

Assessing Tax Literacy in Punjab: An Empirical Analysis of Government and Non-Government Employees

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Abstract Tax literacy involves understanding personal taxation concepts and making use of that knowledge to determine tax liabilities and file tax returns independently. The present study aims to measure the level of tax literacy among government as well as non-government employees and to compare tax literacy among them. The data were gathered from primary sources using a well-structured and pretested questionnaire. The study's scope includes government and non-government employees from major cities in Punjab, including Amritsar, Jalandhar, Ludhiana, and the union territory of Chandigarh. Samples of 400 employees were split evenly between 200 government and 200 non-government employees. The findings of this study reveal that approximately 50% of government employees have a medium level of tax literacy, with approximately 45% demonstrating high tax literacy and being capable of managing their tax matters effectively. In contrast, roughly 66% of non-government employees exhibit an average level of tax literacy, while only around 26% of them show a high level of tax literacy. Overall, government employees are more knowledgeable in tax affairs than non-government employees, but employees of both groups mostly have a medium level of tax literacy. Enhanced tax literacy programs are recommended to improve these skills and support economic growth, making taxation literacy a key part of adult education. Moreover, the knowledge of taxation concepts will help the employees effectively

manage their hard-earned money via financial planning.

Keywords Tax Literacy, Government Employees, Non-Government Employees, Tax Knowledge, Punjab

1. Introduction

Tax literacy is crucial for an individual's financial planning. Understanding various aspects of taxes and tax strategies helps individuals realize how much they can save even after fulfilling their tax obligations. Those without formal education in taxation often struggle with calculating tax liability, filing returns, and utilizing tax-saving deductions and exemptions [1]. Tax literacy may be defined as "the knowledge necessary to manage the issues concerning personal taxation effectively" [2]. Low tax literacy and morale are linked to poor compliance, negatively impacting society. Fair taxation helps combat evasion and corruption, fostering greater democracy, accountability, and responsiveness. Financial literacy is defined as "the ability to make informed judgments and to make effective decisions regarding the use and management of money."

Tax is a sensitive issue for taxpayers due to the complex taxation system. Tax literacy is a relatively new and

developing concept closely related to financial literacy [3]. Taxation should be considered a key component of financial literacy [4, 5] because it significantly impacts individuals and businesses. The ability to meet tax liabilities on time, prepare accurate returns, and claim all available deductions and exemptions positively influences an individual's overall financial position. Ignoring taxation as a critical aspect of financial literacy poses risks to personal wealth and the economy. Taxpayers who do not understand tax laws and procedures cannot meet their tax obligations [6], highlighting the need for education and assistance programs to help them better understand their tax responsibilities and entitlements.

The Organisation for Economic Co-operation and Development (OECD), together with the International and Ibero-American Foundation for Administration and Public Policies (FIIAPP) in 2015, highlighted that enhancing tax literacy is anticipated to help citizens understand how the tax system operates and strengthens their sense of duty to the state [7]. Additionally, it is expected to increase their awareness that higher revenues could lead to improvements in the quality of public goods and services. More recently, tax literacy has been recognized as a crucial element of financial literacy [8]. This is because taxation can impact various significant financial decisions and events, such as promotions, donations, and the selection of retirement-saving products, placing more responsibility on taxpayers to make informed choices [9].

The majority of research done on tax literacy abroad focuses on tax compliance practices. Few studies have been conducted in India that demonstrate the low level of tax literacy among salaried employees [2]. Consequently, additional research is needed in the Indian context, accounting for each taxpayer's tax literacy and tax-saving strategies. Therefore, this study aims to evaluate the tax literacy levels of both government and non-government employees. By assessing the tax literacy of employees, we can determine their actual understanding of tax-related matters. This study makes a substantial contribution to our knowledge of the tax literacy levels of both government and non-government employees. The study identifies gaps in understanding and highlights areas where education and assistance programs could improve tax literacy. Additionally, it attempts to use a comparative analysis of the tax literacy level between government employees and non-government employees. This study assists educators and policymakers in identifying areas that need targeted interventions to enhance tax literacy in general.

The paper is organized as follows: The literature review is explained in Section 2. The report then goes on to describe the purpose and need of this investigation. The study's methodology is covered in Section 4. The results and discussions are presented in Section 5. Section 6 deals with the conclusion and implications, while Sections 7 and 8 concurrently outline the study's limitations and future scope.

2. Literature Review

Lewis [10] in his study titled "*The Social Psychology of Taxation*" explored how individual tax knowledge and attitudes affect the completion of tax returns. He aimed to understand how increased tax knowledge influences tax compliance behavior. His findings revealed that the general population lacks sufficient knowledge about tax regulations, which adversely impacts tax compliance. Additionally, he highlighted a correlation between low tax knowledge and negative attitudes towards taxation.

Sabri [11] in his study titled "*Tax Ethics and Taxpayers Attitudes*" assessed the tax knowledge of individuals in Kuala Lumpur and Petaling Jaya, Malaysia. To evaluate tax knowledge and related experiences, a Likert scale was developed. The respondents' tax knowledge scores ranged from 0 to 12 out of a possible 16. The findings showed that the average tax knowledge score was 7.38. Respondents aged 30-39 had the highest scores, followed by those aged 40-49, while those under 29 had the lowest scores. Overall, the study concluded that the Malaysian public is generally not well-informed about personal taxation matters.

Eriksen and Fallan [12] found that preferences and attitudes toward taxation influence an individual's knowledge of tax laws. They emphasized the crucial role of tax knowledge within a tax system, particularly in a Self-Assessment System (SAS). The study suggested a correlation between fiscal knowledge and attitudes toward taxation and tax behavior, noting that an improved understanding of tax laws could enhance tax compliance. The study used a quasi-experiment with pre-and post-testing of two groups of students in Norway. The control group chose marketing as an elective, while the experimental group selected tax laws. Tax knowledge was assessed initially with 12 questions and later with 28 questions to get a clearer picture of the differences between the two groups. Results showed a positive correlation between tax knowledge and perceptions of fairness, tax ethics, and attitudes towards others' tax evasion. Increased tax knowledge was linked to a greater perception of tax system fairness. The study concluded that reducing tax evasion could be achieved by enhancing tax knowledge among taxpayers and recommended including tax law education as a compulsory part of social science curricula in schools.

Fallan [13] investigated gender differences in tax knowledge and attitudes toward taxation. The results revealed that male students tend to have a much stricter attitude regarding their own tax evasion, whereas female students exhibit a notably stricter stance on others' tax evasion.

Kamaluddin and Madi [14] assessed tax literacy among salaried individuals in Malaysia's Sabah and Sarawak states. The study aimed to determine if these taxpayers were ready for the Self-Assessment System (SAS) implemented in 2004, which required them to accurately compute their own taxes. The research revealed that salaried individuals in

Sarawak were more tax-literate than their counterparts in Sabah. The employment sector did not significantly impact tax literacy levels, with no notable differences between public and corporate sector employees. Overall, the study found that tax literacy was generally insufficient, indicating that employees had only a basic understanding of tax concepts, potentially affecting the accuracy of their tax calculations. The findings highlighted a need for improved tax education to better prepare taxpayers for SAS.

Latiff et al. [15] emphasized the significance of tax knowledge by evaluating the tax literacy rate among Malaysian taxpayers based on three criteria: 1) the ability to complete tax return forms independently, 2) the interest in learning about taxes, and 3) the occurrence of errors in tax return forms. The findings revealed that professionals exhibited the highest level of tax literacy, while businessmen had the lowest. Most businessmen relied on external services for filling out their tax returns, whereas high-ranking officers were more likely to complete their forms themselves. Businessmen also had the highest error rates in their tax returns, while teachers reported minimal errors. Although many businessmen showed a keen interest in learning about taxation, viewing it as a valuable tool for themselves and their families, over 60% of respondents were considered tax literate. However, a substantial portion was still 'functionally tax illiterate'.

Loo and Ho [16] in their study, assessed the competency of salaried individuals in Malaysia regarding the Self-Assessment System. They evaluated respondents' tax knowledge on aspects such as chargeable income, exemptions, reliefs, rebates, and tax credits. The findings indicated that respondents' understanding of personal taxation was relatively weak, rendering them unprepared and less capable of complying effectively with the self-assessment system.

Madi et al. [17] aimed to assess tax literacy levels among taxpayers in Sabah and Sarawak. They used random sampling from selected towns in both states and employed statistical tests such as t-tests and chi-square tests to analyze tax literacy scores by state and workplace. The findings revealed that taxpayers in Sarawak were more tax literate than those in Sabah. However, taxpayers in both states were still not fully prepared for the Self-Assessment System (SAS). The study recommended more vigorous efforts to improve tax literacy among the population.

Palil and Mustapha [18] explored the role of tax knowledge in influencing tax compliance behavior within Malaysia's Self-Assessment System (SAS). They surveyed 1,073 individual taxpayers to gauge their level of tax knowledge and its impact on compliance. The analysis was conducted in two phases: Stage 1 used t-tests and ANOVA to examine how taxpayer knowledge varied by factors such as gender, ethnicity, education, and income; Stage 2 employed stepwise multiple regression to analyze the relationship between tax knowledge and compliance. The findings highlighted the crucial role of tax knowledge in the SAS, offering insights for policymakers on its

importance for compliance. The study also provided guidance for tax administrators on how to design effective tax education programs, simplify tax systems, and better understand taxpayer behavior.

Furthermore, a study by Bhushan and Medury [2] aimed to assess the tax literacy of salaried individuals, considering various demographic and socio-economic factors. The study found that overall tax literacy was relatively low and varied widely among respondents. Factors such as gender, age, education, income, type of employment, and workplace influenced tax literacy, while geographic region had no significant impact. The study concluded that the government should implement more robust educational initiatives to enhance taxpayers' understanding and improve overall tax literacy.

Razak and Adafula [19] explored how individual taxpayer attitudes influence tax compliance decisions in Ghana, a developing nation. Using a structured questionnaire with five-point Likert scale items, they surveyed individual taxpayers in medium and small-scale businesses in Tamale. The Cronbach alpha was used to test the reliability of the scale items, and one-way ANOVA tested for significant differences between the means of attitudinal variables and tax compliance.

Findings showed that individuals are highly concerned about the taxes they pay, with many perceiving Ghana's income tax rates as high. This perception influences their attitudes towards taxes and their compliance decisions. Individuals showed little concern for comparing their tax payments to those of higher earners. Additionally, the study revealed that governmental accountability and transparency did not significantly affect taxpayer attitudes. However, the perceived benefits from public goods and services, especially physical infrastructure, were high. The research also indicated that individuals did not have a clear understanding of tax laws. A significant positive statistical relationship ($R=0.72$) was found between levels of understanding and tax compliance decisions.

Chardon et al. [6] conducted an empirical study to assess tax literacy levels among Australians and explore their association with demographic factors. The research began with focus group interviews to define the components of tax literacy scores (TLS), followed by a survey of over 600 Australians to measure their TLS. The findings showed that around 81% of Australians had a TLS classified as "basic" or higher, while 19% fell into the "poor" or "low" categories. The study also found that demographic groups with lower financial literacy tended to have lower tax literacy levels. Furthermore, those with a stronger connection to employment generally exhibited higher tax literacy. These results offer valuable insights for policymakers and administrators, helping them identify areas where the general population requires more tax education and refine communication and education strategies.

Acharya and Saddiq [20] conducted research to assess tax literacy levels among salaried individuals in the

Dakshina Kannada District of Karnataka, considering various demographic and socio-economic factors. Their findings revealed a generally good level of tax literacy overall. The study noted that socio-economic factors, excluding geographic regions, influenced tax literacy levels. They recommended that the government enhances educational efforts to boost tax literacy, aiming for universal literacy.

Moučková and Vitek [21] investigated tax literacy among bachelor's degree students at the University of Economics in Prague. They looked into whether tax literacy was influenced by (i) completing tax courses and (ii) practical experience with tax returns. Analyzing 150 questionnaires, the study found that over half of the students had a strong understanding of tax issues, even if they had only completed basic tax courses. For VAT knowledge, the results showed that familiarity improved with advanced coursework in consumption taxation.

Bornman and Wassermann [22] demonstrated how a conceptual framework of tax literacy can help identify tax compliance risks for individuals in the digital economy. The study focused on risks arising from gaps in taxpayers' knowledge, skills, and access to information resources. Their framework includes three key elements: tax awareness, contextual knowledge and skills, and informed decision-making. They showcased the framework's effectiveness by providing examples of the specialized knowledge needed at procedural and legal levels for taxpayers in the digital era.

Güneş et al. [3] aimed to explore tax literacy levels among university students undergoing tax education and identify key determinants of tax literacy in Turkey. Using a questionnaire based on national and international scales, the study analyzed cognitive, affective, and psychomotor dimensions, as well as sub-dimensions of tax literacy, alongside factors such as trust, justice, tax compliance, and non-compliance. The survey covered public finance students from 41 universities and students enrolled in tax courses at universities without a public finance department across 26 cities within Turkey's NUTS-2 statistical sub-regions, with a total of 1,492 survey responses evaluated. The research demonstrated high reliability with a Cronbach's Alpha value of 0.910 for the 51-question Likert scale used and a KMO value of 0.941 indicating suitability for factor analysis. Factor analysis revealed seven factors explaining 55.6% of the total variance, highlighting the cognitive dimension's significant role in determining tax literacy among individuals receiving tax education, with the affective dimension playing a secondary role. These findings underscore the critical importance of effective tax education initiatives.

Kaur and Sekhon [23] conducted a systematic literature review to develop a conceptual framework for tax literacy in India. They used qualitative methods, analyzing themes from relevant literature and employing a self-structured questionnaire to assess Tax Literacy Levels among individuals in the income tax bracket. The study

determined a sample size of 384 respondents using Cochran's formula for populations assumed to be infinite (Israel, 1992). Data analysis utilized descriptive statistics such as percentages, frequencies, and averages. The findings revealed inadequate tax literacy levels: 77% for basic tax literacy and 68% for advanced tax literacy. The study highlighted that most taxpayers struggle with aspects of tax assessment, often perceiving it as overly complex. Only 22% of respondents were identified as functionally tax literate, with 78% relying on tax experts for filing their Income Tax Returns (ITR). Reasons for functional tax illiteracy included lack of confidence, time constraints, and behavioral factors among individuals. In conclusion, the study recommends improving tax literacy through campaigns, taxpayer education initiatives, and simplifying tax computation processes to empower taxpayers and enhance their understanding of tax obligations.

Wiqar et al. [1] carried out research to investigate financial knowledge within the context of tax literacy and the government's role in fostering it. They utilized a questionnaire to collect primary data. The questionnaire included a scale developed specifically to assess financial knowledge related to tax literacy. The study surveyed 215 respondents from Delhi NCR using convenience sampling. The findings indicate that the respondents demonstrated high levels of both financial knowledge and tax literacy. The study recommends adopting a multi-stakeholder approach to encourage broad participation, alongside a nationwide government initiative. Additionally, it suggests implementing outreach programs via social media and information technology to enhance tax literacy efforts.

Ali et al. [24] explored the factors influencing individual's attitudes toward tax evasion in Pakistan. Data were collected through 300 questionnaires distributed to taxpayers in Lahore, with 267 valid responses (66.75% response rate). Using Smart PLS software, correlation and regression analyses were performed to identify key determinants of tax evasion. The results show that tax knowledge, tax rates, and the taxation system significantly impact tax evasion attitudes. To reduce evasion and increase revenue, the study suggests that policymakers focus on tax literacy campaigns, lowering tax rates, adopting fixed taxation, and improving tax administration governance.

In a study conducted by De Clercq and Aprea [8], due to the limited research on tax literacy in existing literature, a careful approach was taken to synthesize the concept of this emerging topic. Three main content areas related to defining 'tax literacy' emerged from the review and are included in a proposed holistic conceptual framework. These areas include (i) tax literacy from an individual's standpoint, where a person acts as their tax advisor; (ii) tax literacy from a relational viewpoint, emphasizing citizens' responsibility in all tax matters; and (iii) tax literacy from a systemic lens, highlighting the importance of contributing to the social contract through active citizen participation and strong tax ethics.

3. Need and Objective of the Study

The existing literature indicates that most research on financial and tax literacy has been conducted in developed countries such as the US, Australia, the UK, and Malaysia, while studies on tax literacy are relatively scarce globally. Research specifically on tax literacy is limited, with very few studies examining this area within the Indian context. Previous research primarily explored the link between tax knowledge and tax compliance behavior, and there is a notable lack of studies focusing on measuring tax literacy among employees. No research has yet assessed the tax literacy of salaried employees in India or compared the tax literacy levels between government and non-government employees. Therefore, there is significant potential for further research on these aspects of tax literacy, particularly in Punjab. This study aims to evaluate and compare the tax literacy of government versus non-government employees.

4. Research Material and Methods

4.1. Data Collection and Sample Size

Primary data were collected from credible sources to evaluate tax literacy among government and non-government employees. A well-crafted questionnaire developed through extensive research and expert consultation [25, 2], was utilized for this purpose. The study focused on employees in major cities of Punjab (Amritsar, Jalandhar, and Ludhiana) and the union territory of Chandigarh, selected for their educational, cultural, and social significance. Of the 400 employees surveyed (200 from each sector), 50 questionnaires were incomplete, resulting in an effective sample size of 350 and a response rate of 87.50%. Due to the lack of a comprehensive respondent list, a non-probabilistic judgment-cum-convenience sampling method was employed. The survey was carried out from August 2023 to December 2023, with each respondent personally interviewed using the questionnaire.

4.2. Questionnaire Development and Scoring Criteria of Tax Literacy

The standardized questionnaire recommended by the OECD (Organization for Economic and Cooperation Development) for measurement of financial literacy was used for measuring the degree of tax knowledge among salaried employees in the present study. To measure the tax literacy level of employees, a set of questions were framed keeping in consideration the guidelines of the OECD's standardized questionnaire recommended for measuring financial literacy level. The scoring criterion for measuring tax knowledge is used on the basis of the same rules as suggested by the OECD (Organisation for Economic

Cooperation and Development) for measurement of financial literacy, which is commonly used in the prior research undertaken by the OECD (2020) [7].

4.2.1. Set of Questions and Scoring Criteria Relating to Tax Knowledge

To evaluate the tax knowledge of employees, sixteen questions covering fundamental topics such as income tax concepts, tax liability calculation, tax return filing, deductions, exemptions, and rebates were framed. Each correct response received half a point, while incorrect answers earned zero points, with a maximum possible score of 8. The scores were then categorized into two levels of tax knowledge. The first category, with scores ranging from 1 to 5 marks, represents a low level of tax knowledge. The second category, with scores ranging from 6 to 8 marks, reflects a high level of tax knowledge.

4.2.2. Set of Questions and Scoring Criteria Relating to Tax Behavior

To evaluate tax behavior on issues such as legal tax reduction methods, tax management, investments for tax savings, e-filing, and staying updated on tax laws, employees were asked nine questions covering areas such as legal tax reduction methods, tax management, investments for tax savings, e-filing, staying updated on tax laws, monitoring tax issues, and filing tax returns independently. These questions are rated on a five-point Likert scale. The employees who respond with a 4 or 5 on the scale receive a score of one for each question. The total score from the nine questions, which measure financial behavior, can reach a maximum of 9, which is further categorized into two levels for evaluating the financial behavior of both government and non-government employees. The first category, labeled as negative tax behavior, includes employees who score below 6, ranging from 1 to 5. This indicates a negative approach to taxation matters. Conversely, employees who score between 6 and 9 are categorized as demonstrating positive tax behavior towards taxation issues.

4.2.3. Set of Statements and Scoring Criteria Relating to Tax Attitude

To assess the tax attitude of government and non-government employees, five statements were used, rated on a five-point Likert scale from "strongly agree" to "strongly disagree." Each statement was scored up to 5 points, and the total score was averaged to determine the overall attitude. According to the OECD (Organization for Economic Cooperation and Development) criteria, employees with an average score of 3 or above indicate a positive attitude, while those with scores of 3 or less were categorized as having a negative financial attitude. The five statements used to gauge tax attitude are detailed in Table 1.

Table 1. Set of five statements indicating the tax attitude of employees

Sr. No.	Statements
S1	I have the ability to calculate tax liability and e-filing tax returns independently.
S2	I feel capable of understanding income tax laws.
S3	I feel capable of increasing my tax knowledge.
S4	I feel that dealing with tax-related issues is stressful.
S5	I feel that tax rates are very high.

Source: www.oecd.org

4.2.4. Scoring Criteria Relating to Tax Literacy

To evaluate the tax literacy of government and non-government employees, three key dimensions were considered: tax knowledge, tax behavior, and tax attitude. The overall tax literacy score is calculated by summing the scores from these three dimensions. The highest possible tax literacy score is 22, which includes 8 points for Tax Knowledge, 9 points for Tax Behavior, and 5 points for Tax Attitude, as outlined in Table 2. The total score of 22 is then categorized into four levels using Quartiles to assess the level of tax literacy, with the categories detailed in Table 3.

Table 2. Summation of tax literacy scores

Name	Scores
Tax Knowledge (a)	8
Tax Behavior (b)	9
Tax Attitude (c)	5
Tax Literacy (a + b + c = d)	22

Source: www.oecd.org

Table 3. Scoring criteria measuring the level of tax literacy of employees

Category	Intervals	Level of TL
1	1-5	Poor TL
2	6-11	Low TL
3	12-17	Average TL
4	18-22	Good TL

Source: www.oecd.org

Table 3 outlines four categories of tax literacy based on respondents' scores. The first category, Poor Tax Literacy, includes individuals who score less than 6 marks. These individuals exhibit very low tax literacy and struggle with managing tax-related issues. The second category, Low Tax Literacy, covers scores between 6 and 11 marks. Individuals in this group have a limited understanding of tax matters and face difficulties with their regular tax issues.

The third category, Average Tax Literacy, encompasses scores between 12 and 17 marks. People in this range possess a moderate level of tax literacy and can manage tax-related issues effectively. The final category, Good Tax Literacy, includes those scoring between 18 and 22 marks. This group demonstrates a high level of tax literacy across all three components: Tax Knowledge, Tax Behavior, and Tax Attitude, and is well-equipped to handle tax-related matters.

5. Results and Discussion

Tax literacy is measured using the OECD (Organisation for Economic Cooperation and Development) approach. Tax literacy is determined by combining the scores of tax knowledge, tax behavior and tax attitude in the present study as follows:

5.1. Results and Discussion Relating to Tax Knowledge of Employees

This section addresses the evaluation of tax-related knowledge among government and non-government employees. Tax knowledge is crucial for accurately determining tax liability [26, 27]. Recent research from Malaysia [28, 29, 30] also highlights that tax knowledge significantly influences taxpayers' compliance behavior within the self-assessment system. This finding is supported by various studies [31, 32], which indicate that having a good understanding of tax regulations is associated with higher compliance rates. Conversely, a lack of tax knowledge can lead to non-compliance, whether deliberate or inadvertent.

Table 4 displays the tax knowledge levels of government employees, while Table 5 shows the levels for non-government employees. Descriptive statistics, including frequencies and percentages, were used for data analysis. According to Table 4, 76% of government employees demonstrated high tax knowledge, scoring more than 5 on questions related to basic tax concepts. Conversely, only 24% of government employees had a low level of tax knowledge. Table 5 indicates that 70.29% of non-government employees also exhibited high tax knowledge, scoring 6 or more on similar questions. However, 29.71% of non-government employees had a low level of tax knowledge. The results indicate that government employees generally have a higher level of tax knowledge compared to non-government employees. Both groups, however, demonstrate a reasonable understanding of basic tax concepts, such as calculating tax liability, filing tax returns, and utilizing deductions and exemptions.

Table 4. Results measuring tax knowledge of government employees

Category	Frequency	Percentage
1 (Low Tax Knowledge)	42	24
2 (High Tax Knowledge)	133	76
Total	175	100

Source: "Authors' own findings"

Table 5. Results determining tax knowledge of non-government employees

Category	Frequency	Percentage
1 (Low Tax Knowledge)	52	29.71
2 (High Tax Knowledge)	123	70.29
Total	175	100

Source: "Authors' own findings"

5.2. Results and Discussions regarding TAX Behavior of Employees

A key element of tax literacy is the inherent motivation to "do the right thing." Taxpayers are driven to comply with tax laws because they feel it is the correct action to take, rather than out of fear of punishment for non-compliance [33]. This motivation to comply is closely linked to the individual's behavioral norms.

Descriptive statistics such as frequency and percentages were used to analyze employee responses regarding tax behavior. Tables 6 and 7 present the findings for government and non-government employees, respectively. According to Table 6, 69.71% of government employees exhibit positive behavior in tax matters, whereas 30.29% display negative behavior. Table 7 shows that 56.57% of non-government employees have positive behavior concerning tax-related issues, while 43.43% demonstrate negative behavior.

Table 6. Results indicating tax behavior of government employees

Category	Frequency	Percentage
1 (Negative Tax Behavior)	53	30.29
2 (Positive Tax Behavior)	122	69.71
Total	175	100

Source: "Authors' own findings"

Table 7. Results showing tax behavior of non-government employees

Category	Frequency	Percentage
1 (Negative Tax Behavior)	76	43.43
2 (Positive Tax Behavior)	99	56.57
Total	175	100

Source: "Authors' own findings"

To conclude, government employees generally exhibit more favorable behavior in managing tax-related matters compared to their non-government counterparts. Additionally, most employees show positive behavior regarding important tax issues, including legal methods to reduce taxes, tax management, investing in tax-saving instruments, e-filing returns, and staying updated on tax laws.

5.3. Results and Discussions regarding Tax Attitude of Employees

The factors influencing tax payment behavior are categorized into two main types: internal and external norms. Internal norms encompass taxpayers' thoughts and perceptions about taxation that shape their attitudes. External norms include aspects such as the tax system and its procedures, the approach of tax administration towards taxpayers, tax knowledge, and legal frameworks [34].

The responses to the five statements about tax-related matters were analyzed using descriptive statistics, including frequency, percentages, and average scores. The results are detailed in Tables 8 and 9 for government and non-government employees, respectively. Table 8 shows that 58.86% of government employees exhibit a positive attitude toward tax-related issues, while 41.14% display a negative attitude. Those with a positive attitude are proficient in calculating tax liability, e-filing, understanding tax laws, enhancing tax knowledge, and handling tax matters effectively. Conversely, Table 9 indicates that 57.71% of non-government employees have a positive attitude toward tax-related matters, whereas 42.29% have a negative attitude. Overall, government employees demonstrate a more positive attitude towards tax issues compared to their non-government counterparts.

Table 8. Results signifying tax attitude of government employees

Category	Frequency	Percentage
1 (Negative Tax Attitude)	72	41.14
2 (Positive Tax Attitude)	103	58.86
Total	175	100

Source: "Authors' own findings"

Table 9. Results signifying tax attitude of non-government employees

Category	Frequency	Percentage
1 (Negative Tax Attitude)	74	42.29
2 (Positive Tax Attitude)	101	57.71
Total	175	100

Source: "Authors' own findings"

5.4. Results and Discussion regarding Tax Literacy of Employees

The overall tax literacy score of government and non-government employees is calculated by summing the scores from tax knowledge, tax behavior, and tax attitude. The analysis of data from government and non-government employees, using descriptive statistics such as frequency and percentages, categorized the results into four levels as shown in Tables 10 and 11.

Table 10. Results demonstrating tax literacy of government employees

Category	Frequency	Percent
1 Poor	0	0
2 Low	9	5.14
3 Average	88	50.29
4 Good	78	44.57
Total	175	100

Source: "Authors' own findings"

Table 11. Results revealing tax literacy of non-government employees

Category	Frequency	Percent
1 Poor	0	0
2 Low	15	8.57
3 Average	115	65.71
4 Good	45	25.72
Total	175	100

Source: "Authors' own findings"

The findings reveal that no employees fall into the Poor Tax Literacy category, indicating that all participants scored more than 5 marks. According to Table 10, only 5.14% of government employees are classified under the Low Tax Literacy category (6-11 marks), suggesting they need to enhance their tax knowledge to manage tax-related matters more effectively. Half of the government employees are in the Average Tax Literacy category (12-17 marks), meaning they have a moderate understanding of tax issues but should increase their awareness for better management in the future. Additionally, 44.57% of government employees are in the Good Tax Literacy category (18-22 marks), reflecting strong capabilities in managing their tax affairs.

For non-government employees, Table 11 shows that just 8.57% fall into the Low Tax Literacy category, indicating a need to improve their tax literacy for better handling of tax matters. The majority, 65.71%, are classified under Average Tax Literacy, suggesting they can manage their tax issues but need to boost their awareness. Only 25.72% of non-government employees exhibit Good Tax Literacy, showing proficient management of their taxation affairs. On the contrary, [2] found that non-

government employees demonstrate higher tax literacy than their government counterparts, and this difference is statistically significant.

6. Conclusions and Implications

The overall results on tax literacy reveal that most government employees (50.29%) have a medium level of tax literacy, scoring between 12 and 17 marks. These employees can manage their tax-related issues but should enhance their awareness for better future outcomes. Only 44.57% of government employees demonstrate a high level of tax literacy, showing strong abilities to handle taxation matters. In comparison, the majority of non-government employees (65.71%) have average tax literacy and need to improve their knowledge to handle tax issues more effectively, though they are currently managing their tax affairs adequately. Only 25.72% of non-government employees show a high level of tax literacy. Overall, it can be concluded that government and non-government employees generally have medium tax literacy levels, with government employees being more knowledgeable about taxation issues than their non-government counterparts. Government employees possess better skills and abilities to manage taxation affairs. Therefore, the government and regulators need to enhance tax literacy initiatives to support economic development. Taxation literacy should be part of adult education programs.

7. Limitations of the Study

The present study also carries certain limitations like any other study, which is based on the consumer survey through a pre-designed questionnaire. The purposive sampling technique used to select the sample means that the results may not fully represent the broader population.

The study focuses solely on employees and does not encompass the general population. Future research could benefit from a larger sample size to improve the generalizability of the findings.

8. Scope for Further Research

The study suggests several directions for future research, acknowledging that a comprehensive exploration of the topic is not feasible in a single study. The current research is limited to four major districts in Punjab—Amritsar, Jalandhar, Ludhiana, and Chandigarh—so its results may not be broadly applicable. Expanding the study to include a wider geographic area could yield more representative and detailed insights into tax literacy. Future studies could benefit from including a more diverse sample of respondents, such as older adults, women, and students, to gain a more comprehensive understanding of tax literacy

across different societal segments. A comparative analysis of tax literacy levels between rural and urban populations could provide valuable insights and should be considered in future research. Investigating factors that might influence tax literacy levels could also be a fruitful area for future exploration.

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