting. These three variables can be comprehensively analysed through the lens of TPB, as each contributes to shaping attitudes, perceived control, and ultimately, an individual's intention to comply with tax obligations.

The first component of TPB, attitude toward the behaviour, refers to how an individual evaluates a particular action—such as reporting crypto assets—as favourable or unfavourable. Tax knowledge is closely related to this component. Individuals with a sound understanding of the importance of tax payment and the social and economic benefits of tax compliance are likelier to hold a positive attitude toward reporting their crypto assets. Recent studies support the idea that higher levels of tax literacy are positively associated with favourable attitudes toward tax compliance (Alamsyah et al., 2024; S. Wardani & Hermawan, 2024).

The second component, subjective norms, concerns an individual's perception of social pressure or expectations regarding a given behaviour. In cryptocurrency

transactions, which are often conducted anonymously and digitally, social norms may be less influential than in conventional financial settings. However, in Indonesia's growing crypto community, moral and ethical encouragement and influence from peers or professionals (such as tax consultants) still shape subjective norms that support compliance. (Fitria, 2024) argues that social norms can mediate the relationship between intention and digital tax compliance. Although not the primary focus of this study, environmental influences—such as crypto investor communities, social media, or professional advice—can still affect an individual's intention to comply with tax regulations.

The third component, perceived behavioural control, refers to how individuals feel capable or in control of performing a behaviour. In this study, educational and income levels serve as important indicators. Individuals with higher education have a greater capacity to access and comprehend complex tax regulations, including those related to digital assets. However, as noted by (Nichita et al., 2019), a higher level of education does not always guarantee compliance, as negative perceptions of tax benefits and distrust in government—often due to corruption—can foster scepticism. This suggests that while education and income are important, perception and trust remain critical. Likewise, higher-income individuals are generally more financially capable of fulfilling their tax obligations without perceiving them as burdensome. (Pandiangan et al., 2024) found that increased income correlates positively with tax compliance.

Grounded in the Theory of Planned Behaviour (TPB), this study offers a robust conceptual framework for exploring the behavioural dynamics behind individual compliance with cryptocurrency asset reporting obligations. By examining why some taxpayers fulfil these responsibilities while others do not, the research contributes a behavioural lens to an area of tax literature that traditionally focuses on conventional income sources. Its emphasis on cryptocurrency—a sector that remains underrepresented in academic discourse—adds timely relevance, especially in light of Indonesia's rapid expansion of digital asset ownership. Given the complexities of tax compliance in the digital era, the insights drawn from this study have practical implications for tax authorities, particularly Indonesia's Directorate General of Taxes (DJP). Integrating psychological and demographic variables allows a more nuanced understanding of taxpayer behaviour. This can inform the development of more targeted, behaviorally informed policy interventions to improve voluntary compliance in the growing cryptocurrency sector.

Hypothesis Development. Taxpayers' level of understanding significantly influences their tax compliance; the better their comprehension, the more likely they are to fulfil their tax obligations effectively. While tax awareness has a positive and significant effect, it is insufficient without adequate knowledge and the willingness of individuals to comply. Several studies empirically strengthen this argument. For example, research from (Al-Ttaffi et al., 2020) shows that increasing tax knowledge significantly increases compliance behaviour in Yemen. Likewise, research in Nigeria conducted by (Oladipo et al., 2022) concluded that perceptions of tax fairness and tax knowledge are significant determinants that positively affect compliance behaviour. Recent research with diverse country settings also produced the same conclusion (Appiah et al., 2024; Hien et al., 2025). Therefore, with a sound understanding of taxation, individuals are more likely to make timely tax payments (Nugroho, 2022). Personal income tax compliance is positively affected by a thorough understanding of tax regulations (Zaikin et al., 2022).



However, not all studies show a uniform positive picture. Several findings show that although knowledge can increase awareness, it does not always lead to compliance, especially when taxpayers view the tax system as unfair or when law enforcement is weak. For example, research by (Musimenta, 2020) revealed that administrative complexity and high compliance costs can limit the influence of knowledge on compliance, showing that knowledge alone may not be sufficient in systems burdened by administrative challenges.

Considering the mixed but generally supportive evidence, especially in the context of digital and relatively novel regulatory domains such as cryptocurrencies, we posit:

H1: Tax knowledge related to digital transactions positively influences cryptocurrency reporting compliance.

Education can effectively disseminate information about taxation, including its roles, objectives, and other related aspects. A higher level of education is believed to increase the ability to think critically, understand regulations, and foster awareness of the contribution of taxes to infrastructure development, the provision of social services, and economic progress. (Nugraha et al., 2024) emphasised that adequate education encourages a more profound understanding, which fosters intrinsic motivation to comply with paying taxes. Similar findings were reported by (Hidayati et al., 2023), who found that taxpayers with higher education levels tend to be more compliant, especially in income tax reporting. International evidence also supports this view. For example, (Kiow et al., 2021) in Malaysia found that higher education levels positively correlate with perceptions of ethics and tax compliance.

However, not all studies are in line with these findings. Some research found that education is not always a significant predictor of tax compliance. (Haizumah & Hayati, 2022) showed that the level of education had no significant effect on taxpayer compliance in Pamekasan, indicating that other factors, such as specific tax knowledge and perceptions of fairness, have a more dominant role. At the international level, (Kogler et al., 2023) in Austria found that education alone cannot increase compliance without trust in the tax authority.

These varied findings show that although education is often associated with higher tax compliance, its effect is not always consistent and can be influenced by contextual factors such as law enforcement, trust, and the tax system's integrity. In the context of cryptocurrency, the level of education is expected to help taxpayers understand the tax implications and encourage reporting compliance. Therefore, the hypothesis we propose is as follows.

H2: Educational level positively influences cryptocurrency reporting compliance.

One of the key factors influencing an individual's ability to pay taxes is their income level (Handriyani & Astawa, 2022; Putri & Trisnaningsih, 2023). The higher a person's income, the greater their ability to manage finances and fulfil tax obligations, provided such management is carried out wisely to meet basic needs before short-term desires (Handriyani & Astawa, 2022; Wea, 2022). A stable income can generally cover living expenses and fulfil the obligation to pay taxes. Conversely, low-income individuals tend to prioritise meeting basic needs, so the ability to allocate funds for taxes becomes limited (Putri & Trisnaningsih, 2023).



Various recent empirical studies support this positive relationship. (Judijanto, 2024), in his literature review, concluded that income is one of the most consistent economic determinants affecting tax compliance in developing and developed countries. In line with this, (Muehlbacher et al., 2023), through a behavioural experiment, found that when taxpayers transparently report their income and tax obligations, the level of compliance increases significantly, indicating that the factor of financial capacity plays a role in encouraging compliant behaviour. Similar findings were also reported by (Jagrič et al., 2025), who identified financial capacity, including income level, as one of the main taxpayer characteristics that contribute to compliance.

Based on largely supportive empirical evidence, this study assumes that in the context of cryptocurrency tax reporting in Indonesia, income will be an important factor in driving compliance. Thus, the last hypothesis in this study is formulated as follows.

H3: Income level positively influences cryptocurrency reporting compliance.

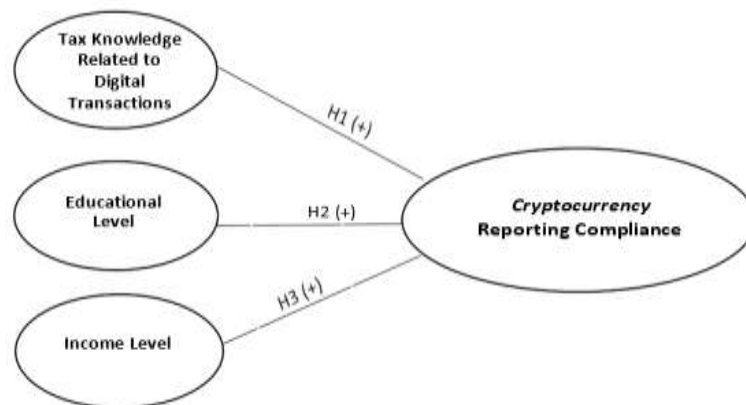


Figure 1. Reaserch Model

Source: Processed data, 2025

METHODS

This study collected primary data from individual respondents through their answers to a structured questionnaire. The data collection process involved distributing the questionnaire via Google Forms, which was shared across various social media platforms such as WhatsApp, Instagram, LinkedIn, and others. This approach enabled the researchers to reach various participants and gather relevant insights efficiently. The primary data was gathered through the distribution of questionnaires, which included questions regarding the influence of tax knowledge on digital transactions, educational level, and income level on the compliance of individual taxpayers in reporting cryptocurrency assets in their annual tax returns.

Population and Sample. The population of this study consists of cryptocurrency investors in Indonesia. The sampling technique employed is purposive sampling, which involves focusing on specific characteristics and collecting data based on predefined criteria—namely, cryptocurrency investors from Tokocrypto (operated by PT Aset Digital Berkat), Indodax (operated by PT Indodax Nasional Indonesia), and Stockbit Crypto (operated by PT Coinbit Digital Indonesia). These three are the most prominent among

Indonesia's 12 cryptocurrency trading platforms. Limiting the sample to investors using these three platforms is based on several considerations. These platforms are among Indonesia's largest and most widely used, representing a substantial local cryptocurrency trading market share. The study aims to gather relevant and representative data on tax reporting behaviour among active participants by concentrating on users from these platforms. Moreover, each platform attracts a distinct user base, allowing for comparative analysis of factors such as tax knowledge, educational level, and income level in the context of tax compliance. The selection of this sample also considers the accessibility of data and the relevance of the research findings to the broader Indonesian cryptocurrency market. The number of respondents in this study is shown in **Table 1**.

Table 1. Distribution of Respondents Based on Platform

No	Platform	Respondent	Per cent
1	Tokocrypto	38	35
2	Indodax	35	32
3	Stockbit Crypto	37	34
Total respondent		110	100

Source: Processed data, 2025

Table 1 shows the distribution of respondents based on the cryptocurrency platforms they use. The study involved 110 respondents, investors or users of three major cryptocurrency exchanges in Indonesia: Tokocrypto, Indodax, and Stockbit Crypto. Among the respondents, 38 individuals (35 per cent) are users of Tokocrypto, making it the platform with the highest number of participants in this research. This is followed by Stockbit Crypto, with 37 respondents (34 per cent), and Indodax with 35 respondents (32 per cent). Although the differences in the number of respondents across the platforms are relatively small, they collectively reflect a balanced representation of the three most widely used cryptocurrency exchanges in the Indonesian market. The selection of these platforms was intentional, as they represent the country's largest and most popular exchanges, capturing a significant portion of trading activity. The relatively even distribution also supports comparative analysis across different user groups. This data serves as the foundation for exploring patterns in tax compliance behaviour, particularly concerning factors such as tax literacy, educational level, and income level among active users of these platforms.

Based on the demographic data in **Table 2**, most respondents fall within the 21 to 30 age group, making up 59 per cent (n is 65) of the total sample. This suggests that young adults are the dominant participants in cryptocurrency investment or usage within the surveyed population. Their strong representation may be attributed to higher digital literacy, openness to innovation, and familiarity with mobile-based financial platforms. Respondents under 20 account for 29 per cent (n is 32), emphasising that cryptocurrency engagement is heavily concentrated among younger individuals. In contrast, only a small percentage of respondents come from older age groups: 1 per cent are aged 31 to 40, 4 per cent are aged 41 to 50, and 7 per cent are over 50. These figures imply that involvement in cryptocurrency-related activities generally declines with age, possibly due to differences in technology adoption and investment preferences.

Regarding gender distribution, 60 per cent of the participants are female (n is 66), while 40 per cent are male (n is 44). This indicates a noteworthy trend, as it reflects a growing level of participation among women in the digital financial landscape—an area historically dominated by men. The data may signal changing patterns in financial behaviour and increasing accessibility of crypto investment platforms for diverse user groups.

Table 2. Distribution of Respondents Based on Age and Gender

Category	Sub-category	Frequency (n)	Percentage (per cent)
Age	Under 20	32	29
	21 to 30	65	59
	31 to 40	1	1
	41 to 50	4	4
	Above 50	8	7
	Total	110	100
Gender	Male	44	40
	Female	66	60
	Total	110	100

Source: Processed data, 2025

Data Analysis Technique. The variables in this study consist of three independent variables, namely KNOWLEDGE, EDUCATION, and INCOME, and one dependent variable, namely COMPLIANCE. The KNOWLEDGE variable in this study is measured using six indicators, each comprising statements that assess the taxpayer's understanding of tax regulations related to digital transactions in Indonesia. These indicators evaluate cryptocurrency investors' awareness of the applicable tax obligations and the digital economy taxation framework. The COMPLIANCE variable is measured through four indicators that contain statements reflecting the taxpayer's behaviour in fulfilling their tax responsibilities, specifically in reporting cryptocurrency assets in their annual personal income tax returns. These indicators are designed to capture the extent to which crypto users comply with the reporting requirements of Indonesian tax authorities. The EDUCATION variable is determined based on the respondents' highest level of formal education completed. Meanwhile, the INCOME variable is measured by the total monthly income of each respondent, who, in this context, is an active taxpayer engaged in cryptocurrency-related activities. These variables collectively provide insight into the factors influencing tax compliance behaviour among Indonesian crypto investors.

The research model, shown in **Figure 1** above, was tested using the Structural Equation Modelling—Partial Least Squares (SEM-PLS) method with SmartPLS version 3 software. This method was chosen because it is suitable for simultaneously analysing relationships between latent variables, works optimally on data with a non-normal distribution, and can be used on relatively small to medium sample sizes (Hair et al., 2021).

The model evaluation was carried out in two stages. The first stage is the outer model, which is used to assess the feasibility of indicators in measuring their constructs through validity and reliability tests. An indicator is declared to meet convergent validity if the loading factor value is more than 0.700 and the Average Variance Extracted (AVE) is more than 0.500. In contrast, construct reliability is met if the Composite Reliability (CR) and Cronbach's Alpha are more than 0.700. The second stage is the inner model,



which is used to test the strength and direction of relationships between latent variables according to the hypotheses that have been formulated. Path significance is tested using the bootstrapping technique with 5,000 resamples, with the significance limit at a t-statistic value above 1.960 for α is 5 per cent. The quality of the structural model is assessed through the coefficient of determination (R^2), effect size (f^2), and predictive relevance (Q^2), which must have a positive value (Hair et al., 2021).

RESULTS

Outer Model Evaluation. The outer model evaluation was conducted to assess the validity and reliability of the constructs. **Table 3** presents the results of the outer model evaluation. The test results show that all indicators have a loading factor value above 0.700, which means they meet the criteria for convergent validity. The Average Variance Extracted (AVE) value for all constructs is also greater than 0.500, indicating that the constructs can explain more than 50 per cent of the variance of their indicators. Furthermore, the reliability test shows that all constructs have Composite Reliability (CR) and Cronbach's Alpha values above 0.700, indicating good internal consistency. Thus, all constructs are suitable for use in further analysis.

Inner Model Evaluation. Next, the inner model evaluation was conducted to test the structural relationships between latent variables and assess the model's ability to predict the dependent variable. The first step was to test the potential for multicollinearity problems. **Table 4** presents the results of the inner model evaluation. The test results show that all Variance Inflation Factor (VIF) values are from 1.000 to 3.225, far below the threshold of 5. This confirms that there is no indication of multicollinearity, so each independent variable provides a unique contribution of information in predicting COMPLIANCE.

Table 3. Outer Model Evaluation Results

Construct / Indicator	Loading Factor	Cronbach's Alpha	CR	AVE
KNOWLEDGE		0.912	0.932	0.696
KNOW1	0.806			
KNOW2	0.841			
KNOW3	0.872			
KNOW4	0.837			
KNOW5	0.867			
KNOW6	0.780			
COMPLIANCE		0.835	0.890	0.671
COMPLIANCE 1	0.762			
COMPLIANCE 2	0.850			
COMPLIANCE 3	0.903			
COMPLIANCE 4	0.751			
EDUCATION	1.000	1.000	1.000	1.000
INCOME	1.000	1.000	1.000	1.000

Source: Processed data, *SmartPLS*, 2025

The coefficient of determination (R^2) value for the COMPLIANCE construct is 0.772, with an adjusted R^2 value of 0.765. This means that KNOWLEDGE, INCOME, and EDUCATION can explain 77.200 per cent of the variation in cryptocurrency asset



reporting compliance, while other factors outside the model influence the remaining 22.800 per cent. Based on the criteria of (Hair et al., 2021), this value falls into the substantial category, indicating that the model has high explanatory power.

Table 4. Inner Model Evaluation Results

Criteria	Compliance
R ²	0.772
R ² Adjusted	0.765
Q ²	0.503
f ² KNOWLEDGE	1.769
f ² INCOME	0.026
f ² EDUCATION	0.209
VIF Range	1.000 to 3.225

Source: Processed data, *SmartPLS*, 2025

The effect size (f^2) test in **Table 4** also shows that KNOWLEDGE significantly affects COMPLIANCE with a value of 1.769. In contrast, INCOME has only a small effect (0.026), while EDUCATION has a medium effect (0.209). These results indicate that tax knowledge is the dominant factor in encouraging cryptocurrency asset reporting compliance, while the influence of income level is relatively limited. Finally, the model's predictive ability was tested using the Predictive Relevance (Q^2) value obtained through the blindfolding procedure. The Q^2 value for the COMPLIANCE construct is 0.503, indicating that the model has strong predictive relevance (Q^2 more than 0.350). These findings reinforce the conclusion that the model is not only statistically significant but can also predict compliance behaviour well in the context of cryptocurrency asset taxation. Overall, the inner model evaluation results confirm that this research model has high explanatory power and predictive ability. Tax Knowledge is the most influential factor, followed by education, while income has a lower contribution.

Hypothesis Testing. Hypothesis testing was carried out using the bootstrapping method with 5,000 resamples to obtain t-statistics and p-values for the relationships between variables in the model. The test results are shown in **Table 5**.

Table 5. Hypothesis Test Results

Path	Original Sample	T Statistics	P Values	Remarks
KNOWLEDGE → COMPLIANCE	0.699	14.822	0.000	Significant
INCOME → COMPLIANCE	0.088	1.996	0.046	Significant
EDUCATION → COMPLIANCE	0.271	5.148	0.000	Significant

Source: Processed data, *SmartPLS*, 2025

The analysis results show that all independent variables positively and significantly affect COMPLIANCE. KNOWLEDGE has the most significant effect with a path coefficient of 0.699 and a t-statistic value of 14.822 (p less than 0.001), so hypothesis H1 is accepted. The EDUCATION variable has a positive effect with a coefficient of 0.271 and a t-statistic of 5.148 (p less than 0.001), supporting hypothesis H2. Meanwhile, INCOME also positively affects COMPLIANCE, although with a relatively small coefficient (0.088) and a t-statistic value of 1.996 (p is 0.046), so hypothesis H3 is accepted. These findings indicate that tax knowledge is the primary determinant of





cryptocurrency asset reporting compliance, followed by education level. In contrast, the influence of income level is relatively weak but still statistically significant.

DISCUSSION

Tax knowledge related to digital transactions and cryptocurrency reporting compliance. A comprehensive understanding of taxation in the digital economy, particularly concerning cryptocurrency transactions, plays a pivotal role in shaping individual taxpayer compliance. As digital assets become more integrated into mainstream financial behaviour, taxpayers' ability to comprehend their obligations under current tax law is increasingly essential. In this context, tax knowledge includes awareness of applicable rates, reporting procedures, payment deadlines, and the legal consequences of non-compliance. When taxpayers are equipped with such knowledge, they are more confident in fulfilling their obligations. However, they are also less likely to make errors or avoid filing out of uncertainty. This is particularly important for cryptocurrency assets, which often raise questions around valuation, timing, and the recognition of gains, unlike traditional financial instruments. In the framework of TPB, this knowledge plays a role in shaping a positive attitude toward compliance (attitude), strengthening confidence in the ability to manage complex reporting processes (perceived behavioural control), and can be influenced by the subjective norms of the crypto environment or community (subjective norms), thereby encouraging compliant behaviour.

The findings of this study confirm H1, showing that tax knowledge has a significant and positive influence on compliance behaviour in cryptocurrency reporting. This indicates that higher levels of understanding enable taxpayers to interpret complex reporting rules, meet deadlines, and avoid intentional and unintentional errors. Such results are consistent with several earlier studies highlighting the positive relationship between tax knowledge and compliance. For instance, a study by (Zaikin et al., 2022) conducted at KPP Pratama Kendari found that taxpayers' understanding of the Indonesian tax system significantly impacted their willingness and ability to comply. Individuals with greater awareness of relevant laws were more inclined to accurately prepare their returns, calculate their tax liabilities, and submit timely payments. The study also emphasised that tax knowledge helped reduce psychological barriers, such as fear of penalties or confusion over filing requirements, which improved compliance behaviour. These results reflect that when a positive attitude toward tax obligations is formed and psychological barriers are reduced, the intention to comply (intention) in TPB becomes stronger, affecting actual compliance behaviour. In line with previous studies (Al-Ttaffi et al., 2020; Appiah et al., 2024; Hien et al., 2025; Oladipo et al., 2022).

Similarly, (Nugroho, 2022), in research conducted at Universitas Wijaya Kusuma Surabaya, confirmed that tax knowledge had a strong, positive influence on taxpayer behaviour. The study revealed that individuals who understood their tax obligations tended to be more proactive in fulfilling them. This included voluntarily preparing tax reports, calculating and paying owed taxes without delay, and avoiding administrative mistakes. However, other literature, such as (Musimenta, 2020), shows that even with high knowledge, administrative complexity and high compliance costs can reduce perceived behavioural control, so the intention to comply does not always lead to compliant



behaviour. This serves as a reminder that knowledge needs to be balanced with policies that facilitate reporting and reduce structural barriers.

Cryptocurrency, by nature, presents a dynamic and often ambiguous tax landscape. Price volatility, decentralised exchanges, and the anonymous nature of some transactions pose challenges to accurate and timely reporting. Unlike salaried income or conventional capital gains, third parties may not automatically report cryptocurrency profits, making it the taxpayer's responsibility to understand and self-declare. From the perspective of TPB, this volatile crypto market condition demands high perceived behavioural control, where tax knowledge becomes a determining factor to manage uncertainty and still fulfil reporting obligations correctly.

This study fills that gap by focusing specifically on taxpayers who are cryptocurrency investors. Narrowing the scope captures behaviours, challenges, and compliance patterns unique to this rapidly growing group. The implication is that policy interventions should be directed to improve the three components of TPB simultaneously: strengthening positive attitudes through relevant education, building supportive subjective norms through educational communities, and increasing perceived behavioural control with simple reporting procedures and clear technical guidelines.

Educational level and cryptocurrency reporting compliance. The findings of this study reveal that educational level has a significant and positive influence on taxpayers' compliance behaviour in reporting cryptocurrency holdings on their Annual Tax Returns (SPT). While educational attainment is often perceived as a strong predictor of rational decision-making and responsible civic behaviour, this study confirms that the assumption holds in the context of cryptocurrency tax compliance. Higher formal education levels enhance individuals' ability to comprehend complex reporting requirements, interpret tax regulations, and execute accurate reporting of digital asset transactions. This result supports H2, showing that education is not only associated with general knowledge but also with a greater capacity to apply that knowledge in novel and technically challenging tax contexts.

From the perspective of TPB, higher educational attainment may contribute to more favourable attitudes toward compliance, increase perceived behavioural control in navigating complex crypto-tax rules, and strengthen subjective norms regarding lawful reporting among peers with similar educational backgrounds. This aligns with previous studies, such as (Kiow, 2021), which found that education levels moderate ethical perceptions and positively influence compliance behaviour. Likewise, (Appiah et al., 2024) and (Hien et al., 2025) have emphasised that education empowers taxpayers to assess their obligations critically and reduces the cognitive burden of understanding sophisticated tax matters.

However, not all literature fully supports this view. Some studies, including (Kasturi et al., 2024), conducted in the Lombok Timur Regency area, concluded that educational level had no significant influence on tax compliance. While the research recognised education as an important element in shaping individual capacity, it found no substantial evidence that formal education could predict whether taxpayers would meet their reporting obligations. Similarly, (Haizumah & Hayati, 2022) conducted a study at KPP Pratama Pamekasan and found that education level had no statistically significant effect on compliance. They argued that both high- and low-educated taxpayers could show similar levels of compliance, provided they had sufficient exposure to tax information and possessed a strong moral commitment to fulfilling their civic duties. These studies suggest



that tax knowledge, outreach by tax authorities, and internal motivation play a more direct role than educational credentials in determining compliance behaviour.

In our context, such potential limitations appear less pronounced because the tax rules for cryptocurrency are still relatively new in Indonesia, and individuals with higher education may be more motivated to seek accurate guidance and avoid misreporting. This indicates that education's effect on compliance may be context-dependent and more pronounced in emerging policy areas like crypto taxation.

Cryptocurrency reporting requires understanding fluctuating asset valuations, transaction documentation, and the absence of third-party reporting mechanisms. Individuals with higher education may possess better problem-solving skills and information-seeking behaviours, enhancing their perceived behavioural control to overcome these challenges. This supports the idea that education improves general literacy and facilitates adaptability in dealing with tax innovations and digital financial ecosystems.

Policy-wise, these results suggest that targeted educational interventions can be particularly effective when tailored to the needs of less-educated taxpayers, while reinforcing advanced technical training for those already well-educated. Encouraging peer-led education, professional seminars, and accessible guidelines could amplify the positive effect of education on compliance. Such measures would align with TPB by fostering positive attitudes, strengthening supportive subjective norms, and enhancing perceived behavioural control across all educational strata, ultimately improving voluntary compliance in cryptocurrency reporting.

Income level and cryptocurrency reporting compliance. The third hypothesis of this study posits that income level positively influences individual compliance in reporting cryptocurrency assets in annual tax returns (SPT). This means that the higher an individual's income, the greater their likelihood of complying with tax regulations by reporting their assets truthfully and on time. Individuals with higher earnings may possess greater awareness of the civic responsibility attached to taxation and view paying taxes not merely as a legal obligation, but as a form of contribution to national development. Moreover, they often have better access to information and advisory services related to tax requirements, facilitating more accurate and timely compliance. The results of this study confirm H3, demonstrating that income level has a significant and positive effect on cryptocurrency tax compliance. This suggests that higher income provides the financial capacity to meet tax obligations and enhances perceived behavioural control, enabling taxpayers to navigate complex reporting requirements more easily, as TPB predicted.

What distinguishes this research from prior studies is its focus on a unique and relatively underexplored population—cryptocurrency investors. Most existing studies, including those by (Handriyani & Astawa, 2022), (Putri & Trisnaningsih, 2023), and (Zaikin et al., 2022), have concentrated on general annual income taxpayers, whose income sources are typically derived from formal employment or conventional business activities. These traditional taxpayer profiles differ significantly from the digital asset investors examined in this study, who often engage with decentralised platforms and alternative financial systems. Thus, while earlier findings provide valuable insights, they may not fully capture the behaviours and motivations of crypto investors, making this study a rare and valuable contribution to the literature. Our findings extend these earlier results by showing that in the context of digital assets, income level interacts with taxpayers' attitudes and subjective norms, two other key components of TPB, by fostering a stronger sense of responsibility and alignment with peer expectations in the crypto community.



In their research conducted in Buleleng Regency, (Handriyani & Astawa, 2022) found that income level was one of the most important factors influencing tax compliance. Their findings revealed that individuals with sufficient income were more willing and able to fulfil their tax obligations. When income is adequate to cover basic needs, taxpayers are generally more open to allocating a portion of their earnings for taxes. Conversely, for lower-income individuals, tax obligations may be perceived as an additional burden, particularly when their earnings are just enough to meet daily necessities such as food, housing, and education. These observations align with TPB's assertion that when basic needs are met, perceived behavioural control increases, strengthening the intention to comply.

Supporting this conclusion, (Zaikin et al., 2022), in a study conducted at KPP Pratama Kendari, also demonstrated a positive relationship between income level and taxpayer compliance. They highlighted that taxpayers' ability to fulfil their obligations is often conditioned by whether their primary needs have been met. Higher-income individuals tend to have the means, motivation, and understanding required to comply with complex tax procedures. Moreover, as income increases, so does the amount of tax owed, prompting these individuals to be more careful and methodical in calculating and reporting their tax liabilities. The study also observed that those in higher income brackets are generally more aware of their role in contributing to public infrastructure and social welfare through taxation. These findings resonate with our study's focus on cryptocurrency investors, where higher income may also be associated with greater investment sophistication, leading to more deliberate and accurate reporting. In contrast, low-income individuals may face barriers to compliance, such as limited access to tax-related information, a lack of familiarity with reporting procedures, or concerns about financial hardship. These findings reinforce the need for a more inclusive and equitable tax system that supports all income groups adequately through accessible information, simplified procedures, and targeted assistance.

This study reaffirms the importance of income level as a key factor influencing tax compliance, particularly among cryptocurrency investors. While previous research has shown similar trends in broader populations, the focus on crypto asset holders brings fresh insight to the discussion. Given the distinctive nature of digital finance, tax authorities must consider not only the economic capacity of taxpayers but also the evolving ways in which they generate and manage income. By designing fair, responsive, and educationally supportive systems, policymakers can encourage voluntary compliance and build a more sustainable and inclusive fiscal foundation. For policymakers, this implies that while raising awareness is important, ensuring economic stability and providing resources that enhance perceived behavioural control will be crucial for boosting voluntary compliance. In the context of TPB, such interventions would work synergistically with attitudes and subjective norms to create a stronger, more consistent compliance culture among cryptocurrency taxpayers.

CONCLUSION

This study examined the influence of tax knowledge, educational level, and income level on individual compliance in reporting cryptocurrency assets through the Annual Individual Income Tax Return (SPT Tahunan PPh Orang Pribadi), using the Theory of

Planned Behaviour (TPB) as the conceptual framework. The empirical results confirm that all three variables, tax knowledge, educational level, and income level, positively and significantly influence cryptocurrency tax compliance. These findings indicate that higher knowledge, formal education, and financial capacity collectively strengthen taxpayers' attitudes, subjective norms, and perceived behavioural control, encouraging accurate and timely reporting.

This research contributes to the literature by addressing a relatively underexplored taxpayer segment—cryptocurrency investors—whose compliance behaviour is shaped by the unique complexities of digital asset taxation. It extends previous studies on conventional tax compliance by empirically validating the role of TPB components in a digital economy context. The findings offer practical insights for policymakers, emphasising the importance of targeted tax education, outreach strategies tailored to different educational backgrounds, and equitable compliance support across income groups to foster voluntary and sustainable compliance.

However, this study has several limitations. The use of self-reported data through online questionnaires may introduce response bias, and the sample was limited to users of selected cryptocurrency platforms, potentially restricting generalizability. Another limitation lies in the study's use of Likert-scale questionnaires to assess perceptions and behaviours. While this method effectively identifies trends and quantifies attitudes, it does not capture the deeper reasons behind individual choices. The structured nature of the questionnaire restricts participants from elaborating on their personal motivations, experiences, or contextual factors that may influence their compliance behaviour. Consequently, the data lacks the depth to explain the "why" behind the observed patterns. Future research could adopt mixed-method approaches, incorporating interviews or focus group discussions to capture deeper behavioural insights, and expand the sampling frame to include more diverse crypto user populations. Longitudinal studies are also recommended to track changes in compliance behaviour over time, particularly in response to evolving regulations and public education initiatives.

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