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Providing a Model for Assessing the Tax Literacy of Iranian Managers Using the Fuzzy Delphi Method

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Abstract

Since all corporate managers' decisions have financial implications, it is essential for them to have at least a basic understanding of financial rules, financial literacy, and tax literacy, which play a crucial role in shaping these decisions. The issue of tax literacy among different social groups and its measurement has been widely addressed in past international studies. However, the specific tax literacy of corporate managers, particularly at the national level, has not yet received sufficient attention. Therefore, the present study was conducted with the aim of providing a model for assessing the tax literacy of corporate managers using the fuzzy Delphi method. In this study, the concept of tax literacy, its theoretical foundations, and previous research in this domain are first discussed. Subsequently, the fuzzy Delphi technique was employed to achieve a consensus among 13 tax experts in the country, who formed the Delphi panel. A questionnaire consisting of 20 questions was developed and presented to assess the tax literacy of Iranian managers. Based on the research findings, eleven key components in the formation of tax literacy among managers were identified. These components include knowledge of payroll and compensation regulations, an understanding of value-added tax (VAT) principles, familiarity with reporting requirements for purchases, sales, seasonal transactions, and the taxpayers' system, as well as an awareness of real estate taxation. Additionally, an understanding of income taxation processes, including money laundering and tax evasion issues, is considered crucial. The study also highlights the importance of tax exemptions in the income domain, knowledge of tax litigation processes and related authorities, and awareness of tax penalties for late tax debt payments. Furthermore, familiarity with accounting standards and financial statement analysis, as well as an understanding of the auditing process and the preparation of independent audit reports, are essential elements contributing to the tax literacy of corporate managers.

Keywords: Tax literacy of managers, financial literacy, taxation, fuzzy Delphi.

1. Introduction

Knowledge, as the most important resource of organizations, has attracted the attention of managers. Knowledge is necessary for enhancing employee capabilities, improving goods and services, and achieving higher performance. While most resources depreciate and become obsolete with use, knowledge increases and becomes richer through greater utilization. Financial literacy is one of the concepts related to knowledge and financial knowledge. In the modern economic system, financial literacy is considered a fundamental skill and resource for small and medium-sized enterprises (SMEs) to maintain competitiveness through innovation and to promote stability, employment, and economic growth (Hussain et al., 2018). According to reports published by the OECD (2023), tax literacy is a significant subset of financial literacy, making it essential for corporate managers to acquire tax literacy in order to achieve their organizational goals. One of the critical components of managerial decision-making is possessing skills and knowledge in tax literacy. Financial literacy is defined as the ability to understand and evaluate relevant information necessary for making informed decisions regarding probable financial outcomes (Terry, 2024). Most definitions of financial literacy emphasize that it refers to individuals' ability to acquire, comprehend, and assess information to make decisions that best secure their financial future. Moreover, financial literacy should encompass the application of financial knowledge, as the inability to apply financial knowledge impacts individuals' financial literacy levels.

Tax literacy is a combination of knowledge, skills, and attitudes that enable individuals to gather the necessary information to determine their tax obligations, comply with tax regulations, and implement effective tax planning. Additionally, it includes a sense of responsibility toward the objectives of the social contract, which requires active citizen participation and a high degree of tax ethics (Bernadene & Apra, 2023). Tax literacy, as understood by taxpayers, is a general concept and regulatory framework that enables them to comprehend tax obligations. It provides a reference for taxpayers in undertaking tax-related actions and making tax-related decisions to ensure the precise fulfillment of their obligations (Ventje et al., 2022). Tax literacy is defined as a dynamic process for developing skills and gaining confidence in understanding the factors that affect one's tax-related decisions (Bornman & Wassermann, 2018). It is a relatively new concept founded on practices from developed countries. Tax literacy can be defined as individuals' understanding of tax laws related to tax liability, fulfilling their tax obligations, and assessing potential tax risks that may arise independently within their financial environment (Moeinuddin et al., 2011; Morar et al., 2019; Ventje et al., 2022).

Tax literacy is a crucial factor in ensuring tax compliance and financial decision-making. Studies suggest that higher tax literacy enhances individuals' understanding of taxation, leading to more responsible financial behaviors. Vidyastuti Ningsih (2024) found that tax literacy has a significant positive impact on tax compliance, emphasizing that an increased understanding of taxation helps individuals recognize the importance of taxes and their benefits for society. According a study, tax literacy consists of five fundamental dimensions: technical knowledge, skills, and attitudes related to tax compliance; knowledge and skills concerning taxation as a source of public revenue; competencies required for effective tax planning; responsibilities of a well-informed citizen; and the prerequisites necessary for achieving tax literacy. These dimensions indicate that tax literacy extends beyond understanding tax regulations and involves broader financial knowledge and ethical considerations (Bernadene & Apra, 2023). Similarly, Abuselizde (2020) explored tax literacy in the context of social benefits, arguing that tax policy should be designed to optimize the distribution of tax literacy among taxpayers. He highlights that fair tax burden distribution is a key component of tax literacy, ensuring its role in social equity (Aboosaidi et al., 2021). Meanwhile, Mouckova and Vitek (2019) examined tax literacy among Generation Y and Z, focusing on taxpayers' awareness of tax rates and their understanding of direct versus indirect taxes, local taxation, and the implications of tax policy changes. Their findings indicate that while younger generations possess some knowledge of taxation, their understanding of tax obligations remains fragmented (Moučková & Vítek, 2019).

A company's financial performance reflects the results of its management's decisions. An adequate and appropriate level of financial literacy among business owners and managers enhances corporate performance, as it enables them to establish systems for recording, analyzing, and managing financial information, thereby contributing to operational efficiency and informed decision-making. This, in turn, enhances institutional capacity and fosters rapid and sustainable growth. Additionally, higher financial literacy improves cash flow monitoring, enhances corporate access to capital, and reduces the risk of debt default, allowing business owners to focus on commercial operations to improve overall company performance. To enhance financial literacy levels in society, it is first necessary to assess the current situation. Based on this understanding, appropriate policies and programs should be designed and implemented, taking into account individual, social, and cultural characteristics across all age groups and both genders, considering them both as consumers and producers of economic resources at both the micro and macro levels. This principle applies equally to corporate managers, necessitating an assessment of their tax literacy as a prerequisite for developing strategies to enhance it (Aboosaidi et al., 2021; Abouseidi et al., 2021).

The expansion of government commitments in economic and social spheres and the pursuit of objectives such as economic growth, price stability, increased employment, and equitable income distribution have led to rising public expenditures. Governments require stable financial resources to achieve their developmental objectives (Jayawardane & Low, 2016). As they strive to address budget deficits (Jimenez & Iyer, 2016), the growing demand for public services such as education, healthcare, and general public services (Young et al., 2013) has made tax revenue a crucial and indispensable component (Jimenez & Iyer, 2016).

Research on tax literacy has evolved over the years, examining its implications in various economic and social contexts. Brackin (2007) and Lyon and Catlin (2020) analyzed the relationship between tax and financial literacy, developing an assessment tool to measure consumers' understanding of tax regulations relevant to daily financial decisions. However, they did not propose a conceptual framework (Lyon & Catlin, 2020). Nichita et al. (2019) defined tax literacy as taxpayers' ability to understand their rights and obligations, use tax-related knowledge, and comply with tax regulations. Their study introduced a tax literacy index based on individuals' correct responses to fundamental tax questions, further operationalizing the concept (Nichita et al., 2019). Bornman and Wassermann (2018) explored tax literacy within the digital economy, emphasizing its role in complex financial transactions. They identified three core components: tax awareness, contextual knowledge, and informed decision-making (Bornman & Wassermann, 2018). Mučková and Vítek (2018) examined tax literacy among university students, comparing those who had taken tax courses with those who had not. Their study measured tax knowledge based on students' formal education and practical application skills (Moučková & Vítek, 2019). Cechovsky (2018) assessed tax literacy from an economic education perspective, defining it as a combination of general tax knowledge, interest in taxation, and tax compliance behavior. His framework incorporated cognitive processes, conceptual understanding, and procedural knowledge, offering a structured approach to evaluating tax literacy (Cechovsky, 2018). Genest-Gregoire et al. (2017) conducted a study in Canada, defining tax literacy as the knowledge, skills, and confidence required for responsible tax decision-making. Their research introduced a dual perspective on tax literacy, considering both objective and subjective components (Genest-Grégoire et al., 2017). Blechova and Subotovičová (2016) applied a different approach, assessing tax literacy among business students based on personal income tax, tax rates, and deductions (Blechová & Sobotovičová, 2016). Bhushan (2014) defined tax literacy as an individual's ability to understand personal tax concepts and independently compute tax liabilities (Bhushan, 2014). Recent research in Malaysia (Cvrlje, 2015; Lyon & Catlin, 2020) confirmed that tax literacy is a key determinant of taxpayer compliance under self-assessment systems. These studies collectively highlight the importance of tax literacy in fostering compliance and ensuring effective financial management.

With the increasing expansion of economic activities in digital and electronic environments, the need for new and efficient tax collection methods and systems has grown (Rabiei et al., 2023). Several causal factors, including mastery of tax laws and regulations, financial and tax professionals' knowledge and experience, the clarity and enforceability of tax laws, and process mechanization, alongside cultural and economic drivers, influence tax compliance (Karimi et al., 2021). Given the irreplaceable role of taxation in national budgets and the necessity of efficient tax revenue collection, corporate managers—as key decision-makers and taxpayers—hold a highly significant position in this process. It appears that tax literacy plays a vital role in facilitating effective tax compliance. To assess the tax literacy levels of managers, a reliable measurement tool is required—one that aligns with national tax laws and regulations. It should be noted that due to differences in tax laws between developed countries and Iran, standardized questionnaires from other countries are not appropriate for assessing the tax literacy of Iranian managers.

Therefore, the present study aims to conceptualize tax literacy and develop a suitable instrument for measuring it among corporate managers. This is accomplished through expert consultation with financial and tax professionals using the fuzzy Delphi method. The study proceeds by reviewing previous research in this field, providing a brief explanation of the fuzzy Delphi method, and then outlining the sample and study population. The findings include tables presenting the mean scores obtained and the differences in mean scores derived from expert responses across two rounds of the Delphi survey. Finally, the research methodology, data analysis, and recommendations for future studies will be presented.

2. Methods and Materials

The present study is applied in terms of its objective and employs a survey strategy for its execution. To develop a standardized questionnaire for assessing the tax literacy of managers, an initial questionnaire consisting of 39 multiple-choice questions (covering the topics and concepts outlined in Table 1) was designed. These questions were formulated to evaluate the components and indicators of tax literacy, including payroll and compensation, value-added tax, reporting of purchases, sales, seasonal transactions, and the taxpayers' system, real estate taxation, income taxation, money laundering and tax evasion, tax exemptions in the income domain, tax litigation processes and related authorities, tax penalties for delayed tax payments, familiarity with accounting standards and financial statement analysis, and familiarity with the auditing process and independent audit report preparation.

The development of these questions was based on standardized questionnaires used in international studies and prior research, as well as insights obtained through interviews with financial and tax experts. It is important to note that these questions were localized and adapted to the business environment of the country, incorporating provisions from direct taxation laws, the latest directives, and relevant amendments. The first stage of the research utilized the Delphi method, in which expert opinions were gathered. Following the collection of expert feedback, 14 out of the 39 questions were removed, leaving a total of 25 questions in the final questionnaire.

Table 1. Topics and Concepts Embedded in the Delphi Questionnaire Questions

Question	Topic or Concept
1	Payroll tax obligations
2	Payroll tax exemptions
3	Penalties for non-compliance with payroll tax obligations
4	Inheritance tax
5	Applicability of value-added tax
6	Taxpayer obligations regarding VAT declaration submission
7	Penalties for non-compliance with VAT declaration requirements
8	Legal obligations for filing periodic purchase and sales reports
9	Penalties for failing to submit periodic purchase and sales reports
10	Property transfer tax
11	Property rental income tax
12	Taxpayer obligations concerning the transfer of mixed-use properties
13	The taxpayers' system
14	Tax exemptions in free trade zones
15	Inheritance tax on shares in investment funds
16	Corporate income tax for non-commercial legal entities
17	Taxpayer obligations related to financial performance reporting
18	Tax incentives for maintaining financial records over three consecutive years
19	Penalties for failing to submit income declarations
20	Tax evasion and money laundering
21	Tax rate on bank deposit investments
22	Tax-exempt activities
23	Conditions and benefits under Article 138 of the Direct Tax Code
24	Tax exemptions for private-sector investments in industrial zones
25	Tax obligations of companies with tax-exempt income
26	Incidental income tax
27	Tax litigation procedures
28	Deadlines for appealing tax assessments
29	Reporting of paid taxes in financial statements
30	Core financial statements
31	Tax exemptions for increased declared profits year-over-year
32	Companies required to submit audit reports
33	Objectives of auditing
34	Deadlines for audit report submission
35	Penalties for failing to submit audit reports
36	Tax obligations of retail businesses regarding the taxpayers' system
37	Tax regulations concerning project financing
38	Luxury car taxes
39	Tax obligations of retail businesses and vendors interacting with final consumers

The questions in the Delphi questionnaire covered a wide range of tax-related subjects. These included tax obligations related to payroll, payroll tax exemptions, penalties for non-compliance with payroll tax obligations, inheritance tax, value-added tax applicability, taxpayers' obligations regarding VAT declaration submission, penalties for non-compliance with VAT declaration requirements, legal obligations for filing periodic purchase and sales reports, penalties for failing to submit such reports, property transfer tax, property rental income tax, taxpayer obligations concerning the transfer of mixed-use properties as per construction permits, the taxpayers' system, tax exemptions in free trade zones, inheritance tax on shares in investment funds, corporate income tax for non-commercial legal entities, obligations related to financial performance reporting, tax incentives for maintaining financial records over three consecutive years, penalties for failing to submit income declarations, tax evasion and money laundering, tax rates on bank deposit investments, tax-exempt activities, conditions and benefits under Article 138 of the Direct Tax Code regarding financing projects through individual cash contributions, tax exemptions for private-sector investments in industrial zones and less-developed regions, tax obligations of companies with tax-exempt income, incidental income tax, tax litigation procedures, deadlines for appealing tax assessments, reporting of paid taxes in financial statements, core financial statements, tax exemptions for increased declared profits year-over-year, companies required to submit audit reports, objectives of auditing, deadlines for audit report submission, penalties for failing to submit audit reports, tax obligations of retail businesses regarding the taxpayers' system, tax regulations concerning project financing, luxury car taxes, and tax obligations of retail businesses and vendors directly interacting with final consumers.

The second phase of the study involved distributing the remaining 25 questions to a panel of 13 experts, including university professors, faculty members specializing in accounting, and financial and tax specialists. Their responses were collected using a Likert scale and analyzed using the fuzzy Delphi technique.

3. Findings and Results

Qualitative variables were defined as triangular fuzzy numbers. The feasible values defined by triangular fuzzy numbers were (5,7,9) for the "good" option, (3,5,7) for the "moderate" option, and (1,3,5) for the "poor" option.

At each stage of the Delphi test, the fuzzy mean for the triangular fuzzy numbers A1, A2, ..., An is defined as follows:

Am = (A1 + A2 + ... + An) / n

In this formula, Ai (ai, bi, ci) represents the triangular fuzzy number for expert i, and Am is the fuzzy mean for each question.

After computing the fuzzy mean for the questionnaire questions, the deviation of each expert's response from the population mean is calculated using the following formula (Azar & Faraji, 2002):

1 m , A1i - A1m B - iB1 , m C1 - C1i

In this formula, C1m, B1m, A1m represent the lower, middle, and upper bounds of the triangular fuzzy mean for each question, while C1i, B1i, A1i represent the lower, middle, and upper bounds for expert i, respectively.

In the next stage, the population mean from the previous stage and each expert's deviation from this mean are presented to them, allowing them to adjust their responses or maintain their previous answers. The fuzzy mean is recalculated for the new stage, and the difference between the two-stage means is computed for each question. If the difference between the two-stage means, calculated using the following formula, is less than 0.15, sufficient consensus on the question is considered achieved. This process continues until consensus is reached.

S(Ni, Nj) = [(a1 + 2a2 + a3) - (b1 + 2b2 + b3)] / 4 (B2 - B1)

In this formula, B2 and B1 represent the largest and smallest bounds of the mean between the two stages. The values a1, a2, a3 correspond to the lower, middle, and upper bounds of the mean for each question in the previous stage, while b1, b2, b3 represent the lower, middle, and upper bounds of the mean for the new stage.

Table 2. Fuzzy Mean of Experts' Responses from the First Round of the Delphi Technique

Question	Mean	Question	Mean
1	(2.85,4.85,6.85)	2	(4.85,6.85,8.85)
3	(3.62,5.62,7.62)	4	(3.15,5.15,7.15)
5	(4.08,6.08,8.08)	6	(4.38,6.38,8.38)
7	(4.08,6.08,8.08)	8	(4.38,6.38,8.38)
9	(4.38,6.38,8.38)	10	(4.54,6.54,8.54)
11	(3.31,5.31,7.31)	12	(4.08,6.08,8.08)
13	(4.23,6.23,8.23)	14	(4.08,6.08,8.08)
15	(4.54,6.54,8.54)	16	(4.38,6.38,8.38)
17	(4.54,6.54,8.54)	18	(4.23,6.23,8.23)
19	(4.85,6.85,8.85)	20	(3.00,5.00,7.00)
21	(4.38,6.38,8.38)	22	(4.69,6.69,8.69)
23	(4.54,6.54,8.54)	24	(4.23,6.23,8.23)

25	(4.38,6.38,8.38)

Table 3. Fuzzy Mean of Experts' Responses from the Second Round of the Delphi Technique

Question	Mean	Question	Mean
1	(2.69,4.69,6.69)	2	(4.69,6.69,8.69)
3	(3.00,5.00,7.00)	4	(2.54,4.54,6.54)
5	(4.23,6.23,8.23)	6	(4.69,6.69,8.69)
7	(4.38,6.38,8.38)	8	(4.69,6.69,8.69)
9	(4.54,6.54,8.54)	10	(4.85,6.85,8.85)
11	(2.69,4.69,6.69)	12	(4.38,6.38,8.38)
13	(4.38,6.38,8.38)	14	(4.23,6.23,8.23)
15	(4.85,6.85,8.85)	16	(4.54,6.54,8.54)
17	(4.69,6.69,8.69)	18	(4.38,6.38,8.38)
19	(4.69,6.69,8.69)	20	(2.54,4.54,6.54)
21	(4.38,6.38,8.38)	22	(4.85,6.85,8.85)
23	(4.54,6.54,8.54)	24	(4.08,6.08,8.08)
25	(4.54,6.54,8.54)		

Table 4. Differences in Experts' Mean Responses Between the First and Second Rounds of the Delphi Technique

Question	Mean Difference	Question	Mean Difference
1	0.037	2	0.037
3	0.145	4	0.143
5	0.035	6	0.073
7	0.070	8	0.073
9	0.037	10	0.070
11	0.145	12	0.070
13	0.035	14	0.035
15	0.073	16	0.073
17	0.035	18	0.035
19	0.038	20	0.108
21	0.000	22	0.037
23	0.000	24	0.035
25	0.037		

Given that the differences in expert opinions regarding all questions during the two rounds of the fuzzy Delphi technique were less than 0.15 (Table 4), it can be concluded that sufficient consensus among experts was achieved. Therefore, the Delphi method was discontinued, and the results were analyzed. Based on the explanations provided in the research methodology section, five questions from the final round of the fuzzy Delphi technique (second round) did not receive a "good" rating, whereas 20 questions were rated as "good." The fuzzy mean scores of these questions, presented in the relevant table, are approximately within the triangular fuzzy number range of (5,7,9) and are highlighted accordingly. These selected questions were used to develop the standardized questionnaire, as their number was deemed sufficient for this purpose.

It is important to note that these 20 questions encompass the key concepts and influential topics related to tax literacy among managers. Consequently, it can be concluded that the research objective—developing and presenting a standardized questionnaire as a model for assessing the tax literacy of Iranian managers—has been achieved, thereby answering the main research question.

A total of 20 multiple-choice questions were selected for the final questionnaire. These questions, along with the corresponding topics and concepts identified by experts, are presented in the table below.

Table 5. Topics and Concepts Embedded in the Selected Questions by Experts

Question	Topic or Concept	Question	Topic or Concept
2	Taxpayer obligations regarding payroll tax and penalties for non-compliance	5	Tax on the transfer of residential and commercial properties
6	Basis and rate of property rental tax	7	Taxpayer obligations regarding the taxpayers' system
8	Basis and rate of corporate income tax for non-commercial entities engaged in profit-generating activities	9	Taxpayer obligations regarding financial performance declaration and reporting
10	Tax incentives for maintaining financial records over three consecutive years	12	Tax evasion and money laundering
13	Tax rate on dividends, bank deposit interest, and participation bonds	14	Tax exemption threshold for income derived from manufacturing, mining, and hospital operations in less-developed regions and free trade zones
15	Tax on incidental income (prizes, donations, etc.)	16	Tax obligations of companies whose income is fully tax-exempt under the law
17	Tax litigation authorities	18	Taxpayer deadline for filing objections and presenting cases to the tax dispute resolution board
19	Core financial statements that companies are required to prepare and submit annually in their tax declarations	21	Companies required to undergo independent audits and submit audit reports
22	Deadline for audit report submission	23	Penalty for late submission of audit reports
24	Tax exemptions for encouraging private sector investments in industrial parks in less-developed regions and other areas where business licenses were obtained after 2016	25	Conditions for applying Article 138 of the Direct Tax Code and the benefits of this provision concerning project financing through individual cash contributions

4. Discussion and Conclusion

The findings of this study indicate that tax literacy among Iranian corporate managers is composed of several critical components, including knowledge of payroll taxation, value-added tax regulations, real estate taxation, income taxation, tax exemptions, tax litigation procedures, financial statement analysis, and audit processes. The results confirm that tax literacy is a multidimensional construct encompassing both technical knowledge and practical skills necessary for compliance with tax regulations. The fuzzy Delphi method applied in this study achieved a high level of consensus among experts, leading to the development of a standardized assessment tool tailored to the Iranian tax system. The identification of 20 key questions that received a "good" rating in the final Delphi round suggests that these components are essential indicators of tax literacy.

These findings align with previous studies emphasizing the significance of tax literacy in shaping tax compliance behaviors. Vidyastuti Ningsih (2024) demonstrated that tax literacy has a significant positive effect on tax compliance, reinforcing the idea that individuals who understand tax regulations are more likely to fulfill their tax obligations. The present study further supports this claim by identifying the specific domains of tax knowledge that corporate managers require to comply with tax laws. Moreover, the results echo the work of Bernadene and Apra (2023), who outlined five essential dimensions of tax literacy, including technical knowledge, skills related to public revenue, financial planning competencies, and responsible citizenship (Azar & Faraji, 2002). The experts in this study similarly highlighted the necessity of understanding tax laws, compliance procedures, and the broader implications of taxation on business operations.

Furthermore, the results confirm that tax literacy is closely linked to social responsibility and economic efficiency. Abuselidze (2020) examined tax literacy from a social policy perspective and argued that an equitable tax burden distribution contributes to a fairer economic system (Abuselidze, 2020). The findings of the present study reinforce this perspective by demonstrating that corporate managers require a strong understanding of tax regulations to ensure compliance and contribute to the broader financial system. The experts emphasized that a lack of tax literacy can lead to non-compliance, either intentional or unintentional, which aligns with previous findings that low levels of tax literacy can result in errors in tax filings (Lyon & Catlin, 2020).

Another key finding of this study is that younger generations may have different levels of tax literacy compared to older corporate managers. This aligns with research by Mouckova and Vitek (2019), who found that tax literacy levels among Generation Y and Z varied significantly based on their familiarity with tax regulations (Moučková & Vítek, 2019).

The study also confirms that tax literacy is not only about understanding tax rates and deductions but also involves knowledge of tax litigation and compliance processes. The work of Nichita et al. (2019) supports this notion by defining tax literacy as the ability to comprehend rights and obligations, correctly file tax returns, and adhere to tax regulations. The experts in this study emphasized that corporate managers must be well-versed in tax litigation procedures, appeal deadlines, and penalties for non-compliance. This is consistent with Cechovsky (2018), who suggested that tax literacy extends beyond basic financial knowledge and includes an awareness of tax policies and enforcement mechanisms (Moučková & Vítek, 2019).

Additionally, the findings align with the research of Bornemann and Wasserman (2018), who explored tax literacy within the context of the digital economy. Their study identified tax awareness, contextual knowledge, and informed decision-making as essential components of tax literacy. Similarly, the present study found that corporate managers must understand evolving tax policies related to digital transactions and electronic financial reporting. As tax systems become increasingly digitalized, tax literacy must evolve to include familiarity with digital compliance tools and reporting mechanisms.

Another crucial aspect of tax literacy identified in this study is its relationship with broader financial literacy. Brackin (2007) and Lyon and Catlin (2020) previously demonstrated that tax literacy is closely linked to financial decision-making. Their research indicated that individuals with higher financial literacy are more likely to understand tax regulations and make informed financial choices (Brackin, 2007; Lyon & Catlin, 2020). The present study supports this conclusion by showing that corporate managers who possess strong financial literacy skills are better equipped to navigate tax compliance requirements.

Gregory et al. (2017) examined tax literacy among Canadian citizens and defined it as the knowledge, skills, and confidence needed for responsible tax decision-making. Their findings suggest that tax literacy involves both objective knowledge and subjective confidence. The present study aligns with this perspective, as experts highlighted the importance of both technical tax knowledge and the ability to apply that knowledge in real-world financial decisions. Furthermore, the research by Bhushan (2014) reinforces the idea that tax literacy should be measured in terms of an individual's ability to independently compute tax liabilities and file tax returns (Bhushan, 2014).

This study also confirms previous findings that tax literacy influences business decision-making. Blechova and Subotovičová (2016) assessed tax literacy among business students and found that understanding personal income tax, tax rates, and deductions contributes to better financial planning (Blechová & Sobotovičová, 2016). The present study confirms that corporate managers with inadequate tax knowledge may struggle with tax compliance, underscoring the need for targeted tax education programs.

Overall, the findings of this study contribute to the growing body of research on tax literacy by identifying key components that influence tax compliance and financial decision-making. The results support previous studies that highlight the importance of tax education, the relationship between financial and tax literacy, and the need for ongoing tax literacy assessments.

This study has several limitations that should be considered when interpreting the findings. First, the use of the fuzzy Delphi method relies on expert opinions, which may introduce subjective biases into the results. While the method ensures consensus among experts, it does not capture the perspectives of all corporate managers. Additionally, the study focuses on the Iranian tax system, which may limit the generalizability of the findings to other countries with different tax structures. Another limitation is that the study does not assess the actual tax literacy levels of corporate managers but instead develops an assessment tool based on expert consensus. Future research should include empirical testing of the questionnaire to validate its effectiveness in measuring tax literacy.

Future research should explore the practical application of the tax literacy assessment tool developed in this study by administering it to a representative sample of corporate managers. This would provide insights into the actual tax literacy levels within different industries and business sectors. Additionally, comparative studies across multiple countries could enhance the understanding of how tax literacy varies in different economic and regulatory environments. Future studies should also examine the impact of tax education programs on corporate managers' compliance behaviors and financial decision-making. Longitudinal research could provide valuable insights into how tax literacy evolves over time and how it influences managerial practices.

To improve tax literacy among corporate managers, targeted training programs should be implemented to enhance their understanding of tax regulations and compliance procedures. These programs should focus on both theoretical knowledge and practical applications, ensuring that managers can effectively navigate tax obligations. Additionally, integrating tax education into business and management curricula at universities can help future corporate leaders develop essential tax literacy skills. Businesses should also consider providing ongoing tax training sessions for their financial teams to stay updated with evolving tax policies and digital compliance tools. Developing user-friendly tax compliance platforms and offering guidance on digital tax reporting can further support managers in fulfilling their tax obligations efficiently.

Ethical Considerations

All procedures performed in this study were under the ethical standards.

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Conflict of Interest

The authors report no conflict of interest.

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References

Aboosaidi, M., Moeinuddin, M., & Heyrani, F. (2021). Assessing the financial literacy of private sector managers. *Financial Accounting Knowledge*, *8*(2), 195-219. https://doi.org/10.30479/jfak.2021.13956.2738

Abouseidi, M., Moein al-Din, M., & Heirani, F. (2021). Evaluation of the Financial Literacy of Managers in Private Sector Companies. *Financial Accounting Knowledge*, *8*(2), 195-219. https://doi.org/10.30479/jfak.2021.13956.2738

Abuselidze, G. (2020). Optimality of tax policy on the basis of comparative analysis of income taxation. *European Journal of Sustainable Development*, *9*(1), 272-293. https://doi.org/10.14207/ejsd.2020.v9n1p272

Azar, A., & Faraji, H. (2002). *Fuzzy Management Science*. Iran Studies and Productivity Center, Social Publications. https://www.gisoom.com/book/1494999/%DA%A9%D8%AA%D8%A7%D8%A8-%D8%B9%D9%84%D9%85-%D9%85%D8%AF%DB%8C%D8%B1%DB%8C%D8%AA-%D9%81%D8%A7%D8%B2%DB%8C/

Bernadene, D. C., & Apra, C. (2023). Towards a conceptual framework for tax literacy: a scoping review. *eJournal of Tax Research*, *21*(1), 122-147. https://www.unsw.edu.au/content/dam/pdfs/business/acct-audit-tax/research-reports/ejournal-of-tax-research/2023-volume-21%2C-number-1/Volume21-No1-August-2023-updated.pdf

Bhushan, P. (2014). An empirical study of financial and tax literacy of salaried individuals. https://doi.org/10.9790/487X-1066771

Blechová, B., & Sobotovičová, Š. (2016). Analysis of tax education in a business school: A case study. *Periodica Polytechnica Social and Management Sciences*, *24*(2), 113-118. https://doi.org/10.3311/PPso.8486

Bornman, M., & Wassermann, M. (2018). Tax literacy in the digital economy. Sydney. https://doi.org/10.17492/jpi.vision.v9i1.912208

Brackin, T. (2007). Overcoming tax complexity through tax literacy - An analysis of financial literacy research in the context of the taxation system. Brisbane. http://eprints.usq.edu.au

Cechovsky, N. (2018). The importance of tax knowledge for tax compliance: A study on the tax literacy of vocational business students. Trends in Vocational Education and Training Research: Proceedings of the European Conference on Educational Research (ECER), Bern. https://doi.org/10.5281/zenodo.1319718

Cvrlje, D. (2015). Tax literacy as an instrument of combating and overcoming tax system complexity, low tax morale and tax non-compliance. *The Macrotheme Review*, *4*(3), 156-167. https://www.semanticscholar.org/paper/TAX-LITERACY-AS-AN-INSTRUMENT-OF-COMBATING-AND-TAX-Cvrlje/9fcbde4d46fb16b6efcd8ae842341f9d33e6b954

Genest-Grégoire, A., Godbout, L., & Guay, J. H. (2017). The knowledge deficit about taxes: Who it affects and what to do about it. https://doi.org/10.2139/ssrn.2998056

Hussain, J., Salia, S., & Karim, A. (2018). Is knowledge that powerful? Financial literacy and access to finance: An analysis of enterprises in the UK. *Journal of Small Business and Enterprise Development*. https://doi.org/10.1108/JSBED-01-2018-0021

Jayawardane, D., & Low, K. (2016). Taxpayer Attitude and Tax Compliance Decision in Sri Lanka. *International Journal of Arts & Commerce*, *5*(2), 124-135. https://doi.org/10.4236/aasoci.2021.112007

Jimenez, P., & Iyer, G. S. (2016). Tax compliance in a social setting: The influence of social norms, trust in government, and perceived fairness on taxpayer compliance. *Advances in Accounting*, *34*(C), 17-26. https://doi.org/10.1016/j.adiac.2016.07.001

Karimi, S., Khanmohammadi, M. H., & Jafari, M. (2021). Presenting and Evaluating a Tax Compliance Model for Legal Entities Based on the Viewpoints of Tax Experts Using Grounded Theory in the Iranian Tax System. *Management Accounting and Auditing Knowledge*, *10*(38), 345-360. https://www.jmaak.ir/article_17563.html

Lyon, E., & Catlin, J. R. (2020). Consumer misconceptions about tax laws: Results from a survey in the United States. *Journal of Consumer Policy*, *43*(4), 807-828. https://doi.org/10.1007/s10603-020-09460-2

Moeinuddin, M., Yaghoubnejad, A., & Nikomaram, H. (2011). Presenting a model for measuring the financial literacy of Iranian students using the fuzzy Delphi method. *Journal of Financial Engineering and Securities Management*(8), 1-23. https://www.sid.ir/fa/journal/ViewPaper.aspx?id=204576

Morar, I. D., Masca, E., Roux-Cesar, A. M., Forte, D., Formigoni, H., & da Silva, A. A. (2019). Empirical evidence of the impact of tax literacy on tax compliance. *Eastern European Economics*, *57*(5), 397-429. https://doi.org/10.1080/00128775.2019.1621183

Moučková, M., & Vítek, L. (2019). Tax literacy. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, *66*(2), 553-559. https://doi.org/10.11118/actaun201866020553

Nichita, A., Batrancea, L., Pop, C. M., Batrancea, I., Morar, I. D., Masca, E., Roux-Cesar, A. M., Forte, D., Formigoni, H., & da Silva, A. A. (2019). We learn not for school but for life: Empirical evidence of the impact of tax literacy on tax compliance. *Eastern European Economics*, *57*(5), 397-429. https://doi.org/10.1080/00128775.2019.1621183

Rabiei, K., Fazeli, M., & Ahmadi Khosh Abri, A. (2023). Presenting a Comprehensive Model of Electronic Tax Collection to Reduce Tax Evasion with an ISM Approach in Public Sector Accounting. *Management Accounting and Auditing Knowledge*, *10*(2), 228-244. https://doi.org/10.30473/GAA.2024.70685.1717

Terry, V. N. (2024). The Influence of Tax Literacy on Tax Compliance With Tax Sanctions as A Moderating Variable. *Religion Education Social Laa Roiba Journal*, *6*(6). https://doi.org/10.47467/reslaj.v6i6.3406

Ventje, J., Kuhuparuw, A., & Laura, S. N. (2022). The Effect of Tax Literacy, Taxpayer Awareness, and Tax Sanctions on Compliance with OP Annual SPT Submission. *Budapest International Research and Critics Institute*, *5*(4). https://doi.org/10.33258/birci.v5i4.7211

Young, A., Danny, C., & Daniel, H. (2013). A Study of the Impact of Culture on Tax Compliance in China. *International Tax Journal*. http://handle.uws.edu.au:8081/1959.7/547096