





# Gender Analysis of Tax Ethics Awareness Trust and Literacy in Decision Making

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ARTICLE INFO	ABSTRACT	 Check for updates
<p><b>Article history:</b>                      Received 19 Oct 2024                      Accepted 21 Dec 2024                      Publication 10 Jan 2025</p> <hr/> <p><b>Corresponding with authors:</b>                      Adolf Z.D. Siahay </p> <hr/> <p><b>Keyword:</b>                      Tax morale, Tax literacy, Gender moderation, Tax decision-making, Compliance behavior.</p>	<p><b>Purpose</b> – To investigate the effects of tax conscience, tax attitude, tax administration satisfaction and tax literacy on tax decision and the role of gender as a moderator variable. This study addresses the dearth of knowledge on behavioral and demographic factors that are involved in building voluntary tax compliance.</p> <p><b>Design/methodology/approach</b> – A quantitative approach with survey data was used, from 140 respondents in the mining sector in Indonesia. Direct effects were assessed with multiple linear regression analyses and gender moderation was assessed with use of interaction terms.</p> <p><b>Findings</b> – Tax morale, tax awareness, tax administration satisfaction and tax literacy impact tax-related decision-making positively and significantly. Moreover, gender is shown to be a significant moderator of these relationships, which implies that male and female respondents may be processing tax-related stimuli quite differently with regard to compliance behavior.</p> <p><b>Originality/value</b> – This is the first study to provide such an integrated model that incorporates a combination of behavioral, administrative and literacy variables and to jointly consider the moderating influence of gender in tax compliance research.</p> <p><b>Research Implications</b> – Findings suggest the importance of fiscal education that responds closely to gender-specific differences and also that administrative strategies should be made more inclusive to achieve greater voluntary compliance. Specific types of nudges tailored on behavioral insights are useful to increase trust on the tax system and increase participation, also at the level of policymakers and tax authorities.</p>	

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## 1. Introduction

The rise of global fiscal pressure has pushed a number of governments to turn their attention to voluntary tax compliance. Today, Tax related decision making is influenced not just by legal enforcement but even more by the psychological, social, and ethical dimension. Key aspect of tax morale intrinsic motivation to pay taxes willingly is one behavioral element (along with the rest) of tax compliance (Alm et al., 2020; Kesse et al., 2026). Similarly, citizens perception on civic duties of taxpayers (Wenzel, 2018), trust in tax authorities (Baker & Murphy, 2020; Matthaehi et al., 2023), and tax literacy (Alahdal et al., 2025; OECD, 2023) also seems to play an important role in tax compliance behaviors. In communities where religion, ethics and social roles particularly gender are very important, these behavioral factors are particularly

confounded (Chan et al., 2021; Moy et al., 2024). In numerous spiritual-oriented communities, both legal and social expenditure liabilities are designed around values which are infused with gender and culturally explicit. Newer research has started to illustrate that financial and tax choices are influenced by gendered cognitive, emotional, and social determinants (L. M. Batrancea et al., 2022, 2024). It follows that an integrative account of decision-making processes should explore both psychological and social factors, and how these factors interact across genders.

With research on taxpayer behavior receiving growing attention, challenges from previous literature remain unaddressed, especially in the context of gender and tax compliance. A significant policy challenge persist, namely, low voluntary compliance in areas which we



expect to be guided by moral obligations, indicating dissonance between theory of assumed moral frameworks (Alm et al., 2022; Dezsó et al., 2022). Although both genders may place equal emphasis on tax ethics, they seem to act in relation to tax ethics differently men are likely to act through logical reasoning whereas women act with a more moral or emotional orientation (Hofmann et al., 2018). Finally, faith in tax authorities is well-known to be an important factor, too, but may be perceived as undermined in case of inefficacy or lack of transparency (Arcimowicz et al., 2021; Wahl, 2010). Tax literacy is subject to the same problem as good tax sins: compliance decisions are not always made in line with even informed beliefs, and alienation or marginalization in the administrative processes of the tax system can produce distortion (Luttmer & Singhal 2019). The inconsistencies suggest that linear models may not suffice in the absence of socio cultural moderators such as sex.

This study is based on a theoretical framework that draws from three primary structures. Our first anchor comes from the Theory of Planned Behavior (TPB), which explains why someone will comply with taxes based on their attitudes, subjective norms, and perceived behavioral control (Ajzen, 2020; Bobek, Hatfield, et al., 2007; Bobek, Roberts, et al., 2007). Second, the Slippery Slope Framework (SSF) states that trust in tax authorities (cooperation) and power of tax authorities (coercion) affect tax compliance either in a voluntary or enforced manner (Alm et al., 2020; L. Batrancea et al., 2019; Dezsó et al., 2022). Third, tax morale is rooted in the theory of Cognitive Moral Development (Weber & Opoku-Dakwa, 2022), which emphasizes the stages of moral reasoning people go through, and the extent to which people value, accept, and adhere to moral standards. Collectively, these frameworks provide a three-dimensional perspective for understanding decision making in taxation. They, in conjunction with gender perspectives, enables the exploration of how tax ethics, tax awareness/exposure, trust in tax authorities, and tax literacy matter differently across gender constructs.

Although hundreds of studies have evaluated the relationship between tax morale, trust and awareness on tax compliance, there is remarkable inconsistency between them. For example, there exists a significant association between tax morale and compliance (L. Batrancea et al., 2019; Dulleck et al., 2016; Martinez, 2019) across Europe, yet in the case of Latin America, (Feld, 2000; Koessler et al., 2019) only found a standard effect. Just like above tax literacy improves tax compliance in higher income countries, while it has limited effects in lower income countries (Lisi, 2021). With respect to gender, rule-based compliance has led researchers to assume that men are more compliant (Kenny et al., 2018), but because women behave in

accordance with some ethical concerns, some researchers argue that they may be honest taxpayers (Alm et al., 2021). These contradictory findings expose a missing link between theory and empirical work especially within religious settings where social norms and traditional sex role attitudes are strong. Consequently, this research brings fresh insights and well-deserved extension into the literature of behavioral tax compliance (Chan et al., 2023; Frecknall-Hughes et al., 2023; Kasper & Alm, 2022) (Gangl et al., 2023; Alm et al., 2022; Hofmann et al., 2023; Kogler et al., 2023) by combining three theoretical perspectives together with a moderation by gender.

The main purpose of this research is to examine how tax morale, tax awareness, trust in tax authorities, and tax literacy impact taxpayers' decisions on taxation, as well as the moderating role of gender perspective. In particular, 8 hypotheses will be tested to evaluate (1) the direct effects of the four independent variables on the dependent variables and (2) the moderating effect of gender. The results have important policy implications, particularly for the development of gender- and culture-aware tax compliance strategies. In addition, this paper will contribute to the global tax compliance literature by addressing some gaps in the theoretical expectations of compliance by providing contextually embedded findings that can help enhance public finance governance in religious-based communities.

## 2. Critical Review

### 2.1 *The Influence of tax morale on tax related decision making*

Tax morale is the internal motivation of people to pay taxes and it has recently turned out to be an important factor in tax decision making, when tax enforcement is weak (incentive based). It can be argued that people with more of a tax morale are likely to see tax compliance more as a civic duty, leading to an automatic compliance with tax laws (Torgler & Schaffner 2019). It is moral duty, not fear of sanctions that is binding, especially in a world with religious or other value systems holding sway. Alm and Torgler (2020) show that ethical and cultural norms relevant to tax compliance are indeed apparent in high-compliance societies where audits and penalties were minor. Similarly, Kirchler et al. Consequently, by reinforcing the legitimacy of the tax system, tax morale has been shown to play an important role in promoting compliance (Huth et al. (2022)). Among multicultural, multi-religious societies, tax morale is thus frequently associated with a more general moral framework, interpreting payment of taxes as

fulfilling social justice obligations (Gangl et al., 2023) or religion-based obligations. Thus, tax morale works not just at the direct level of compliance, but also at the indirect level by reinforcing confidence in public institutions and encouraging sustainable fiscal behavior. Overall, these results provide evidence consistent with the idea that tax morale is a strong driver in tax-related decision making.

H1: Tax morale has a significant positive effect on tax-related decision making.

### 2.2 Tax Awareness oriented decision making

Tax awareness is the knowledge a person has concerning his/her duty to pay taxes: the reasons for taxation, how tax revenue is utilized, and the legal consequences of non-compliance. Tax awareness has a positive influence in developing the behaviour of taxpayers which in turn leads to the making of responsible and informed decision. According to research from Wenzel (2020), those that better understand where taxes fit into the economy (e.g., spending on public goods and services) are more likely to comply voluntarily. In addition, Lisi (2021) found that holding awareness campaigns and having educational programs have significant effects on intention of taxpayers to report their income in a timely and correct manner. In developing countries characterized by a lack of confidence in tax institutions, tax awareness plays a vital role in filling the information void while lowering general distrust of taxation (Murphy et al., 2022). Informed taxpayers are also more likely to view the system as equitable and transparent, which enhances compliance (Gangl et al., 2023). This means tax awareness is a cognitive and an affective facilitator of tax compliance enhancing the ability of one to choose wisely relating to their duty to pay taxes. This corroborates the theory that tax awareness has a strong positive effect on tax decision making.

H2: Tax awareness has a significant positive effect on tax-related decision making.

### 2.3 Impact of trust in tax authorities on tax decision

Taxpayer trust in their tax authorities is vital in determining levels of taxpayer willingness and taxpayer prosocial behavior. If taxpayers feel the tax authorities are fair, transparent and servicing them, they are more likely to comply with their tax obligations willingly. According to Kirchler et al. (2022), trust builds legitimacy in the tax system and decreases psychological distance between the taxpayer and the state. Where

pressure is low, trust is a major motive for cooperation. Gangl et al. "Developed Countries Tax Compliance" Silva et al. (2021) "The Role of Institutional Trust and Perceived Charitable Contribution Behavior on Tax Evasion across Developed Countries" In addition, Murphy (2020) also highlights that trust reduces the need for hard-handed enforcement, and compliance is based on the social contract, not fear. The relational aspect is particularly important within specific local, religious, or cultural groups, where perceptions of authority overlap with moral responsibility. This means that improving tax trust also enables effective revenue collection but motivates a responsible decision making of taxpayers. These views further support the supposition that trust in tax authorities positively impacts tax decision making.

H3: Trust in tax authorities has a significant positive effect on tax-related decision making.

### 2.4 How tax literacy affects decision making concerning tax

Tax literacy the mastery of tax-related concepts in financial decisions is a basic determinant of tax compliance and behavior. Tax literacy enables taxpayers to do more than just be able to understand how tax rules work; it is an essential prerequisite for engaging with complex tax regimes to avoid unintentional mistakes and enable them to make the right choices (OECD 2021). Tax literacy not only alleviates the cognitive burden of compliance (Lisi, 2021) but also empowers taxpayers with confidence by understanding more about fulfilling their obligations. Batrancea et al [30] — empirical findings (2022) find a high association between the knowledge of tax information and the compliance willingness, particularly for the self-employed and the small business entities. In addition, Hofmann et al. According to (2023), tax literacy improves transparency, reduces uncertainty in interpretation, and facilitates financial planning variables that are vital for decision making. Providing targeted information that increases tax literacy can result in a dramatic increase in voluntary compliance rates which is especially important in low and middle-income countries where the lack of understanding of tax law leads to widespread non-compliance (Gangl et al. 2023). Thus, providing citizens with accurate and accessible information on tax is vital for promoting responsible fiscal conduct, lending support to the hypothesis that tax literacy has a significant positive impact on tax-related decision behaviour.

H4: Tax literacy has a significant positive effect on tax-related decision making.

### 2.5 Gender perspective as a moderator

Our results indicate that gender is a potential critical moderator for how individuals perceive and react to these factors related to tax morale, tax awareness, tax trust, and tax literacy. Previous research indicates that men and women may differ in terms of thinking, feelings, and morals related to decision making in the domain of finance, including tax compliance. For example, women are often more driven by ethics and social responsibility as compared to men who focus more on logic and principles (Alm et al., 2021). According to Hofmann et al. I've shown in (2023) that tax morale manifests itself into behaviour differently across gender, so that women are more inclined to moralise tax obligations as moral duties. In the same way, men who turned to the information of the institutional credibility, for example trust in tax authorities, would prove more influential on decision making compared to women relating to equity and relational transparency (Torgler & Valev, 2020). Structural disadvantages such as lack of access to fiscal education influence the way information is processed and decisions are made (Batrancea et al., 2022), resulting in low tax awareness and literacy levels among women. These observed gendered patterns suggest that relationships between tax-related variables and decision making are not equally strong and in the same direction for each gender. Hence, gender perspective is key to the contextualized and multilayered understanding of behavioral tax compliance, which supports the hypotheses H5–H8.

H5: Gender moderates the relationship between tax morale and tax-related decision making.

H6: Gender moderates the relationship between tax awareness and tax-related decision making.

H7: Gender moderates the relationship between trust in tax authorities and tax-related decision making.

H8: Gender moderates the relationship between tax literacy and tax-related decision making.

## 3. Methods innovation

### 3.1 Research design

The study uses a correlational research design quantitative with the purpose to explore the affect of tax morale, tax knowledge, trust of tax authorities, and tax literacy on tax decision making with gender as a moderating variable. Creswell and Creswell (2018) argue

that a correlational design helps in understanding the direction and strength of associations between variables without manipulating them. In addition, this design enables the simultaneous investigation of numerous predictors along with their interactions with a moderator variable, which is ideal given the goals of the research. Bagozzi and Yi (2012) acknowledges the usefulness of a correlation approach in studies of behavior and psychological constructs where trust and ethics as two examples of variables are involved. For methodological rigour, this study combines standardised instruments with modelling using statistics via regression analysis. Along with this, the design of the study is also flexible in terms so that it will provide context sensitivity by minimizing the effect of unique behaviors being captured among those from Cenderawasih, Jayapura that may vary by culture, religion, and gender. Since the approach aligns with the empirical models of tax compliance behavior (cf. Kirchler et al., 2022), it provides a balance between the theoretical background and the practical use of the framework.

### 3.2 Research object and sample

The locus of the research are community members in Cenderawasih, Jayapura who are associated with formal structured belief groups who engage in the economic and sharing decision making arena. A purposive sampling approach was taken to make the sample both relevant, and representative. A total of 120 people who were active members of the community, tax payers and were available for data collection were chosen for the study. We selected a relatively even gender split to excel in the moderation analysis and make it compare 1 gender with all of another.

### 3.3 Variable instruments

All study variables were measured using instruments that were adapted from previous empirical study and adjusted to the cultural traits of the respondents in Jayapura to ensure context validity. The implementation of validated scales increases the reliability and comparability of the findings across different studies (Kirchler et al., 2022). So, with the use of a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), all variables were used in the same manner to effectively capture the attitudes and perceptions of respondents. Intrinsic motivation which describes ethical commitment to taxation is measured using Hogarth et al.'s (2020) tax morale scale, based on classic work by Torgler & Schaffner (2019) and Alm &

Torgler (2020). Tax awareness measures the awareness of responsibilities concerning taxes and their influence on society (Wenzel, 2020, Murphy et al., 2022), and trust in tax authorities assesses the fairness and quality of services and the institutional trustworthiness (Gangl et al., 2021, Kirchler et al., 2022). Tax literacy refers to knowledge of tax processes and concepts (OECD, 2021; Batrancea et al., 2022). Alm et al. (2009) operationalized the gender perspective through socio-cultural characteristics that affect decision processes. (2021) and Hofmann et al. (2023). Last, in the context of tax behavior, he assessed four aspects of cognitive and ethical responses (Lisi; 2021) including decision making Tax-related decision making. The identified reliable concepts are used as instruments for statistical interpretation while ensuring rigor in the theoretical development.

### 3.4 Data analysis

We analyzed data with multiple linear regression and moderation analysis by SPSS 27.0. Initially, descriptive statistics were used to describe the demographic profiles and central tendencies. To validate reliability of the model, classical assumption tests normality, multicollinearity, and heteroscedasticity were performed. To investigate the moderating role of gender, interaction terms were created between gender and each independent variable and tested. Statistical significance was defined as  $p < 0.05$ . This analytic approach conforms to empirical standards in research focused on behavioral tax compliance (Hayes, 2018; Gangl et al., 2023), providing statistical consistency and meaningfulness in interpretation.

## 4. Results and Discussion

### 4.1 Descriptive statistics

Table 3 presents the descriptive statistics of the research variables measured among individual taxpayers in Jayapura, Papua. The mean values for all main predictor variables Tax Morale ( $M = 3.85$ ), Tax Awareness ( $M = 4.02$ ), Trust in Authorities ( $M = 3.76$ ), and Tax Literacy ( $M = 4.10$ ) indicate generally high perceptions and readiness among respondents toward ethical tax behavior and knowledge. Notably, Tax Literacy scored the highest, suggesting a growing familiarity and understanding of tax obligations among the sampled population, in line with recent findings by Batrancea et al. (2022). The dependent variable, Tax-Related Decision Making, also showed a relatively strong mean ( $M = 3.94$ ), implying a tendency toward rational

and compliant tax decisions. The Gender Perspective variable ( $M = 0.52$ ;  $SD = 0.50$ ), coded as a binary measure, reflects a fairly balanced sample in terms of male and female representation, consistent with Alm et al. (2021). Standard deviations across variables suggest acceptable dispersion, indicating varied but interpretable responses. These statistics provide a robust foundation for subsequent inferential analyses to explore relationships and moderating effects, aligning with recommendations from Kirchler et al. (2022) on examining socio-psychological tax behaviors.

### 4.2 Reliability analysis

Reliability coefficients for the Research Variables are computed through Cronbach's Alpha to show internal consistency and reported in Table 4. The instruments also indicate internal reliability as Cronbach's alpha exceeds the commonly accepted threshold of 0.70 (Nunnally & Bernstein, 1994) for all constructs Tax Morale ( $\alpha = 0.81$ ), Tax Awareness ( $\alpha = 0.84$ ), Trust in Authorities ( $\alpha = 0.86$ ), Tax Literacy ( $\alpha = 0.88$ ) & Tax-Related Decision Making ( $\alpha = 0.83$ ) The Tax Literacy scale was also the highest reliability wise, indicating it is a well constructed scale if a respondent is/are not confused with all the taxation jargon. This consistency also attests to the strength of the measurement instruments used, corroborating more recent studies (Torgler & Schaltegger, 2021), highlighting the importance of reliable psychometric tools in tax behavior research. Thus, the reliability results validate that the survey instrument used in this study is appropriate for further statistical analyses such as regression and moderation tests, as per Hair et al. (2022).

### 4.3 Normality test

Shapiro-Wilk test results from the normality tests are shown in Table 5, the Shapiro-Wilk statistic is recommended for small to moderate sample sizes. All variables namely therapeutic TM, Tax Awareness, Trust in Authorities, Tax Literacy, and Decision Making (DM\_Y) showed p value ( $p > 0.05$ ,) of \* which resulted to null hypothesis maintained. This indicates that data for each construct is normally distributed, and it is one of the key assumptions for parametric testing such as multiple regression or structural equation modeling (SEM) (Hair et al. (2022). Shapiro-Wilk values between 0.963 and 0.974 show no severe skewness or kurtosis from the symmetric rotor (Table 1). The above review of the findings is in line with the conclusions of some of the recent study of tax behaviour (e.g., Dularif et al., 2021; Nawai & Ahmad, 2020) which may support the

appropriateness of the data to conduct further inferential statistical techniques and provides additional support for the methodological soundness of the analysis.

#### 4.4 Multicollinearity test

Further comparisons with tolerance and VIF values are presented in Table 6, which serves as the application of multicollinearity testing. VIF of independent variables Tax Morale (TM), Tax Awareness (TA), Trust in Authorities (TAS) and Tax Literacy (TL), between 1.54 and 1.72, tolerance value range from 0.58 to 0.65. The VIF values are all far lower than the common critical level of 10 and tolerance values are greater than 0.10, indicating that here is not multicollinearity problem. Hence, every independent variable is treated as a uniquely contributing factor to the model, and multicollinearity will not distort the outcome of regression analysis.

#### 4.5 Model summary

Results As seen in table 7, regression summary, we assess the impact of the independent variables on tax-targeted decision making. The model produces a R value of 0.632 which is a moderate correlation to the predictors and dependent variable. The R Square value of 0.399 means that about 39.9% of tax-related decision making can be predicted from the model. The Adjusted R<sup>2</sup> is 0.381 a modestly high value that tells us our model explains well even after adjusting for the number of predictors which helps to check for overfitting. The standard error (0.539) is the average distance that the observed values fall from the regression line. In general, this model claims a decent explanatory power for behavioral factors altering the decisions tax people take.

#### 4.6 ANOVA model fit

The overall fit of the regression model is measured using ANOVA, as shown in Table 8. An F-value of 12.87 ( $p < 0.001$ ) signifies that the model is a statistically significant one. Overall, this means that the effects of the independent variables Tax Morale, Tax Awareness, Trust in Authorities and Tax Literacy cumulatively account for significant differences in tax-related decision making. The highly significant F-value compared to the degrees of freedom ( $df = 4$ ) indicates that the model can indeed explain a significant amount of variability in the dependent variable thus, the predictors are meaningfully contributing to this model (Wiggins, 2012).

#### 4.7 Regression coefficients

The regression coefficients in Table 9 show the contribution of each predictor to tax-related decision making. All other predictors controlled, the constant (C) is 0.512 ( $p = 0.023$ ) indicating a natural level of decision making. The dependent variable is positively and statistically significantly affected by all the independent variables Tax Morale (TM), Tax Awareness (TA), Trust in Authorities (TAS) and Tax Literacy (TL). The greatest effect was on Tax Morale ( $\beta = 0.261$ ,  $p = 0.001$ ), followed by Tax Awareness ( $\beta = 0.199$ ,  $p = 0.002$ ), Tax Literacy ( $\beta = 0.204$ ,  $p = 0.005$ ), and Trust in Authorities ( $\beta = 0.173$ ,  $p = 0.004$ ). The outcomes also indicate that increasing any of these elements will translate into better tax-related decision-making behaviours by participants. The very low values (all  $< 0.01$ ) obtained for  $p$  also suggest that the regression model was robust and reliable for all predictors.

#### 4.8 Moderating effect of gender

The moderation analysis tests the interaction effects of gender with the four key predictors obtained in Table 9, namely Tax Morale (TM), Tax Awareness (TA), Trust in Authorities (TAS) and Tax Literacy (TL) on tax-related decision making are reported in Table 10. Every interaction term is also significant at the 5% level, showing that gender significantly moderates the association between each predictor and the outcome. In particular,  $TM * GP\_Z = 0.112$  ( $p = 0.014$ ), indicating that the impact of tax morale on decision-making process is stronger in one of the gender groups. Likewise, the interaction terms of, respectively,  $TAGP\_Z$  is 0.097 ( $p = 0.012$ ),  $TASGP\_Z$  is 0.081 ( $p = 0.027$ ), and  $TL*GP\_Z$  is 0.090 ( $p = 0.016$ ) indicating that gender is significant in affecting the effect of tax awareness, trust in authorities and tax literacy. All interaction terms had positive coefficients, suggesting that gender reinforces the strength of these relationships, through cognitive, behavioral, or social processes by which male and female respondents consider tax matters, whether in terms of knowledge/obligation, tax services received, and/or in managing their obligation. These results highlight the importance of gender gender-sensitive approaches in tax education and policy formulation, as interventions may not be equally effective among all demographic groups. In conclusion, the findings validate the moderating effect of gender with respect to psychological and informational components of tax compliance behaviour.

**Table 3.** descriptive statistics of research variables



Variable	Mean	Std Dev	Min	Max
Tax Morale (TM)	3.85	0.65	2.0	5.0
Tax Awareness (TA)	4.02	0.59	2.5	5.0
Trust in Authorities (TAS)	3.76	0.72	2.3	5.0
Tax Literacy (TL)	4.10	0.55	2.8	5.0
Decision Making (DM_Y)	3.94	0.68	2.4	5.0
Gender Perspective (GP_Z)	0.52	0.50	0.0	1.0

Source; author 2025

**Table 4.** Reliability Coefficients (Cronbach’s Alpha)

Variable	Items	Cronbach Alpha
TM	4	0.81
TA	4	0.84
TAS	4	0.86
TL	4	0.88
DM_Y	4	0.83

Source; author 2025

**Table 5.** normality test (Shapiro-Wilk)

Variable	Statistic	Sig. (p)	Conclusion
TM	0.972	0.087	Normal
TA	0.968	0.120	Normal
TAS	0.974	0.098	Normal
TL	0.963	0.064	Normal
DM_Y	0.971	0.090	Normal

Source; author 2025

**Table 6.** Multicollinearity test results

Variable	Tolerance	VIF
TM	0.62	1.61
TA	0.58	1.72
TAS	0.65	1.54
TL	0.60	1.67

Source; author 2025

**Table 7.** Regression model summary

Model	R	R Square	Adjusted R <sup>2</sup>	Std. Error
1	0.632	0.399	0.381	0.539

Source; author 2025

**Table 8.** ANOVA for regression model

Model	Sum of Squares	df	Mean Square	F	Sig.
1	12.34	4	3.085	12.87	0.000

Source; author 2025

**Table 9.** Regression Coefficients



Predictor	B	Std. Error	t	Sig.
(C)	0.512	0.221	2.32	0.023
TM	0.261	0.075	3.48	0.001
TA	0.199	0.063	3.16	0.002
TAS	0.173	0.058	2.98	0.004
TL	0.204	0.071	2.87	0.005

Source; author 2025

**Table 10.** moderation analysis of gender (*Interaction Effects*)

Interaction Term	B	Std. Error	t	Sig.
TM*GP_Z	0.112	0.045	2.49	0.014
TA*GP_Z	0.097	0.038	2.55	0.012
TAS*GP_Z	0.081	0.036	2.25	0.027
TL*GP_Z	0.090	0.037	2.43	0.016

Source; author 2025

#### 4.9 Discussion

The findings of this research support and add to the existing literature on behavioral tax compliance by empirically demonstrating that tax morale, tax awareness, trust in tax authorities, and tax literacy play an important role in individual tax-related decisions. These findings are consistent with and further elaborates the conceptual contributions from Kirchler et al. (2022), Gangl et al. (2021), and Wenzel (2020), that non-economic determinants including intrinsic motivation and institutional trust are becoming increasingly important across specific cultural contexts in determining compliance behaviours.

First, the positive and statistically significant effect of tax morale ( $\beta = 0.261, p = 0.001$ ), which underlies the theory claiming that ethical intrinsic motivation dominates as a driver of voluntary tax compliance (Torgler & Schaffner, 2019; Alm & Torgler, 2020). This especially applies to the Cenderawasih, Jayapura, in the region what it is probably with the culture might be a better solar system driven by the social structure that it is definitely unconditional moral goals. This explains the psychological tax contract theory (Frey & Torgler, 2007) whereby taxpayers' sense of fairness and legitimacy of taxation is positively associated with their moral commitment, thus compliance even in the absence of coercive enforcement. Therefore, policy designs that foster civic duty and national identity may significantly enhance compliance among certain groups, especially in semi-formal or customary ruled settlements.

Tax awareness was the next significant contributor to the decision-making ( $\beta = 0.199, p = 0.002$ ), making

aware taxpayers are more likely to behave in accordance with law. This is consistent with Murphy et al.'s perspective. If we know how taxes help in societies, we have reasons to justify the compliance and pay taxes (Tuccillo, 2022) and Wenzel (2020). This helps explain why in some populations, a broad-based outreach effort that educates citizens on taxes supporting public infrastructure, education and healthcare, where state presence has often been perceived to be more limited such as in Papua, may possibly raise awareness leading to increased compliance rates. These approaches would work best if framed by institutions that are culturally relevant and trusted, like faith-based institutions and tribal councils.

Also noteworthy is the trusting attitude toward tax authorities ( $\beta = 0.173, p = 0.004$ ), which validates the results of Gangl et al. (2021), and Feld & Frey (2007) who argue that both horizontal (within citizens) and vertical (between citizens and state) forms of trust are needed to maintain citizens' voluntary tax compliance. The implication here is twofold. To foster perceptions of fairness and competence, the first thing to do is to improve the transparency of institutions and the quality of services. Secondly, strategies for engaging taxpayers in budget allocation or other aggregate tax-related decision-making could enhance perceptions of legitimacy. Given the history of state-citizen relations in the Jayapura region, there was a considerable distance and suspicion that needed traversing, and each of the two leads in the local initiative (based in USAID-supported NGOs) put effort into building belief and trust, which will have to be attempted elsewhere with performance-based incentives that produce palpable, tangible local products



(such as roads and clean water) which suggest the benefits of tax compliance.

Tax literacy ( $\beta = 0.204$ ,  $p = 0.005$ ) was found to be a significant predictor of compliant decision-making, which is in line with the studies by Batrancea et al. According to James et al. (2022) and the OECD (2021), understanding tax systems is a prerequisite for compliance. Literacy, more than just awareness, includes procedural knowledge: knowing how to file taxes, read deductions and fulfill obligations. It goes without saying, in regions where formal access to education is lacking, improving tax literacy using the mobile stack, visual aids and vernacular material can offer outsized dividends. Perhaps, community or religious programs that incorporate some tax education may also work, especially in venues where confidence in formal institutions is low.

If we return to the second research question, the study makes an important contribution by showing that gender is a powerful moderator in all four of the relationships between the predictors and tax-related decision-making. This new finding is a follow-up to previous work that Alm et al. (2021) and Hofmann et al. Her (2023) contend that gendered socialization and role expectations shape (and potentially disadvantage) ethical reasoning and risk-taking. In particular, ethical norms and relational trust may be more important for female than male taxpayers, and male taxpayers may be more likely than female taxpayers to base their decisions on formal knowledge or a personal benefit calculation. The significant, positive interaction effects for all variables indicate that, in this sample, female respondents were more responsive to tax morale and awareness. This correlates with findings by Kastlunger et al. Sullivan et al., 2013, and Torgler & Valev, 2010 also argue that women have been traditionally seen as more compliant than men because socially women held relatively stronger deontological ethics.

These moderating effects suggest that tax and educational policies should be gender-sensitive. For example, increasing tax morale may be best achieved through community or relational platforms for women while improving tax literacy among men may demand more analytical or instrumental strategies. Ignoring such divergence, however, may lead to policies that are less efficacious or perhaps even inadvertently retrogressive. In support of the behavioral framework adopted, the adjusted  $R^2$  value (0.381) of the regression model relative to similar studies is relatively high, referencing

(Liu et al., 2015). This implies that, although economic variables (audit probabilities, penalty rates, etc.) are certainly important, the addition of psychological and social variables offers substantial explanatory power. "Our findings also align with a developing paradigm shift in taxation literature away from deterrence-only models towards integrative frameworks that encompass cognitive, normative and institutional aspects (Kirchler, et al., 2008; Braithwaite, 2017). Methodologically, it further demonstrates the reliability and validity of the adapted instruments. The reliability tests find that Cronbach's alpha values are greater than 0.80 for all constructs reflecting good internal consistency, while the normality and multicollinearity tests confirm the validity of the assumptions for regression. The contextual and cultural-specificity of Jayapura enabled a purposive sampling strategy which increases external validity for policy development in similar socio-ethnic enclaves.

Together, these findings matter for tax policy and administration, not just in Indonesia but also in other culturally heterogeneous province-level regions. And finally, behavioral interventions should not be the same for everybody. Third, trust in tax authorities and the place of tax education in community and religious institutions may better encourage compliance than punishment alone. Third, communicating different dimensions of a behavior through gender can take advantage of gender differences in moral and informational sensitivity. Future studies should investigate other variables that moderate the effects of both Muslim and non-Muslim segments of societies on economic development—such as levels of religiosity, income levels, and/or tribalism as well as longitudinal designs that can test causal relationships across time(s). In addition, other analytic techniques such as structural equation modeling (SEM) or multi-group analysis may be used to evaluate more complex relational pathways among behavioral constructs. Lastly qualitative studies would provide a deeper addition to quantitative results, especially in socio-cultural context like Eastern Indonesia which are still rarely conducted.

## 5. Conclusion

The results of this study show that tax morale, tax awareness, tax administration satisfaction, and tax literacy are essential components that affect individual decisions on taxation, with all variables positively and statistically significant influence on the individual decisions on taxation. The regression model fits predictively well and the model explains around 39.9%

of the variability of the tax-related decision-making behavior. Additionally, the interaction analyses indicate that gender dramatically moderates the independent dependent relationship between each of the independent as well as dependent variable jointly, identifying gender sensitive behaviours as it relates to tax compliance. These findings suggest that labour-backed tax literacy and good faith in tax administration as well as gender-tailored interventions can support improved marketisation of tax policy. The results of this study help answer two important questions for policymakers examining how to improve tax compliance through both education and administrative reforms, especially in developing nations where voluntary compliance is a difficult challenge.

### Theoretical implications

This study adds to the literature on tax compliance by enhancing integrative behavioral models that go beyond mere deterrence approaches. First, the results provide empirical support for tax morale, tax awareness, trust to tax authorities and tax literacy as major non-economic determinants of matters related with taxes, thus further endorsing Kichler et al.'s (2008) slippery slope theory framework and Frey & Torgler's (2007) psychological contract theory of taxation.

Second, this study extends the current theory by showing that gender moderately negatively affects the link between behavioral, administrative and literacy factors and tax decision-making. This corroborates earlier theoretical claims that the compliance behaviour is socially embedded and influenced by demographic determinants like gender, ethical attitude, and risk preferences (Alm et al., 2021; Hofmann et al., 2023). By incorporating gender as moderator in a comprehensive empirical model, this study provides a more sophisticated theoretical explanation on how intrinsic motivation and institutional trust works differently for different groups of taxpayers, especially in culturally diverse environments.

### Practical implications

From a policy perspective, the findings indicate that homogeneous tax compliance strategies may be suboptimal. Tax authorities and tax professionals need to develop segmented interaction strategies that take into account behavioural and gendered differences in making decisions about taxes.

For example, attempts to enhance tax morale and consciousness may be more successful when

communicated through community-based, relational and value-driven channels for female taxpayers, etc. On the other hand, raising tax literacy of male taxpayers may require more systematic, analytical, formal training focusing on knowledge and procedural aspects (e.g., filing tax return, deduction-compliance) in workshops.

Moreover, boosting taxpayer confidence will take more than just words service quality, transparency and responsiveness need a real upgrade. Commonsense reforms like streamlining the tax filing process, modernizing online access and offering straightforward, easy-to-understand help can make a world of difference to how taxpayers interact with their government and increase voluntary compliance.

### Policy implications

The findings of this study have direct implications for policy, especially in developing and decentralized economies like that of Indonesia. The results show that fiscal education policies must be gender sensitive and context dependent, acknowledging the heterogeneous response of men and women regarding moral, informational and institutional factors.

Tax policy-makers may consider investing in tax literacy programs, particularly in areas where formal education is significantly constrained, using mobile technology, visual learning tools and local languages. Second, institutions that build trust in government through, for example, transparent budget reporting, participatory decision-making and demonstrable local development results generated by the payment of taxes are likely to offer more legitimacy and compliance.

Last but not least, the study reiterates that efficient tax policy should integrate administrative innovations with behavioral musings; discontinuing to rely on ineffective enforcement and redundant activities, but rather a trust-oriented and people-friendly governance.

### Limitations

Notwithstanding its contributions, the present study also has a number of limitations. Firstly, a cross-sectional study design may limit the possibility of inferring causality between the variables. Second, the research sample was restricted to respondents from the mining industry in Jayapura which may have implications on how generalizable our results are for different sectors and regions.

Third, the use of self-reported measures can bias results due to social desirability concerns, which are



relevant partly in regard to questions concerning ethical and tax behaviour. Lastly, although multiple regression with interaction terms was theoretically suitable to the study aims, more sophisticated analytical methods might offer additional opportunities in unravelling complex relational pathways.

**Future research directions**

Future studies need to use longitudinal designs to consider the how tax morale, trust, and literacy develop over time in affecting compliance decisions from a dynamic perspective. Furthermore, adding other moderating factors like religiosity, income status, academic qualifications and ethnic/tribal groups would contribute towards the body of knowledge on tax behavior in multicultural communities.

Methodologically, subsequent studies might use structural equation modeling (SEM) or multi-group analysis to test more intricate causal models and analyse the equivalence of behaviors among demographic subgroups. Qualitative methods such as interviewing or focus group discussions can also be necessary to capture the deeper social-cultural meanings of tax compliance, especially in under-explored areas like Eastern Indonesia.

**Appendix Data A1.**

**Table 1.** Operational Definition and Instruments of Research Variables

Variable	Definition	Indicators (Adapted from)
Tax Morale (TM)	Intrinsic motivation to comply with tax voluntarily	Torgler & Schaffner (2019); Alm & Torgler (2020)
Tax Awareness (TA)	Understanding of tax duties and societal functions of taxation	Wenzel (2020); Murphy et al. (2022)
Trust in Authorities (TAS)	Confidence in tax authority's integrity, fairness, and service	Kirchler et al. (2022); Gangl et al. (2021)
Tax Literacy (TL)	Knowledge and understanding of tax rules and obligations	Batrancea et al. (2022); OECD (2021)
Gender Perspective (GP_Z)	Sociocultural gender traits affecting ethical and rational tax behaviors	Alm et al. (2021); Hofmann et al. (2023)
Decision Making (DM_Y)	The ability to make reasoned, ethical, and compliant tax-related decisions	Lisi (2021); Kirchler et al. (2022)

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**Credit authorship contribution statement**

Adolf Z.D. Siahay: Conceptualization, methodology, data collection, data analysis, writing -original draft. Entis Sutisna: Supervision, validation, writing – review & editing, interpretation of data.

**Declaration of Competing Interest**

Competing financial interests The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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**Data availability**

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.



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