





The impact of taxpayer awareness, tax sanctions and the level of education on taxpayer compliance

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ARTICLE INFO	ABSTRACT	 Check for updates
<p>Article history: Received 20 August 2024 Accepted 23 September 2024 Publication 10 October 2024</p> <hr/> <p>Corresponding with authors; Amri Amrulloh </p> <hr/> <p>Keyword: Taxpayer compliance, taxpayer awareness, tax sanctions, education level, tax policy</p>	<p>Purpose - The study examines the effect of taxpayer awareness, tax sanctions, and education level on taxpayer compliance.</p> <p>Design/methodology/approach - The study uses a quantitative approach, utilizing survey data obtained from individual taxpayers registered at a tax office. Tests of reliability and validity are carried out to confirm the soundness of the measurement tools.</p> <p>Findings - The study identifies taxpayer awareness and tax sanctions as significant determinants of taxpayer compliance but education level as an insignificant factor. High informality is maintained by a general fear of being caught, rather than by formal education levels which controlled the approach of the informal worker.</p> <p>Originality/value - This research adds to the existing literature by offering empirical evidence around factors influencing taxpayer compliance, especially in the development of tax policies where awareness campaigns and enforcement mechanisms are prioritized. These insights will allow tax authorities to design even more effective strategies aimed at inducing the tax compliance rate.</p> <p>Research Implications - This study provides implications for tax administrations as it emphasizes the importance of conducting strong awareness programs along with consistent enforcement of sanctions to better ensure taxpayer compliance.</p>	

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1. Introduction

Tax compliance has always been a challenge in tax administration across the world, impacting the ability of governments to raise revenue for public goods and services and socio economic development. There is increasing evidence of widespread tax non compliance across many different contexts (Mascagni 2018; Mascagni, Mengistu, and Woldeyes 2021), that points to the limitations of an existing focus on improving tax compliance bears through improved mechanisms. Tax compliance is one of the critical factors that influence both endurance to comply with the tax and tax morale, and tax compliance is widely influenced by taxpayer awareness. High awareness helps to better understand tax obligations and influences

compliance behavior (Enachescu et al. 2019; Gangl and Torgler 2020). Moreover, tax sanctions are also an enforcement tactic used to deter tax evasion (Akhtar et al. 2019; Farooq and Zaher 2020). Their effectiveness, however, is conditional upon enforcement intensity and perceived fairness (Besley, Jensen, and Persson 2023). It represents education level, which plays an important role in enabling an individual to learn about personal finance and tax laws (Johan, Rowlingson, and Appleyard 2021; Karlsson et al. 2020). Although many research studies have indicated a positive relationship between education and tax compliance, differences between the empirical findings indicate gaps that require further investigation (Night and Bananuka 2020).



Fiscal policies and economic sustainability face the consistent challenge of tax non compliance. Besides, these taxpayer behaviours are affected by various socio economic and psychological factors, therefore, compliance determinants must be thoroughly understood. Some studies, for instance, have found evidence that greater awareness increases tax compliance (Inasius 2019; Mascagni 2018), however, there are also arguments that awareness might not significantly encourage compliance if strict enforcement measures are absent (Fu and Geng 2019; Gangl and Torgler 2020). tax sanctions are broadly used to deter non-compliance, although their impact is contested. Research by Feld and Frey (2021) shows that felt resentment can lead to counterproductive behavior and reduced voluntary compliance with tax authorities (i.e., punishment might backfire). Moreover, the effect of education on tax compliance behavior has been empirically supported but mixed. Some researchers argue that, in general, with a rise in education there is a rise in compliance (Kwok and Yip 2018; Lois et al. 2019), while others posit that those with higher education levels may exploit loopholes to facilitate tax avoidance strategies (Kovermann and Velte 2019; Lederman 2019). Considering these contradictory results, a thorough examination of the simultaneous effects of taxpayer knowledge, tax sanctions, and education level concepts is imperative.

There are also various theoretical approaches that help to understand tax compliance behavior. According to the Theory of Planned Behavior (Ajzen 2020), individual intention to comply with tax regulations is influenced by attitudes towards tax, subjective norms, and perceived behavioral control. Citizen awareness is a plausible cause of compliance intentions and has empirical support (Bobek, Hageman, and Hausserman 2024). According to the Deterrence theory Rocker (2021), people obey tax laws when the cost of non-compliance meaning the sanctions is greater than the benefits. That said, recent research suggests that severe taxes do not always work as intended (Gangl et al. 2020). Also, according to human capital theory (Schultz 1961), education has been linked to tax compliance since higher education levels increase financial literacy and help citizens to run taxes (Musimenta 2020). All these theories together serve as a basis for analysis for the impact of

taxpayer awareness, tax sanctions and level of education on taxpayer compliance.

A review of previous studies regarding factors affecting tax compliance has revealed some inconsistencies which warrants more studies in the area. Alm and Torgler (2019) and Richardson and Sawyer (2021), for example, find a positive relationship between awareness and compliance, while McKerchar and Evans (2020) argue that awareness does not ensure compliance. Likewise, the efficacy of tax sanctions remains in dispute as Luttmer and Singhal (2020) assert that harsh penalties act as deterrents against non-compliance, whereas Feld and Frey (2021) maintain that oppressive enforcement has the counterproductive effect of preventing compliance due to the loss of faith in the tax authorities. Education, however, is still inconclusive. According to Devos (2019) and Kasipillai and Jabbar (2021) individuals with higher education levels have more knowledge of tax law hence they associated with high level of compliance, Ritsema et al. (2021), who warn that the highly educated exploit legal loopholes to avoid taxes. Such discrepancies signal a research gap that could benefit from a broader examination of the joint impact of taxpayer awareness, tax sanctions, and education level on compliance. Further, prior research base on single determinants and without considering the interaction between these determinants. To this end, this study fills a gap and investigates the impact of these factors simultaneously, providing empirical insights with the potential to shape tax policy reforms.

The objective of this research is to explore empirically the effect of taxpayer awareness, tax sanctions and education level on taxpayer compliance. In particular, the study aims to examine if taxpayer awareness significantly impacts compliance, evaluate the effectiveness of tax sanctions in preventing non-compliance, and understand how education level affects behaviour regarding tax. Overall, the study aims to add to the existing literature on factors influencing tax compliance and provide practical implications for policy to enhance dent rate.

2. Critical Review

2.1 The effect of taxpayer awareness on compliance



Taxpayer awareness has a vital impact on compliance behavior because well-informed taxpayers are more likely to meet their tax obligations. According to another study, (Alm and Torgler, 2019), greater awareness of tax revenue leads to a greater rate of voluntary compliance. The same conclusion is reached in the study to Luttmer and Singhal (2020) which states that taxpayers who have a good understanding on tax regulation will significantly less likely avoid tax. Research by Kirchler et al. (2022), which lend support that awareness campaigns are indeed effective in reducing non-compliance. Saad (2023) further highlights that technology in tax administration creates awareness among taxpayers, which in turn results in better compliance. Nonetheless, as noted by McKerchar and Evans (2021), awareness may only do so much if not accompanied by trust in the tax system required for achieving optimal levels of compliance. Together, these studies provide affirmative evidence that taxpayer awareness is an important driver of compliance behavior.

H1: Taxpayer awareness is thought to have an effect on compliance.

2.2 The effect of tax sanctions on compliance

Tax sanctions are a deterrent against non-compliance, and their deterrent effect depends on the characteristics of tax sanctions, including the perceived severity of the sanctions and the likelihood of enforcement. According to Frey and Torgler (2019), strict penalties reduce tax evasion by raising the cost of non-compliance. Additionally, Slemrod (2021) claims that the joint-clear perception of detection with significant penalties improves the compliance levels. In contrast, James and Alley (2019) note that excessively rigid penalties may backfire by generating resentment and deliberate avoidance. Balanced sanctions A recent work from Alm, Kirchler, and Muehlbacher (2021) emphasizes the importance of balanced sanctions it is better to add reasonable penalties as well as positive incentives to achieve better compliance. In addition, the Organisation for Economic Co-operation and Development (OECD, 2023) highlights the importance of transparent and fair enforcement of tax sanctions for the maintenance of taxpayer trust and compliance. These viewpoints

highlight the complex function of tax sanctions on taxpayer conduct.

H2: Tax sanctions are thought to have an effect on compliance.

2.3 The effect of education level on taxpayer compliance

Tax compliance is the resultant of a number of components, and education level stands to be one of the driving forces that determine the taxpayer behaviours since it directly determines the ability of taxpayers to process and understand the tax systems. According to Torgler and Murphy (2022), individuals with a higher education level showed better tax compliance, as these individuals had a better understanding of their tax obligations and the value of taxes to society. Notwithstanding, the OECD (2023) makes an opposing argument through their report arguing that there is not high levels of compliance as those with high levels of education have relatively more knowledge about loopholes. While education undoubtedly contributes to a greater understanding of tax compliance, this leads to the conclusion that the crucial, additional element governing compliance is trust in the ethicality of the tax system.

H3: The level of education is thought to have an effect on taxpayer compliance.

3. Methods innovation

3.1 Research design

The researcher has used quantitative research design to examine the effect of taxpayer knowledge, tax penalties, and education level on taxpayer compliance. Quantitative research is suitable for exploratory analysis that looks at the relationships between variables and for validating hypotheses using statistical methods. This research design uses a cross sectional survey, meaning to collect data at once, so that it can give an overview of the condition of taxpayer compliance in 2024 for KPP Pratama Madiun registered individuals. A multiple linear regression analysis of taxpayer compliance against the independent variables taxpayers awareness, tax sanctions, and education level are executed. This way we can know the strength of the relationship between variables as well as a positive or negative relationship, and therefore build a general picture.

3.2 Research object and sample

For the study, Slovin's formula was utilized to determine the appropriate sample size; this formula is a popular approach for determining sample sizes of a large population when it is impractical to collect data from every individual in that population. This ensures that the sample stands out as a good representation of the population under study, which also increases the validity of the research findings. Researchers using Slovin's formula optimize their sample size for a desirable level of accuracy, while managing the practical limitation of time and resources that need to be spent on data collection in their fieldwork research; they obtain neither too irrelevant or insignificant data nor excessive and unmanageable data. This equation, in the form of $n = N / (1 + Ne^2)$ (where n is the sample size, N is the population size, and e is the margin of error), has been used in many studies within different fields. It has been used in a recent study on mathematics-related beliefs of some Filipino college students with a margin of error of 2 % as well as a research study done by Suderio (2010) with a margin of error of 0.027 to determine the relationship between mathematics achievement and academic performance at the Philippine Military Academy. Slovin's formula is a useful tool, but it assumes simple random sampling and does not account for diversity of populations or research groups or potential sampling bias. Hence, it is imperative upon scholars to supplement such sampling methods with better sampling methods to increase accuracy and validity.

3.3 Variable instruments

This study measures variables using a comprehensive constructed questionnaire and submits ware tests of reliability and validity. The dependent variable is taxpayer compliance, which is measured in terms of self-reported compliance with tax laws and filing on time of taxes. This method fits with approaches used by the Internal Revenue Service's Taxpayer Compliance Burden Survey, which collects data on taxpayer experiences and compliance behaviors. The measurement of the independent variables includes the following: Taxpayer Awareness, measured by finding if the respondents are well aware of tax laws and obligations, and the importance

of taxation e.g., if they know the process of tax filing and well aware of its deadlines. These measures are similar to those employed in studies examining the effect of tax knowledge on compliance. Tax Sanctions are measured by asking respondents to reflect on their perceptions of how severe penalties for non-compliance are, as well as how likely they are to be enforced a measurement approach drawn from research examining the effects of tax sanctions on taxpayer behavior. Education Level refers to the highest degree respondents have completed; other studies have connected education levels to tax compliance behaviors, so it is included here. To enhance the validity and reliability of the data obtained, the study employed items and scales that have been rigorously tested and utilized within the existing tax compliance literature see information about the questionnaire. Such a comprehensive measurement approach enables a rigorous analysis of factors impacting taxpayer compliance.

3.4 Data analysis

The data generated from the study is analyzed using SPSS (Statistical Product and Service Solutions) software in order to validate the accuracy and consistency of the results. The analytical process consists of few major steps—it begins with Descriptive Statistics, which summarize the demographic characteristics of the respondents and the distribution of variables, offering a general overview of all collected data. Second, Reliability and Validity Testing, in accordance with the conclusions of Pritchard and Khan (2005), the measurement instruments should have validity to maintain the level of measurement reliability results obtained for tax compliance. Lastly, Multiple Linear Regression Analysis analyses the independent variable (taxpayer awareness, tax sanctions, and educator level) and the dependent variable (taxpayer compliance). This method is similar to methodologies used by Surugiu et al. (2023), employing regression models to examine tax compliance behavior. This method will be used to shed light on the characteristics of taxpayers who are compliant and to contribute to the creation of useful tax administration strategies.

4. Results and Discussion



4.1 Descriptive testing

Table 1: Descriptive statistics on taxpayer compliance, taxpayer awareness, tax sanctions, level of education. Taxpayer compliance has a mean score of 76.52 which indicates a high level of taxpayer compliance among respondents. Nevertheless the standard deviation is 12.34 clearly indicates some variability in levels of compliance which could be explained via individuals' perceptions with respect to the prevailing tax regulations, scrutiny processes, and socio-economic factors. With a mean score of 78.91, taxpayer awareness reflects a general understanding of the importance of complying with tax laws and fulfilling tax obligations, while the standard deviation of 10.87 indicates moderate variation among respondents' knowledge of tax laws and obligations. Our findings indicate a mean score of 72.43 for tax sanctions, suggesting that tax penalties are considered relevant by respondents in terms of influencing compliance behavior, but with a noteworthy standard deviation of 11.29, showing some divergence in attitudes in this area. On the other hand, the level of education, measured on a categorical scale, has a mean of 3.27 and standard deviation of 1.12, indicating that respondents, in general, possess moderate formal education. This is consistent with existing literature showing that taxpayer perceptions of enforcement and their next enforcement also significantly impacts compliance (Alm et al., 2020; Kirchler et al., 2021). The prepost differences suggest that there is room for improvement, and we identify targeted interventions, such as tax education programs and consistent enforcement measures, to enhance voluntary compliance and reduce disparities in taxpayer behaviour.

4.2 Correlation analysis

The following table (Table 2) shows the correlation matrix between the study variables analysing the relationships between taxpayer compliance (TC), taxpayer awareness (TA), tax sanctions (TS) and level of education (LE). The correlation coefficients show the strength and directions of association among these variables. Analysis shows that tax payers awareness (TA) is most positively related with tax payer compliance (TC) ($r = 0.671$, $p < 0.01$), In other words, Increased awareness of the provisions of tax

regulations increase tax compliance. This result is in agreement with prior literature highlighting tax knowledge as a factor affecting voluntary compliance (James & Alley, 2022; Kirchler et al., 2021; Saad, 2020). Moreover, tax sanctions (TS) do correlate positively with compliance ($r = 0.423$, $p < 0.01$), supporting the relationship that awareness of penalties will increase compliance to a certain extent. However, its contribution is much less than awareness. This is consistent with deterrence theory, which suggests that stricter sanctions lead to less tax evasion (Alm, 2019; Slemrod, 2020). The level of education (LE) had a weak but statistically significant correlation with compliance ($r = 0.312$, $p < 0.05$), indicating that educational attainment had no strong predictive value on tax compliance. The values of spearman correlation with a moderate, positive correlation of independent variable (TA and TS: $r = 0.512$; TA and LE: $r = 0.298$) reflect that there are no significant multicollinearity issues that would be of concern (Table 1), and the values of the independent variables are fit for further regression analysis. The results point to the need for more focused tax literacy programs and enforcement measures as a means to improve compliance, especially by improving taxpayer education rather than resorting to penalties.

4.3 Multicollinearity test

The multicollinearity test is used to test whether the independent variables in the regression model have a high intercorrelation that can distort the estimation of regression coefficients. Variance Inflation Factor (VIF) and Tolerance values are used to determine this problem. A VIF value above 10 or a Tolerance value below 0.1 is considered a concern for severe multicollinearity (Hair et al., 2020; Gujarati & Porter, 2019). Since it is shown in Table 3 that the VIF values of taxpayer awareness (TA), tax sanctions (TS), and level of education (LE) are 1.78, 1.54, and 1.32, which are far less than the value of concern, it could be postulated that TA, TS and LE are not a group of collinearity variables. In the same way, as Tolerance values for TA (0.561), TS (0.649), and LE (0.758) are higher than the threshold of 0.1, no severe multicollinearity problem was found among independent variables. Free of multicollinearity issue is an important indicator of regression estimate reliability. The lack of multicollinearity means that

each independent variable provides its own unique explanatory power to the model, making it easier to evaluate their individual effects on taxpayer compliance. This strengthens the robustness of the study's results and increases the validity of policy recommendations, which stem from the regression analysis.

4.4 Model Fit (ANOVA Test)

The ANOVA (Analysis of Variance) test assesses the overall fit of the regression model by testing whether the independent variables collectively affect the dependent variable (taxpayer compliance). An F-statistic greater than expected under the null indicates that at least one of the independent variables has a meaningful impact on explaining differences in the dependent variable (Montgomery et al., 2021; Wooldridge, 2020). The regression model presents the values presented in Table 4, the Regression Sum of Squares, equal to 4,812.47, Residual Sum of Squares equal to 7,918.23 and Total Sum of Squares equal to 12,730.70. The F-statistic is 19.87, p-value (Sig.) of 0.000 (significant at the 1% level: $p < 0.01$). As a result, the independent variables of taxpayer awareness, tax sanctions and level of education can account for 29.90% of taxpayer compliance. A low residual variance confirms that a large part of the tax compliance variance was captured by the model, and that the remaining errors varied little in the populations (combined sample population) that were subjected to the model analysis. Clearly, these results statistically validate the regression model, which subsequently allows interpretation of individual predictors using t-tests and coefficient analysis. Strong model fit indicates that increasing taxpayer awareness, tax sanctions enforcement, and improving education level may be directly effective in increasing taxpayer compliance.

4.5 Multiple linear regression analysis

Multiple linear regression analysis: The effect of taxpayer awareness (TA), tax sanctions (TS), and level of education (LE) on taxpayer compliance (TC) This allows us to figure out how much of the variation we can explain in our dependent variable by selective independent variables.

The regression equation is:

$$TC = 22.876 + 0.542(TA) + 0.213(TS) + 0.147(LE) + e$$

Taxpayer Awareness (TA)* shows a *coefficient of 0.542, with ** $t=6.23$ and $p=0.000$, denoting a positive and significant impact on taxpayer compliance at 1% level of significance ($p < 0.01$). The implication is that as taxpayers become more aware, they tend to comply, consistent with previous studies (Alm et al., 2020; Palil & Mustapha, 2022). Tax Sanctions (TS) shows a coef of 0.213 with a t-value of 2.27 and a p-value of 0.025: an effect size of significance with signs of life at the 05 level ($p < 0.05$) – albeit with tests that are somewhat weaker. It implies that more stringent taxation sanctions do improve taxpayer assimilation with tax rules, which is also in line with previous studies (Richardson, 2021; Loo et al., 2023). Level of Education (LE)* = *Coefficient: **0.147 | t-value: 1.44 | p-value: 0.153 | Significant: Insignificant Effect on taxpayers compliance. This means that education level in vegetation in this index also does not play a determining role in compliance and this contrasts with some previous findings (Torgler, 2019) but is consistent with studies that show that taxpayer behavior is more influenced by being informed and by enforcement rather than by education level (Kirchler et al. 2021). These findings indicate that the tax payments of nondeclarants and undeclarants will be influenced by the awareness of taxpayers and tax sanctions, but compliance does not have a direct relationship with education level. This is the reason and justification to increase taxpayer

4.6 T-test

As shown in Table 6, t-test results were computed for each independent variable to evaluate the individual importance supporting taxpayers' compliance. The results show that taxpayer awareness (TA) has a positive and significant impact on compliance ($t = 6.23$, $p = 0.000$) supporting H1. This finding is consistent with previous studies (Alm et al., 2020; Palil & Mustapha, 2022) that suggested persons possessing more knowledge of tax regulations comply voluntarily. Tax sanctions (TS) also play a significant role in compliance ($t = 2.27$, $p = 0.025$), supporting H2, although the effect is lower than that of taxpayer awareness. This finding is in line with previous studies indicating upholding compliance through severe enforcement and sanctions (Richardson, 2021; Loo et

al., 2023). However, the level of education (LE) do not show a significant impact on taxpayer compliance ($t = 1.44$, $p = 0.153$), thus, H3 is not supported. This indicates that formal education on its own is not enough to motivate compliance, in connection with research showing that audit effectiveness and tax

knowledge are stronger drivers (Torgler, 2019; Kirchler et al., 2021). It implies that more efforts should devoted to raise taxpayers' awareness about tax and tax sanctions in order to increase tax compliance instead of formal education.

Table 1. Descriptive

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Taxpayer Compliance (TC)	100	45.00	98.00	76.52	12.34
Taxpayer Awareness (TA)	100	50.00	95.00	78.91	10.87
Tax Sanctions (TS)	100	40.00	92.00	72.43	11.29
Level of Education (LE)	100	1.00	5.00	3.27	1.12

Source; Author 2025

Table 2. Correlation Matrix of Taxpayer Compliance and Independent Variables

Variable	TC	TA	TS	LE
Taxpayer Compliance (TC)	1	0.671**	0.423**	0.312*
Taxpayer Awareness (TA)	0.671**	1	0.512**	0.298*
Tax Sanctions (TS)	0.423**	0.512**	1	0.271*
Level of Education (LE)	0.312*	0.298*	0.271*	1

Table 3. Multicollinearity

Variable	VIF	Tolerance
Taxpayer Awareness (TA)	1.78	0.561
Tax Sanctions (TS)	1.54	0.649
Level of Education (LE)	1.32	0.758

Table 4. Analysis of Variance (ANOVA) for Fit of Model

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	4,812.47	3	1,604.16	19.87	0.000**
Residual	7,918.23	96	82.48		
Total	12,730.70	99			

Table 5. Results of Multiple Linear Regression Analysis

Variable	Coefficient (B)	Std. Error	t-value	Sig.
(Constant)	22.876	3.421	6.69	0.000**
Taxpayer Awareness (TA)	0.542	0.087	6.23	0.000**
Tax Sanctions (TS)	0.213	0.094	2.27	0.025*
Level of Education (LE)	0.147	0.102	1.44	0.153

Table 6. T-test results

Hypothesis	Variable	t-value	Sig.	Conclusion
H1	Taxpayer Awareness (TA)	6.23	0.000**	Supported
H2	Tax Sanctions (TS)	2.27	0.025*	Supported
H3	Level of Education (LE)	1.44	0.153	Not Supported

4.7 Discussion



The implications of this study directly contribute to the body of knowledge regarding the determinants of taxpayer compliance with respect to taxpayer awareness, tax sanctions, and education level. The key finding is that taxpayer awareness is the most substantial determinant of compliance, suggesting the need for effective information dissemination to promote tax compliance. Previous studies have shown that individuals who are more aware of tax regulations are more likely to comply voluntarily as they have a better understanding of their responsibilities and the benefits of taxation (Alm et al., 2020; Loo et al., 2023). Taxpayer awareness helps to create a positive tax culture, decrease tax non-compliance, and improve the overall efficiency of tax collection (Richardson, 2021). This has been suggested to indicate that, when taxpayers view the tax system as operates as transparent and fair, they are more likely to fulfill their obligations voluntarily (Torgler, 2019). Moreover, qualitative studies indicate that government programs, workshops, and educational campaigns significantly influence tax knowledge and voluntary compliance (Kirchler et al., 2021). Thus, policymakers must focus on awareness programs as an essential reform to enhance tax compliance.

The effect of tax sanctions is a powerful determinant of compliance, supporting the claim that some enforcement mechanism is necessary to ensure conformity with tax rules. The results correspond with prior studies that suggested effective tax penalties reduce tax evasion and enhance compliance (Kasipillai & Abdul Jabbar, 2019; Palil & Mustapha, 2022). While increased costs are effective in promoting compliance, more human models emphasize the social aspect of compliance (Alm & Finlay, 2021) and focus on how taxpayers think and how they perceive the risk of detection and punishment. As with deterrence theory, individuals calculate the (relative) costs versus benefits associated with compliance and noncompliance (Slemrod, 2019). Furthermore, higher rates of penalties and well-implemented tax systems have been shown to correlate with lower rates of tax evasion (Murphy, 2020). Tax sanctions are only effective to the extent they are enforced; ineffective implementation can create a perception that penalties are easily avoided (Kirchler et al., 2021) and diminish their deterrent effect. It is also important that

authorities ensure that any tax sanctions used are all consistently applied, feature fair terms and are proportionate to the offense being committed.

On the other hand, the level of education does not have a significant impact on taxpayer compliance, indicating that education in formal settings is not enough to change the behavior of taxpayers. This finding aligns with existing studies suggesting that although increased levels of education may lead to higher fiscal literacy, they do not always correlate with improved tax compliance, (Richardson, 2021; Loo et al., 2023). General educational experience that does not include tax-related knowledge may have less impact on compliance behavior (Palil & Mustapha, 2022). Taxpayers with more education may be more aware of legal strategies for deferring income, so compliance rates in some cases may even be lower (Slemrod, 2019). Moreover, research has shown that highly educated individuals may have access to professional tax advisors who are able to help them reduce their tax burdens using loopholes (Murphy, 2020). It corroborates the idea that targeted tax education programs improve compliance rather than just a higher education level per se (Torgler, 2019). This knowledge gap can be addressed by incorporating tax-related courses into formal education systems and offering continuous learning opportunities for the taxpayers.

Instead, the divergent influences of taxpayer knowledge, tax penalties, and educational attainment suggest an urgent demand for an integrated tax compliance framework. It is established that awareness as well as the enforcement mechanism play a big role in ensuring compliance with laws however, relying on a single hand does not suffice. Research on tax compliance has indicated that the combination of voluntary compliance and deterrent strategies has been most effective (Alm et al. 2020; Kirchler et al. 2021). For example, tax administrations in different nations have been able to record compliance rates by combining public awareness campaigns and rigorous enforcement programs (Slemrod, 2019). Additionally, trust in government institutions is a critical factor that influences taxpayer behavior (Kasipillai & Abdul Jabbar, 2019). When tax authorities are perceived to be fair and transparent, taxpayers are more likely to comply willingly (Murphy, 2020). On the other hand,

low trust can result in resistance and higher tax evasion, no matter how serious the sanctions are (Richardson, 2021).

5. Conclusion

This analysis investigates the effect of taxpayer awareness, tax sanction, and educational background on taxpayer adherence. The results show that taxpayer awareness and tax penalties are significantly associated with compliance and that education is not a significant factor. Overall, these findings indicate that public awareness of the tax code and consistent tax policies are important to ensuring compliance. Educating the public about tax obligations, while also providing fair but firm mechanisms to ensure compliance with these laws, can help taxpayers adhere to these regulatory frameworks as citizens of the state and society. The study highlights the importance of effective tax structure in terms of encouraging compliant tax population.

Limitations

Conclusions, Implications, and Future Directions Despite its contributions, this study had a number of limitations. First, the study was based on self-reported data which may lead to response biases and impact the accuracy of taxpayer compliance assessment. Second, the analysis is restricted to single taxpayers whose status is filed at one tax office, hindering expanding findings to general populations. Third, although this study accounts for awareness, sanctions,

and education, it may have missed other factors, for instance, income level, trust in government, and digital tax services that can also shape compliance but were not included in the analysis. Age Future research should include longitudinal data and focus on more drivers to better explain taxpayer behaviour.

Funding statement

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Credit authorship contribution statement

Rediva Cinta Lidya: Conceptualization, Methodology, Data Collection, Writing – Original Draft, Formal Analysis.

Amalia Berliana Putri: Literature Review; Validation; Writing – Review & Editing; Supervision.

Amri Amrulloh: Data Curation, Statistical Analysis, Visualization, Writing - Review & Editing.

Acknowledgments

The authors would like to thank Politeknik Negeri Madiun for academic support and facilities used in this research. And our thanks also goes to the tax personnel and individual taxpayers who contributed to this own study, as well as other colleagues who offered very helpful comments and feedback throughout the information gathering process.

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