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Research Article

Examining the Association Between Tax Knowledge and Compliance Among Sole Proprietors in Olongapo City: A Moderation Study

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ABSTRACT

This study aimed to explore the relationship between tax knowledge and level of compliance of individual taxpayers in Olongapo City, focusing specifically on the influence of variables such as age, education, income, and whether the taxpayer employs an accountant or tax professional. This study used a quantitative correlational design with data-collection done through a survey among 54 registered sole proprietors. The researcher used a combination of descriptive statistics, correlation analysis, and moderation analysis for the data gathered. The results indicated that the overall tax knowledge among the respondents was very high, as well as the overall compliance rates. Correlation analysis revealed a strong and statistically significant positive relationship between tax knowledge and tax compliance (r values ranging from 0.744 to 0.891, $p < .001$), indicating that higher levels of tax knowledge are associated with better compliance in terms of timeliness and accuracy. Furthermore, moderation analysis showed that while tax knowledge positively predicts compliance, this link varies by demographics and operations: stronger for males ($\beta = .346$, $p = .008$), lower-income proprietors ($\beta = -.107$, $p = .019$), and those not hiring accountants ($\beta = -.477$, $p < .001$, indicating a substitution effect where personal knowledge drives compliance without professionals), but unaffected by education, $\beta = -.082$, $p = .213$). Despite the limitation of having purposive sampling employed and the fact that responses were provided directly by the owners, this research provides some practical information on how tax education and taxpayer assistance can be effectively designed and implemented. With emphasis placed on conditional knowledge-compliance relationship, this study reveals the importance of employing moderation analysis to differentiate between groups of taxpayers to encourage their voluntary compliance.

Keywords: *Compliance Behavior, Demographic Factors, Fiscal Psychology, Moderation Analysis*

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Introduction

Taxes constitute the most important source of funding the provision of services by a state and maintaining macroeconomic stability in a country. In the case of the Philippines, the percentage of tax revenues in the budget of the state accounts for almost 50% of the budget, while the Bureau of Internal Revenue managed to collect ₱2.85 trillion in 2024 (BIR, 2024). Nevertheless, despite the mentioned considerable sum collected by the Bureau, the gap in taxation of the population still persists, particularly concerning sole proprietors, who have no taxes deducted from their income automatically since they are not employed. As a result, the calculation and paying of taxes become a challenging task because taxpayers need to complete it by themselves. The problem occurs frequently in developing countries due to complicated tax legislation, insufficient level of tax literacy, and lack of strict control.

For individuals who are engaged in running their businesses, the experience of handling taxes is not as easy as it may seem. This includes understanding legal policies that may be complex, calculations which may be tricky, and computer-based procedures which keep on evolving to make them more difficult to deal with. Literature has revealed that a huge proportion of Filipino owners and managers of micro, small, and medium enterprises demonstrate a moderate understanding of tax policies, resulting in late filing of taxes, and incorrect declarations of the same (Renoria, 2024; Cureg et al., 2024). Despite availability of technology-based platforms for filing of taxes, it seems very difficult for people to know the exact amounts to be paid and duties to be performed (Estrellana, 2023). However, the significance of tax knowledge with regard to voluntary compliance cannot be that straightforward, since it is still under debate. On the one hand, some researchers believe that higher knowledge leads to increased likelihood of compliance (Bawa & Boachie, 2024; Lestari & Lestianti, 2024; Agana et al., 2023). On the other hand, some evidence points at the fact that increased tax knowledge enables individuals to find out how to benefit from various legal loopholes and therefore reduces actual compliance rates (Finér, 2021; Bomare & Reck, 2022).

In general, we see some kind of inconsistency that seems to be crucial for developing countries that are characterized by informal economies and poor tax administration (OECD, 2021).

In addition to the knowledge base, there are also some personal factors that can influence an individual's behavior towards tax matters. For instance, such variables as age, education level, and personal income can determine an individual's perception of tax laws and his or her compliance behavior (Asante & Baba, 2025; Amin et al., 2022; Trifan et al., 2023). Therefore, tax knowledge alone does not explain tax behavior and compliance since it can be influenced by multiple factors combined into a single construct. The target population of this study is made up of individuals who are sole proprietors in Olongapo City. Despite being economically active, the city is poorly studied in terms of its sole proprietors and the issues they face. The chosen population operates in an environment where their incomes are unpredictable, where the number of tax professionals is minimal, and which changes tax regulations regularly. Thus, it is expected that the behavior of sole proprietors will differ from that of big businesses or corporations in economically developed areas, which is why the focus is made here. Furthermore, the study aims to connect ideas by way of applying fiscal psychology theory of Schmolders (1959) alongside moderation analysis in order to determine the interaction between tax literacy, demographics, and also the availability of professional assistance in influencing tax compliance. Through this, the study offers meaningful findings which would enhance the provision of tax education, formulate policies, and foster voluntary compliance among sole proprietors in the Philippines. Additionally, the study provides a solution to the existing controversy on the relationship between knowledge and compliance while somehow contributing to the reduction of the tax gap and increased revenue collection in the local and national governments.

Fiscal Psychology Theory

This research will utilize the Fiscal Psychology Theory developed by Gunter Schmolders (1959). He states that taxpayers' behavior can

be described using both the cognitive factors (knowledge) and behavioral factors (motivation toward compliance) of taxpayers. Schmolders assumed that the levels of education regarding taxation, specifically understanding of tax law, rates, and obligations, will have direct impact upon the behaviors of taxpayers when it comes to tax compliance. Therefore, individuals who are well-informed about taxation are more likely to follow their obligation to pay taxes while those who do not know may commit errors, compliance failure, or tax fraud.

Tax Knowledge as a Cognitive Driver of Compliance

The Fiscal Psychology Theory emphasizes how knowledge plays a key role in influencing the behavior of taxpayers. Research has identified three primary categories of tax knowledge; awareness of tax law, understanding of tax rate and familiarity of tax obligation. As a result of these categories, sole proprietors are made aware of their tax obligation and the level of this awareness will indicate the likelihood that they will comply with tax regulation.

Tax Compliance as a Behavioral Outcome

The theoretical model views compliant behavior as an observable behavior directly affected by the cognitive component. Timely filing of tax returns, accurate reporting of taxable income, and payment of correct tax amounts represent the three components used to measure compliance. The level of compliance demonstrates the degree to which the sole proprietor complies with the tax regulations. This research aims to explore the connection between a sole proprietor's understanding of tax laws and their adherence to those regulations, ultimately seeking to improve tax collection. Sole proprietors are particularly vulnerable to errors and non-compliance because they don't have built-in systems for tax withholding, relying instead on their own knowledge to navigate tax requirements.

Moderating Role of Demographic and Contextual Factors

This paper further recognizes that a taxpayer's behavior and thus their tax compliance is

influenced by many other factors such as demographics, age, education, and income to create a dynamic environment for compliance. It is assumed that, as taxpayers become older, they accumulate years of life experience and develop an increased awareness of risk that could positively influence compliance as well. Empirical evidence in That et al. (2022) confirms this, with a 78% compliance rate for those who are 45 years and older, compared to only 54% for those aged below 30. Education has been a determinant of tax compliance for a long time, as Erina et al. (2024) reported, the more educated the person, the more they tend to recognize their tax responsibilities, as education heightens civic and tax awareness. Another study by Amin et al. (2022) also found that those with a tertiary education were 35% more likely to obtain their taxation rights than those with only a secondary school education. The income level of taxpayers also has a substantial impact on taxpayers' compliance, as it drives one to pay taxes; the higher a person's income, the greater the amount of tax must be paid (Kurnia & Fajarwati, 2022). Furthermore, a taxpayer engaging an accountant or other tax preparer is included as a moderating variable, as assistance provided by them can influence the tax compliance through expert advice.

Research Gaps in Tax Knowledge and Compliance

Current literature provides limited awareness into the tax compliance behavior or sole proprietors as most studies concentrate on larger businesses. Existing research also treats tax knowledge as unified construct, with no distinction made between specific components such as tax law awareness, tax rate understanding, and familiarity with tax obligations. Additionally, demographic factors such as age, education, and income, are often overlooked as moderators that may influence the relationship between tax knowledge and compliance. Additionally, many research studies have looked at only one aspect of compliance; rather than examining the filing of taxes, accurate reporting of income/expense, proper payment of assessed amount. The study above fills this gap by looking at each individual component of tax

knowledge in detail, examining how demographics moderate tax knowledge, and evaluates overall tax compliance using all three fac-

ets of compliance (timely filing, accurate reporting, correct payment) in Olongapo City sole proprietors.

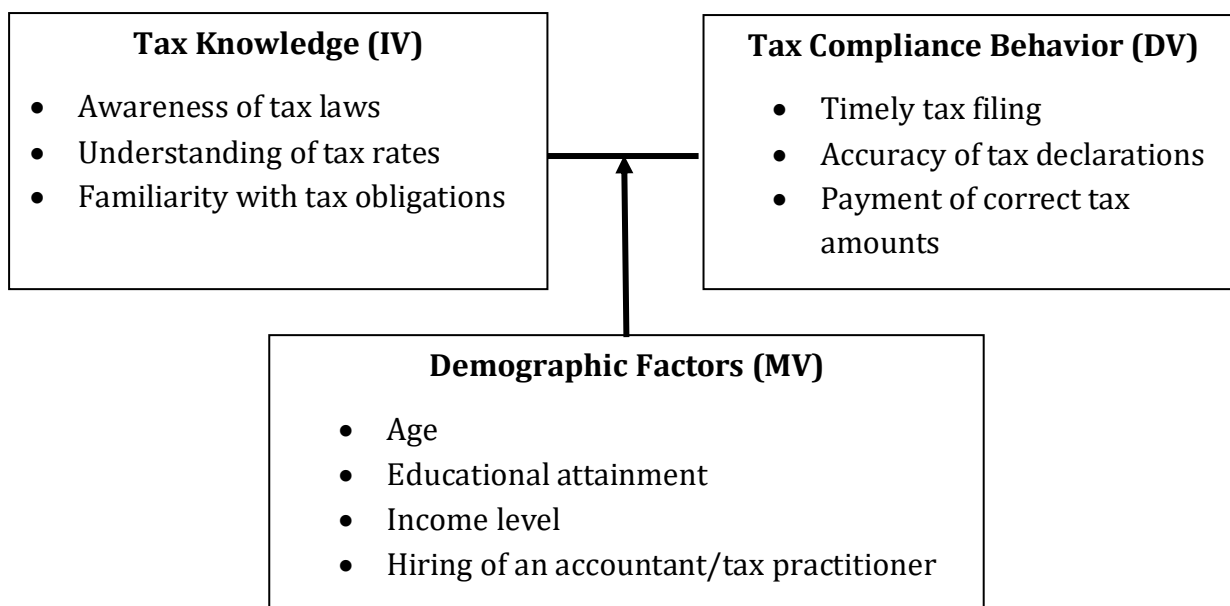


Figure 1. Conceptual Framework

Materials and Methods

Research Design

The study adopts a quantitative approach in order to measure the levels of tax knowledge and tax compliance among sole proprietors in Olongapo City. The descriptive-correlational method will help describe the existing levels of variables and examine the statistical relationship between them without manipulating any conditions while the moderation analysis will help check if age, education, income, or hiring an accountant changes the strength of the relationship (Putri, Rezani, & Hermina, 2025). A survey is used so that data can be gathered uniformly, and the approach makes it easier to convert the responses to numerical values that can be statistically analyzed.

The research is conducted in Olongapo City, a place characterized by a substantial presence of micro and small enterprises, with 7,338 registered business establishments in the city according to the Olongapo City Comprehensive Development Plan (2020–2026), which fits the purpose of the research because sole proprietors here deal with regular tax requirements under the Philippine system (Olongapo City Government, 2024). Most MSMEs in the

Philippines are concentrated in wholesale and retail trade and other service-related industries. More specifically, wholesale and retail trade alone comprises about 44% of all establishments, showing that these industries dominate the Philippine business scene (PSA, 2025), and that a huge part of the MSMEs in Olongapo City probably comprises these industries, most of which are sole proprietorships. Data was gathered through an online survey using Google Forms, as well as through in-person distribution of printed questionnaires to selected respondents, making it easy for respondents to answer.

Respondents

The study involved a total of 54 sole proprietors who are registered under RDO 18. Purposive sampling, a non-probability sampling method where participants are intentionally chosen based on specific criteria tied to the research objectives, helps target those with specific characteristics that are required by the research. Sole proprietors from the retail and service sectors were chosen because they typically handle more frequent tax filings.

Instrument

The questionnaire employed in this study is self-reporting and consists of two major sections. One section gathered data on respondents' age, highest educational attainment, income level, and whether they hire accountants for tax filing services. Research statements on tax knowledge and compliance were adapted from prior studies for relevance to sole proprietors' experiences. Three Certified Public Accountants (CPAs), with expertise in accounting and tax reviewed the instrument by checking the relevance of the items and alignment with the topic being conducted and suggested a few small changes to the wording. All items were assessed employing a 4-point Likert-type scale, with response options from 1 (Strongly Disagree) to 4 (Strongly Agree). The reliability of the instrument was determined using Cronbach's Alpha ($\alpha = 0.88$), and the results showed acceptable internal consistency.

Statistical Treatment of Data

Data were gathered via Google Forms and printed questionnaires, then coded and analyzed with IBM SPSS Statistics version 29. Before running further tests, data normality was checked using the Shapiro-Wilk test to determine whether it was normally distributed. Frequency and percentage were employed to analyze the demographic variables of the respondents. Mean and standard deviation were calculated to analyze the extent of tax knowledge in terms of awareness of tax laws, understanding of tax rates, and knowledge of tax obligations, along with tax compliance behavior.

Pearson correlation analysis was conducted assessing the association between tax knowledge and tax compliance. Moderation analysis was applied to examine the moderation effect of age, education, income level, and engagement of an accountant in the tax knowledge–tax compliance relationship.

Table 1. Demographic Profile of the Respondents

Category	Frequency	Percent
Age		
21-30	8	14.81%
31-40	19	35.19%
41-50	16	29.63%
51-60	8	14.81%
61 and above	3	5.56%
Sex		
Female	27	50.00%
Male	27	50.00%
Highest educational attainment		
College Graduate	37	68.50%
High School Graduate	14	25.90%
Master's Degree	2	3.70%
Vocational	1	1.90%
How much is your monthly income?		
Below ₱10,000	1	1.90%
₱10,001 – ₱20,000	9	16.70%
₱20,001 – ₱40,000	12	22.20%
₱40,001 – ₱60,000	14	25.90%
₱60,001 – ₱100,000	12	22.20%
Above ₱100,000	6	11.10%
Do you hire an accountant or a third-party service to assist with your tax filing?		
Yes	34	62.96%
No	20	37.04%

Ethical Considerations

The researchers ensured that all the participants were provided with informed consent forms prior to participating in the research study. All collected data were treated as confidential and followed all guidelines on data privacy. Personal identifiers were not used in any of the analysis and reporting of the data. Before collecting any data for the research study, approval and clearance from the Research Ethics Review Unit (RERU) with approval code 0127/072125/Pungloy were first sought to verify that all guidelines were followed.

Results and Discussion

The data in Table 1 show that the majority of respondents are middle-aged, specifically those aged 31-40 years (35.19%) and 41-50 years (29.63%), accounting for a total of 64.82% of all respondents. The table also indicates that a majority of the respondents reported having a college degree, with 37 individuals (68.5%), high school graduates comprised 25.9% (n = 14), while a smaller proportion held postgraduate degrees, with 3.7% (n = 2) reporting a master’s degree, and only one respondent (1.9%) indicated vocational education as their highest educational attainment.

Moreover, given that most of the respondents belong to their productive ages and have high academic levels, they are likely aware about the tax payment process.

It is evident from Table 1 that an equal number of women (50.0%, n=27) and men (50.0%, n=27) were considered for participation, hence, eliminating the gender bias in the findings of the study.

Significant differences in incomes could be noticed within the pool of respondents as illustrated in Table 1. The largest share of the participants earns ₱40,001-₱60,000 per month (25.9%, n=14), whereas, 22.2% (n=12) earn between ₱20,001-₱40,000 or ₱60,001-₱100,000. Only 16.7% (n=9) reported monthly incomes between ₱0-₱10,000. Those who earn more than ₱100,000 per month account for 11.1%, (n=6) and only 1.9% (n=1) receive monthly salaries less than ₱10,000.

The data collected indicates that a bigger percentage of participants (62.96%, n=34) prefer to use accountant or third party for tax payment services, compared to 37.04% (n=20) who manage independently, showing that many sole proprietors value professional help for better compliance, including those with limited tax proficiency.

Table 2. Level of Tax Knowledge in Terms of Awareness of Tax Laws

No.	Indicators	M	SD	Descriptive Interpretation
1.	I am aware of the tax obligations of a sole proprietor under the Philippine tax system (Income Tax, Business Tax, and Withholding Tax).	3.48	0.574	Strongly Agree
2.	I understand the difference between tax compliance, tax avoidance, and tax evasion.	3.41	0.813	Strongly Agree
3.	I am familiar with the penalties for late filing for noncompliance for sole proprietors (e.g., the EOPT Act).	3.39	0.738	Strongly Agree
4.	I actively keep myself updated on tax regulation changes affecting sole proprietors (e.g., through the BIR website, announcements, and publications).	2.85	0.878	Agree
Composite Mean		3.28	0.678	Strongly Agree

Note. Scale interpretation: 3.26–4.00 = Strongly Agree; 2.51–3.25 = Agree; 1.76–2.50 = Disagree; 1.00–1.75 = Strongly Disagree.

Composite score of 3.28 represents high awareness concerning tax laws since most respondents agreed with the questions in this section. The results show that the majority of participants were aware of the basic tax requirements expected from a sole proprietor in terms of income tax, business tax, and withholding tax under the Philippine taxation system.

Participants were also able to distinguish between tax compliance, tax avoidance, and tax evasion, indicating a good knowledge of legal

and illegal forms of taxation. Participants also had high awareness about the penalties for delayed filing of tax returns and non-compliance.

On the other hand, being updated on tax law changes earned the lowest score of 2.85. While respondents know the standing tax laws, they do not consistently track updates or amendments. This aligns with prior research noting that small business owners typically grasp core tax laws but struggle with the latest policies and changes (Challoumis, 2024).

Table 3. Level of Tax Knowledge in terms of Understanding of Tax Rates

No.	Indicators	M	SD	Descriptive Interpretation
1.	I understand how my taxable income is determined under the Philippine tax system (e.g., The use of itemized deductions, OSD, etc. applicable to sole proprietors).	3.19	0.826	Agree
2.	I know the income tax rates applicable to sole proprietors in the Philippines (e.g., Graduation Income tax rates, 8% Flat Income tax rate).	3.26	0.828	Strongly Agree
3.	I know whether I should register under VAT, or percentage tax, or when I am applicable to 8% income tax in lieu of business tax.	3.22	0.904	Agree
4.	I understand the impact of recent applicable tax amendments (e.g., TRAIN, CREATE) on my business.	2.81	0.973	Agree
Composite Mean		3.12	0.802	Agree

Note. Scale interpretation: 3.26–4.00 = Strongly Agree; 2.51–3.25 = Agree; 1.76–2.50 = Disagree; 1.00–1.75 = Strongly Disagree.

Table 3 presents the level of tax knowledge of sole proprietors in Olongapo City in terms of their understanding of tax rates. The results indicate that respondents generally have a good level of tax knowledge regarding the understanding of tax rates applicable to sole proprietors. The highest mean score (M = 3.26) shows strong awareness of applicable income tax rates, while knowledge of recent tax

amendments received the lowest mean (M = 2.81) but still reflects agreement. Overall, the composite mean of 3.12 suggests that respondents agree they are knowledgeable about tax rates under the Philippine tax system. Some research findings also point out that understanding tax rates is often much more difficult compared to tax awareness. This is due to the computation of tax brackets (Rosly, 2022).

Table 4. Level of Tax Knowledge in terms of Familiarity with Tax Obligations

No.	Indicators	M	SD	Descriptive Interpretation
1.	I know the required tax forms (e.g., BIR Form 1701, 2551Q) for sole proprietors.	3.50	0.694	Strongly Agree
2.	I am familiar with the Bureau of Internal Revenue (BIR)'s quarterly and annual tax filing requirements for sole proprietors.	3.54	0.665	Strongly Agree

No.	Indicators	M	SD	Descriptive Interpretation
3.	I understand how to properly declare my business income and allowable deductions as a sole proprietor.	3.20	0.810	Agree
4.	I know where and how to file and pay my taxes in the Philippines (e.g., eFPS, eBIR-Forms, authorized banks).	3.48	0.637	Strongly Agree
Composite Mean		3.43	0.630	Strongly Agree

Note. Scale interpretation: 3.26–4.00 = Strongly Agree; 2.51–3.25 = Agree; 1.76–2.50 = Disagree; 1.00–1.75 = Strongly Disagree.

The table 4 shows the level of tax knowledge of sole proprietors in Olongapo City in terms of their familiarity with tax obligations. The highest mean score (M= 3.54) indicates a high level of familiarity with the BIR's quarterly and annual tax filing obligations, which indicates strong awareness of tax compliance schedules. In contrast, the lowest mean score (M=3.20) indicates that respondents are less confident in accurately disclosing business income and allowable deductions, implying that this aspect of tax compliance is less understood and could benefit from additional education or intervention. This affirms previous research findings that small business owners often know what to file but have difficulties in

computing income (Cauble, 2025). Overall, the composite mean of 3.43 indicates that respondents strongly agree that they understand their tax duties under the Philippine tax system.

The study assessed tax compliance among sole proprietors in Olongapo City using a Likert scale where means of 3.26–4.00 indicate "Strongly Agree." Data from the survey (n = 54) focused on three dimensions: timely tax filing, accuracy of tax declarations, and payment of correct tax amounts.

All individual and composite means fell within the "Strongly Agree" range (3.26–4.00), with the highest item mean for compliance with quarterly/annual filing (3.56) and payment of full taxes due (3.56).

Table 5. Level of Tax Compliance in terms of Timely Tax Filing

No.	Indicators	M	SD	Descriptive Interpretation
1.	I always file my tax returns on or before the due date.	3.52	0.693	Strongly Agree
2.	I prepare my tax documents in advance to avoid late filing.	3.31	0.797	Strongly Agree
3.	I comply with both quarterly and annual tax filing requirements.	3.56	0.718	Strongly Agree
4.	I use online platforms (e.g., eBIRForms, GCash, Maya) to ensure timely tax filing.	3.54	0.770	Strongly Agree
Composite Mean		3.48	0.644	Strongly Agree

Note. Scale interpretation: 3.26–4.00 = Strongly Agree; 2.51–3.25 = Agree; 1.76–2.50 = Disagree; 1.00–1.75 = Strongly Disagree.

The composite mean of 3.48 indicates the sole proprietors in Olongapo City strictly adhere to filing deadlines. This highlights proactive behaviors such as advance preparation (M = 3.31) and the use of digital tools such as eBIRForms and GCash (M = 3.54) which

assist compliance in an area with growing micro-businesses, with the highest mean of 3.56 for complying both quarterly and annual tax filing obligations. Such results are consistent with studies on voluntary compliance in underdeveloped countries, where awareness of

penalties under the Ease of Paying Taxes (EOPT) Act encourages early submissions despite limited resources. The minor fluctuation indicates engrained understanding of the BIR’s quarterly and annual responsibilities, lowering late-filing risks that could worsen income shortfalls for local governments

Table 6. Level of Tax Compliance in terms of Accuracy of Tax Declarations

No.	Indicators	M	SD	Descriptive Interpretation
1.	I accurately report all my sources of income on my tax returns.	3.37	0.560	Strongly Agree
2.	I properly declare my deductible expenses as per tax regulations.	3.35	0.649	Strongly Agree
3.	I review my tax filings for accuracy before submission.	3.30	0.792	Strongly Agree
4.	I ensure that my tax declarations reflect my actual earnings.	3.43	0.742	Strongly Agree
Composite Mean		3.36	0.606	Strongly Agree

Note. Scale interpretation: 3.26–4.00 = Strongly Agree; 2.51–3.25 = Agree; 1.76–2.50 = Disagree; 1.00–1.75 = Strongly Disagree.

The composite mean of 3.36 suggests high reporting accuracy, with respondents strongly agreeing to reviewing filings and comparing declarations to actual earnings. This level of clarity in income and deduction reporting demonstrates a commitment to regulatory standards, which could be driven by familiarity forms like BIR 1701. The literature on small business taxations supports this, indicating that self-review methods reduce errors in sole proprietorships, where under-declarations is

widespread in the absence of third-party oversight. Previous research show that self-checking and reviewing of tax returns before filing them helps small business owners avoid common reporting errors (Goyal, 2026). The lowest item mean (M = 3.30) for pre-submission evaluations indicates a slight area for improvement, but overall, it shows a compliance culture that supports the integrity of Olongapo’s tax base.

Table 7. Level of Tax Compliance in terms of Payment of Correct Tax Amounts

No.	Indicators	M	SD	Descriptive Interpretation
1.	I pay the full amount of taxes due based on my declared income.	3.56	0.634	Strongly Agree
2.	I do not intentionally under report my income to reduce my tax liability.	3.50	0.720	Strongly Agree
3.	I ensure that I do not overstate deductions to lower my tax dues.	3.37	0.760	Strongly Agree
4.	I am committed to fulfilling my tax obligations even without strict enforcement.	3.52	0.720	Strongly Agree
Composite Mean		3.49	0.636	Strongly Agree

Note. Scale interpretation: 3.26–4.00 = Strongly Agree; 2.51–3.25 = Agree; 1.76–2.50 = Disagree; 1.00–1.75 = Strongly Disagree.

With a composite mean of 3.49, sole proprietors show strong ethical payment With a composite mean of 3.49, sole proprietors exhibit

strong ethical payment behavior, rejecting underreporting or overstated deductions even absent enforcement. The highest item mean (M

= 3.56) for full payments based on declared income signals intrinsic motivation, consistent with the study's demographic profile of mostly college-educated (68.5%) filers. This resonates with tax psychology theories positing that voluntary compliance thrives when taxpayers

perceive fairness in systems like the TRAIN Law, fostering trust in BIR processes. Such findings imply that Olongapo's proprietors prioritize obligations, contributing to fiscal stability amid economic pressures on micro-enterprises.

Table 8. Significant Relationship Between Tax Knowledge and Tax Compliance Behavior

		1	2	3	4	5	6
Awareness	Pearson's r	—					
	df	—					
	p-value	—					
Understanding	Pearson's r	0.916***	—				
	df	52	—				
	p-value	<.001	—				
Familiarity	Pearson's r	0.907***	0.913***	—			
	df	52	52	—			
	p-value	<.001	<.001	—			
Timely	Pearson's r	0.822***	0.744***	0.874***	—		
	df	52	52	52	—		
	p-value	<.001	<.001	<.001	—		
Accuracy	Pearson's r	0.838***	0.790***	0.891***	0.888***	—	
	df	52	52	52	52	—	
	p-value	<.001	<.001	<.001	<.001	—	
Payment	Pearson's r	0.745***	0.669***	0.757***	0.811***	0.870***	—
	p-value	<.001	<.001	<.001	<.001	<.001	—

Note. * p < .05, ** p < .01, *** p < .001

Table 8 describes the results of the Pearson correlation analysis examining the relationship between the level of tax knowledge and the level of tax compliance behavior among sole proprietors in Olongapo City. Findings indicate strong and significant positive relationships between tax knowledge dimensions (awareness, understanding, and familiarity) and tax compliance indicators (timeliness, accuracy, and payment).

Specifically, awareness is strongly correlated with timeliness (r = 0.822, p < .001), accuracy (r = 0.838, p < .001), and payment (r = 0.745, p < .001). Similarly, understanding shows strong positive associations with timeliness (r = 0.744, p < .001), accuracy (r = 0.790, p < .001), and payment (r = 0.669, p < .001). Familiarity likewise demonstrates robust correlations with timeliness (r = 0.874, p < .001), accuracy (r = 0.891, p < .001) and payment (r = 0.757, p < .001).

Overall, the results demonstrate that higher levels of tax knowledge correspond with higher levels of tax compliance behavior, leading to the rejection of the null hypothesis. This is consistent with research findings in tax psychology that state that people's values and feel-

ings of responsibility have a huge part in motivating them to adhere to tax laws even without enforcements (Herlina, 2026). This implies that tax knowledge plays a substantial role in promoting timely and accurate tax compliance among sole proprietors in Olongapo City.

Table 9. Moderation Analysis of Demographic Profile Variables on Tax Knowledge and Tax Compliance Behavior

Moderator (M)	Model R ²	B (Knowledge)	B (Moderator)	B (Interaction)	p-value (Int.)	Result
Sex	.776	.686	-.131	.346	.008**	Significant
Highest Educational Attainment	.738	.724	.011	-.082	.213	Not Significant
Income Level	.758	.673	.006	-.107	.019*	Significant
Hiring an Accountant	.805	.698	.075	-.477	<.001***	Significant

Note. Dependent Variable: Tax Compliance Behavior. β values represent unstandardized coefficients. Interaction term = (Tax Knowledge * Moderator). * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 9 presents the results of the four regression models used to test moderation. The moderation analysis showed distinct patterns on how demographic and operational factors influence the translation of tax knowledge into compliance behavior.

The Moderating Effect of Sex

The association between tax knowledge and compliance behavior was shown to be significantly moderated by sex ($\beta = .346$, $p = .008$). Based on the positive interaction coefficient, male sole proprietors have a stronger relationship than female sole proprietors. While both groups exhibit enhanced compliance with greater knowledge, male proprietors' compliance levels are more sensitive to their particular comprehension of tax laws and rates.

The Moderating Effect of Income Level

The relationship was significantly moderated by income level ($\beta = -.107$, $p = .019$). The negative relationship implies that proprietors in lower-income categories are more affected

by tax knowledge in terms of compliance. While other variables (such as bigger stakes or insti-

tutionalized processes) may motivate high-income earners to comply, personal tax knowledge is a crucial factor for accurate compliance by lower-income owners to accurately comply.

The Moderating Effect of Hiring an Accountant

The most robust moderation effect was observed on whether the proprietor hires an accountant variable ($\beta = -.477$, $p < .001$). The interaction is negative, suggesting a "substitution effect." The main factor influencing compliance for owners who do not employ an accountant is their own tax knowledge ($\beta = .698$). However, the impact of an individual's personal tax expertise on compliance is greatly reduced for those who do hire an accountant. This implies that employing a professional ensures compliance through external management, making up for a proprietor's lack of personal tax knowledge.

Non-Significant Moderator

The relationship between tax knowledge and tax compliance was not significantly moderated by highest educational attainment (p

=.213). This shows that the influence of particular tax knowledge on compliance is consistent across formal education levels. Regardless of one's educational background, a college degree does not modify the way one applies tax knowledge to filing and payment procedures. The specialized tax knowledge itself remains to be the major driver.

To summarize, tax knowledge is generally a strong and reliable indicator of tax compliance. However, its influence is not uniform across all groups of taxpayers. The degree to which tax knowledge affects compliance tends to vary depending on certain demographic and behavioral factors. It becomes particularly significant among individuals with lower-income levels, male business owners, and those who personally handle their own tax preparation, as these groups rely more heavily on their understanding of tax rules and obligations when making compliance decisions. This is supported by different studies showing that taxpayers without professional help rely on their own knowledge and therefore knowledge has a bigger part in their decisions to comply or not to comply (Matshona, Sibanda, & Phesa, 2024).

Despite this, the findings suggest that many proprietors do not depend solely on their own knowledge or prior experience when it comes to fulfilling tax responsibilities. Instead, they tend to place greater importance on seeking professional assistance, particularly from accountants or tax practitioners, to ensure accuracy and adherence to regulations. This preference indicates that while tax knowledge plays an important role, it is often complemented—or even outweighed—by the perceived reliability and expertise of professionals.

Overall, these insights highlight that improving tax compliance requires not only enhancing taxpayers' knowledge but also promoting access to reliable professional support, especially for groups that may be more vulnerable to errors and compliance.

Conclusion

The analysis revealed that Olongapo City sole proprietors have high levels of knowledge in taxes based on the level of knowledge of tax laws and tax obligations but the level of

knowledge of tax rates is poor. The behavior of tax compliance that assesses whether a person timely files the correct and the appropriate declaration and pays taxes demonstrates a direct connection with tax knowledge in all the tested elements. The findings indicate that the knowledge of tax among people is used in compliance behavior since all the examined variables demonstrated a good relationship with each other. The results of the research indicate that tax knowledge is not sufficient in tax compliance. This also addresses the gap identified in the study as it shows that knowledge is not the only factor in taxpayer behavior and supports the legal framework such as the TRAIN Law and also the regulations of the BIR on the need for accurate compliance. The outcomes of the research study indicated that the participants did not match the performance requirements of two of the areas that encompassed the adherence to the new tax rules and the appropriate deduction claims. Organizations should know the influence of other variables on the operations as cognitive understanding is not the only variable that motivates their business processes. This supports the Fiscal Psychology Theory as it shows that knowledge has a huge part when it comes to taxpayer behavior. However, other factors such as professional help and complexity also have a part in affecting taxpayer behavior, as supported by other studies regarding it (Azmi & Daud, 2024).

The results are quite similar to the results of Agana et al. (2023) and Lestari and Lestianti (2024), which stated that the more knowledge a person has about taxes, the better they comply with tax regulations, like the more knowledge a person has, the more they will comply. However, it is a bit different from the results of Bomare and Reck (2022), which stated that even though a person knows more about taxes, they can still evade taxes because of loopholes in the system. If we compare these results, the results of this study are somewhat in the middle because, even though knowledge about taxes can help, there are still other factors to consider, like the simplicity or complexity of the tax system and whether or not they get help from professionals.

The moderation analysis provides the full description of tax compliance behavior

explaining an interaction of various factors that determine tax compliance behavior. The findings indicate that tax compliance is associated with sex and income level, but with the greatest relationship with the reason behind hiring an accountant. The employment of an accountant is the determinant that alters the interaction between the tax knowledge and compliance. The tax knowledge serves as the primary driver that leads to the compliance behavior of a sole proprietor with no accountant since they rely on their individual knowledge of tax rules and obligations. The accounting professionals lose the effectiveness of tax knowledge since all of the compliance work is done by them.

Future Research

The findings would open up more pathways for further research that would include more respondents to be able to improve the reliability of the quantitative results and allow a wider comparison in terms of location or type of businesses. Further research may be done using qualitative research methods such as interviews or even short, open-ended questions to determine the underlying causes why some sole proprietors are failing in some aspects of taxation despite their general knowledge in the subject. Other methods can be done to establish what other possible moderating factors may be at play, such as the availability of assistance from the BIR, penalties incurred in the past, and even their attitudes toward government services.

Taking into consideration the fact that the number of the respondents for this particular study was only 54 sole proprietors that were purposively selected, the specific group of the respondents gave clear pattern and helped to further strengthen the findings of the study; hence, working with this manageable number of respondents allowed the researchers to obtain more reliable and consistent data with regard to the role of tax knowledge in terms of compliance behaviour in Olongapo City. It is to be noted that although future investigations might increase the number of participants to cover more business types and areas of operation, the current study has already provided sufficient grounding, which can be used to strengthen further academic studies.

Therefore, data from 54 respondents can still be called upon to provide strong evidence base necessary to guide improvements in tax education, professional assistance, and policy development regarding sole proprietors.

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References

- Abel, N. (2023, April 18). New survey shows critical small business tax literacy gap. *American University News*. https://www.american.edu/media/news/20230418_carolinebrucknertaxliteracysurvey.cfm
- Agana, J., Appiah, T., & Domeher, D. (2023). The impact of tax knowledge, tax fairness, and trust on voluntary tax compliance among SMEs. *SAGE Open*. <https://doi.org/10.1177/21582440241234757>
- Amin, S. N., Buhari, P. Z. A., Yaacob, A. S., & Iddy, Z. (2022). Exploring the influence of tax knowledge in increasing tax compliance by introducing tax education at tertiary-level institutions. *Open Journal of Accounting*, 11(2), 57–70. <https://doi.org/10.4236/ojacct.2022.112004>
- Asante, S., & Baba, A. (2025). Tax compliance among self-employed in Ghana: Do demographic characteristics matter?. *International Business and Management*. <http://www.flr-journal.org/index.php/ibm/article/view/j.ibm.1923842820110301.070/0>
- Azmi, D. A. W. M., & Daud, S. A. M. M. (2024). Reconceptualizing tax compliance behavior: A theoretical matrix approach. *Accounting and Finance Research*, 13(1), 67-78.

- https://www.academia.edu/download/111735143/Wan_Mohd_Azmi_and_Md_Daud_2024.pdf
- Balasoiu, N., Chifu, I., & Oancea, M. (2023). Impact of direct taxation on economic growth: Empirical evidence based on panel data regression analysis at the level of EU countries. *Sustainability*, 15(9), 7146. <https://www.mdpi.com/2071-1050/15/9/7146>
- Bawa, F. J., & Boachie, C. (2024). The Impact of Informal Tax Education on Reporting Compliance: Mediation Role of General Tax Knowledge Within the Informal Sector of Ghana. *International Journal For Multidisciplinary Research*. <https://doi.org/10.36948/ijfmr.2024.v06i06.31961>
- Bomare, J., & Reck, D. (2022). Different from you and me: Tax enforcement and sophisticated tax evasion by the wealthy. *LSE Public Policy Review*. <https://ppr.lse.ac.uk/articles/10.31389/lseppr.71>
- Cauble, E. (2025). Channels of Tax Law (Mis) Information. *Univ. of Wisconsin Legal Studies Research Paper*, (1838). https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5212746
- Challoumis, C. (2024). Adapting Tax Policy For Future Economies-Insights From The Cycle Of Money. *SSRN Electronic Journal*. https://www.academia.edu/download/120778143/ssrn_4942974_3_.pdf
- Cureg, A. G., Larida, A. A. P., Mangili, H. M. N., Santos, B. L. B., & Mania, J. R. (2024). Determining the Level of Tax Awareness and Factors Affecting Tax Compliance of Ready-to-Wear Businesses in Solano, Nueva Vizcaya 3709. *International Journal of Research and Innovation in Social Science*, 8(4), 797-823. https://econpapers.repec.org/article/bcpjournal/v_3a8_3ay_3a2024_3ai_3a4_3ap_3a797-823.htm
- Cureg, J. E., Pagulayan, K. B., Tabunan, J. A., & Dalida, R. T. (2024). Determining the level of tax awareness and factors affecting tax compliance of ready-to-wear businesses in Solano, Nueva Vizcaya 3709. *British Journal of Political Research*, 8(4), 797-823. <https://ideas.repec.org/a/bcp/journal/v8y2024i4p797-823.html>
- Erina, L., Saptawan, A., & Martina. (2024). Patriarchy, Economic Values, and Tax Morale in Indonesia. *International Journal of Public Policy and Administration Research*, 11(3), 77-90. <https://doi.org/10.18488/74.v11i3.3875>
- Estrellana, M. C. (2023). Effectiveness of electronic filing and computerized payment system of TAMP taxpayers in Lucena City: A basis to improve collection performance. *ResearchGate*. <https://doi.org/10.26480/aem.01.2023.15.20>
- Finér, L. (2021). Who generated the loopholes? A case study of corporate tax advisors' regulatory capture over anti-tax avoidance legislation in Finland. *Nordic Tax Journal*, 2022(1), 1-26. <https://sciendo.com/article/10.2478/ntaxj-2021-0005>
- Goyal, A. (2026). Blockchain Technology in Taxation: A Transformative Framework. *European Journal of Electrical Engineering and Computer Science*, 10(1), 1-10. <https://www.eu-opensci.org/index.php/ejece/article/view/19762>
- Herlina, N. (2026). The Psychology of Compliance: A Systematic Review of Tax Morale and Sharia Principles in Modern Regulatory Affairs. *BASIRA: Journal of Behavioral Law, Analytical Sharia, Society, Integrity, and Regulatory Affairs*, 29-44. <https://journalweb.org/ojs/index.php/BASIRA/article/view/882>
- Kurnia, K., & Fajarwati, R. A. (2022). Effect of education level, income level, and tax policy on taxpayer compliance during the COVID-19 pandemic: Case study on employee individual taxpayers at the Sukabumi Pratama Tax Service Office. *ResearchGate*. <https://doi.org/10.53730/ijhs.v6nS9.12336>
- Lestari, P. D. P., & Lestianti, S. S. (2024). Taxpayer awareness and understanding of tax regulations on taxpayer compliance

- with tax sanctions as a moderating. *Az-zukhruf: Journal of Management and Business*, 1(1), 30-43. <https://ojs.az-zukhrufcendikia.or.id/index.php/JMDB/article/view/19>
- Matshona, Z., Sibanda, M., & Phesa, M. (2024). Tax knowledge and tax behaviour of individual taxpayers in South Africa: A scoping review. *International Journal of Economics and Financial Issues*, 14(5), 299-316. https://www.academia.edu/download/122352016/31_IJEFI_16149_phesa_okey_8_.pdf
- OECD. (2021). Building tax compliance through education and engagement. OECD Publishing. https://www.oecd.org/en/publications/2021/11/building-tax-culture-compliance-and-citizenship_ad2a361d.html
- Olongapo City Government. (2024). Olongapo City Revised Comprehensive Development Plan 2020–2026. City of Olongapo. <https://olongapocity.gov.ph/wp-content/uploads/2024/09/Olongapo-City-Comprehensive-Development-Plan.pdf>
- Philippine Statistics Authority. (2025, January 13). 2022 Annual Survey of Philippine Business and Industry (ASPBI): Economy-wide preliminary results. <https://psa.gov.ph/content/2022-annual-survey-philippine-business-and-industry-aspbi-economy-wide-preliminary-results>
- Presidential Communications Office. (2025). BIR collected record P2.85 trillion tax in 2024 – PBBM. Presidential Communications Office. https://pco.gov.ph/news_releases/bir-collected-record-p2-85-trillion-tax-in-2024-pbbm/
- Putri, L., Rezani, M. R., & Hermina, D. (2025). Correlational research design. *Jurnal Riset Multidisiplin Edukasi*, 2(6), 306–317. <https://doi.org/10.71282/jurmie.v2i6.456>
- Renoria, M. R. (2024). Tax awareness and compliance levels among small business owners: Basis for tax education program. *Universal International Journal of Research and Technology*, 5(1), 39–48. <https://uijrt.com/paper/tax-awareness-compliance-levels-among-small-business-owners-basis-tax-education-program>
- Republic Act No. 10963, Tax Reform for Acceleration and Inclusion (TRAIN) Law of 2017. <https://elibrary.judiciary.gov.ph/thebookshelf/show-docs/2/80559>
- Rosly, A. S. (2022). Taxpayer Perceptions of tax awareness, tax education, and tax complexity among small and medium enterprises in Malaysia: A quadrant analysis approach. *Universal Journal of Accounting and Finance*. <https://www.academia.edu/download/106606195/UJAF24-12291992.pdf>
- Schmölders, G. (1959). Fiscal psychology: A new branch of public finance. *National Tax Journal*, 12(4), 340-345. <https://www.journals.uchicago.edu/doi/abs/10.1086/NTJ41790780>
- That, O. Y., Hui, J. N. L., & Hiung, A. L. C. (2022). The effect of age on personal income tax compliance: A case of youth in Malaysia. *International Journal of Academic Research in Business and Social Sciences*, 12(13), 1–22. <https://doi.org/10.6007/IJARBSS/v12-i13/14133>
- Trifan, V. A., Szentesi, S. G., Cuc, L. D., & Pantea, M. F. (2023). Assessing tax compliance behavior among Romanian taxpayers: An empirical case study. *SAGE Open*, 13(3), Article 21582440231195676. <https://doi.org/10.1177/21582440231195676>

Appendix

Reliability Analysis		
<i>Scale Reliability Statistics</i>		
	Cronbach's α	McDonald's ω
scale	0.916	0.922

Item Reliability Statistics		
	If item dropped	
	Cronbach's α	McDonald's ω
a. Awareness of tax laws [I am aware of the tax obligations of a sole proprietor under the Philippine tax system (Income Tax, Business Tax, and Withholding Tax).]	0.919	0.922
a. Awareness of tax laws [I understand the difference between tax compliance, tax avoidance, and tax evasion.]	0.880	0.894
a. Awareness of tax laws [I am familiar with the penalties for late filing or noncompliance for sole proprietors (e.g., the EOPT Act).]	0.876	0.890
a. Awareness of tax laws [I actively keep myself updated on tax regulation changes affecting sole proprietors (e.g., through the BIR website, announcements, and publications).]	0.880	0.889

Reliability Analysis		
<i>Scale Reliability Statistics</i>		
	Cronbach's α	McDonald's ω
scale	0.928	0.929

Item Reliability Statistics		
	If item dropped	
	Cronbach's α	McDonald's ω
b. Understanding of tax rates [I understand how my taxable income is determined under the Philippine tax system (e.g., The use of itemized deductions, OSD, etc. applicable to sole proprietors).]	0.919	0.921
b. Understanding of tax rates [I know the income tax rates applicable to sole proprietors in the Philippines (e.g., Graduation Income tax rates, 8% Flat Income tax rate).]	0.910	0.912
b. Understanding of tax rates [I know whether I should register under VAT, or percentage tax, or when I am applicable to 8% income tax in lieu of business tax.]	0.899	0.903
b. Understanding of tax rates [I understand the impact of recent applicable tax amendments (e.g., TRAIN, CREATE) on my business.]	0.892	0.893

Reliability Analysis

Scale Reliability Statistics

	Cronbach's α	McDonald's ω
scale	0.917	0.921

Item Reliability Statistics

	If item dropped	
	Cronbach's α	McDonald's ω
c. Familiarity with tax obligations [I know the required tax forms (e.g., BIR Form 1701, 2551Q) for sole proprietors.]	0.894	0.901
c. Familiarity with tax obligations [I am familiar with the Bureau of Internal Revenue (BIR)'s quarterly and annual tax filing requirements for sole proprietors.]	0.881	0.887
c. Familiarity with tax obligations [I understand how to properly declare my business income and allowable deductions as a sole proprietor.]	0.898	0.899
c. Familiarity with tax obligations [I know where and how to file and pay my taxes in the Philippines (e.g., eFPS, eBIRForms, authorized banks).]	0.896	0.901

Reliability Analysis

Scale Reliability Statistics

	Cronbach's α	McDonald's ω
scale	0.886	0.890

Item Reliability Statistics

	If item dropped	
	Cronbach's α	McDonald's ω
a. Timely tax filing [I always file my tax returns on or before the due date.]	0.837	0.841
a. Timely tax filing [I prepare my tax documents in advance to avoid late filing.]	0.851	0.856
a. Timely tax filing [I comply with both quarterly and annual tax filing requirements.]	0.843	0.849
a. Timely tax filing [I use online platforms (e.g., eBIRForms, GCash, Maya) to ensure timely tax filing.]	0.885	0.887

Reliability Analysis		
<i>Scale Reliability Statistics</i>		
	Cronbach's α	McDonald's ω
scale	0.899	0.904

	If item dropped	
	Cronbach's α	McDonald's ω
c. Payment of correct tax amounts [I pay the full amount of taxes due based on my declared income.]	0.929	0.930
c. Payment of correct tax amounts [I do not intentionally under report my income to reduce my tax liability.]	0.871	0.875
c. Payment of correct tax amounts [I ensure that I do not overstate deductions to lower my tax dues.]	0.875	0.879
c. Payment of correct tax amounts [I am committed to fulfilling my tax obligations even without strict enforcement.]	0.890	0.896

Reliability Analysis		
<i>Scale Reliability Statistics</i>		
	Cronbach's α	McDonald's ω
scale	0.918	0.920

	If item dropped	
	Cronbach's α	McDonald's ω
b. Accuracy of tax declarations [I accurately report all my sources of income on my tax returns.]	0.894	0.900
b. Accuracy of tax declarations [I properly declare my deductible expenses as per tax regulations.]	0.871	0.883
b. Accuracy of tax declarations [I review my tax filings for accuracy before submission.]	0.848	0.859
b. Accuracy of tax declarations [I ensure that my tax declarations reflect my actual earnings.]	0.859	0.872