

Strategic and managerial implications of tax literacy differences among population groups: Case of Croatia

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Abstract

This research focuses on analyzing tax literacy in the context of Croatia and its impact on tax morale, with a particular emphasis on the influence of socio-demographic factors. The aim of the paper is to analyze the level of tax literacy and identify factors that influence tax literacy. Special emphasis is placed on socio-demographic factors such as age, education and place of work that embody the key components of diversity as they represent different groups within the population. The applied methods included analyzing secondary data sources and primary data gathered by conducting a survey. The findings indicate a correlation between the level of tax literacy and tax morale, with informed citizens being more likely to fulfil their tax obligations. This research provided a deeper insight into the tax literacy of citizens and proposed guidelines for the improvement of tax education programs and educational policy. The strategic and managerial significance of the research is reflected in its contribution to the development of more effective public management practices, evidence-based policy-making and targeted educational strategies aimed at strengthening tax compliance, institutional efficiency and citizens' trust in public institutions. Furthermore, the findings provide useful implications for decision-makers and public sector managers in designing inclusive and sustainable tax governance models adapted to different population groups. Based on the obtained research results, relevant recommendations were provided for the improvement of tax systems and the encouragement of civic participation in tax processes.

Keywords: disparities, tax literacy, public management practices, tax morale, socio-demographic factors

JEL Classification: H26, D91, M10, J11

1. Introduction

Tax literacy is, from both individual and government perspectives, equally important. On a personal level, it represents a key component of successful personal finance management, including budget planning, financial decision-making, and understanding tax obligations. Taxes often make up a significant part of personal finances; therefore, it is important to manage tax obligations in the right way to ensure the financial stability of the household. A lack of understanding of tax regulations can lead to the loss of rights to certain tax reliefs and unnecessary expenses. Because of that, it is necessary to educate individuals about tax systems and the ways they function in order to ensure efficient personal finance management and maximize potential tax benefits (Šimurina et al., 2018). Tax literacy can be defined as the tax knowledge and skills necessary for an individual's ability to fulfill all tax obligations and claim all their rights. Tax literacy reflects an individual's ability to calculate their tax obligations, while tax knowledge includes understanding tax rules and policies. Furthermore, another important feature of tax literacy is a positive and responsible attitude of taxpayers toward taxes and paying them (Šimurina et al., 2018). In addition, tax literacy is connected to tax morale, which represents a set of attitudes, values, and citizens' beliefs regarding the fairness and justification of taxation. Therefore, it is important to understand how tax literacy affects different aspects of society, including economic development, social justice, and the efficiency of the tax system (Kirchler, 2007.)

The main purpose of tax literacy is to inform taxpayers about the details of various tax forms, explain tax policy measures and instruments within the tax system, and describe their impact on the financial well-being of taxpayers (Šimurina et al., 2018). The main goals of tax literacy are: informing citizens about tax forms, explaining how the domestic tax system works, explaining the basic elements of taxation and tax forms, raising awareness of the importance of appreciating and managing tax risks, raise awareness of the importance of building tax morale, and developing awareness of the connection between taxes and the quality of public goods and services (Šimurina et al., 2018). Improvement of tax literacy not only contributes to the individual well-being of citizens but also to broader social progress. Citizens who are tax literate have greater confidence in the tax system and are more likely to regularly and correctly fulfill their tax obligations. This, in turn, ensures the stability and predictability of tax revenues, which is crucial for future planning of financing public services and supporting social programs. Taxation, as a means of raising government revenue, is necessary if the government wants to ensure sustainable development. Taxation is, therefore, directly related to the progress of the state (De Clercq, 2023.)

Both tax and financial knowledge can be crucial for making the right decisions in everyday life. Individuals who possess financial knowledge should be capable of making rational decisions, which is very important for creating an efficient and effective financial market. For example, it is less likely that an individual who is well informed about mortgage interest rates and the terms offered on the market will become a victim of financial fraud or take out a loan under extremely unfavorable

terms (Barbić & Lučić, 2018). Likewise, a lack of tax literacy can lead individuals into unfavorable situations, where, for example, they pay unnecessary expenses or fail to take advantage of available tax reliefs. The tax system in every country, as well as in Croatia, is not permanent or unchangeable. Every tax system is subject to minor or major changes, although new legal solutions aim to achieve the greatest efficiency and simplicity in tax collection (Vlaić, 2017). As already highlighted, the tax system in post-transition countries is subject to frequent changes in order to improve the quality of the tax system.

The importance of tax literacy is particularly expressed in the context of Croatia as the country is facing challenges in maintaining a stable and efficient tax system. Through the analysis of tax literacy levels in the country, it will be possible to identify key shortcomings and provide guidance for improving tax policies and programs for tax education. The goal of this study is to analyze the level of tax literacy and identify the factors that affect it. Through the analysis of different aspects related to tax literacy, this paper aims to provide a deeper understanding of the importance of this concept and its impact on the Croatian tax system. The focus will be on determining the key factors that contribute to tax literacy in this field and providing guidelines for improvements in tax education programs and policies. This research provides a deeper insight into the tax literacy of citizens and offers recommendations for improving tax education programs and policies.

Below, the tax systems of the Republic of Croatia are defined and explained in more detail, along with the financial and tax literacy of the citizens, based on previously conducted research. Furthermore, the results of the analysis on the influence of socio-demographic factors on tax literacy will be presented and explained. At the end of this work, the main conclusions will be presented.

2. Characteristics of the Tax System in the Republic of Croatia

When we talk about modern countries' decisions, we can say that tax is the most important income for every country. It refers to compulsory contributions paid by each citizen in Croatia who does not receive any compensation from the country. Vlaić (2017) states that many factors (the size of Croatia's territory, economic development, income per capita, political system, number of citizens, tax administration equipment, structure of the economy, etc.) have an impact on the tax system; therefore, there are no two countries with the same tax system. Tax system development in Croatia started a few years after Croatia became independent. This period is characterized as a delayed period that is a consequence of the state of war in our area. The first significant year that played a role in the development of the tax system was 1994, when a synthetic income tax was introduced, i.e. taxation of individual income, as well as profit tax, but also other special taxes, i.e. excise duties, which are still relevant in today's tax system. The second year in the tax system development that needs to be mentioned, which has had a significant impact on the characteristics of the tax system, was 1998, when value added tax or VAT, was introduced. This type of tax was levied

on all general turnover, i.e. all consumption of goods and services in the territory of Croatia. This reform stands out as an important feature of the system, since the Croatian economy was in transition at the time, and it was necessary to adapt the Croatian tax system to the requirements of a market economy. (Dražić Lutilsky et. al., 2015).

Financial literacy of citizens can be defined as “indicator of the level of understanding and application of knowledge about personal financial management” (Lusardi i Mitchell, 2014:7). When we talk about financial literacy, Croatian citizens, it must be noted that the Government of the Republic of Croatia, to raise the level of literacy in Croatia, has obliged the Ministry of Finance to prepare a proposal for a national strategic framework for consumer financial literacy. The Ministry was obliged to make it in cooperation with the competent ministries, interested representatives of scientific and educational institutions, supervisory authorities, consumers and the financial industry and submit it to the Government of the Republic of Croatia (Ministry of Finance, n.d.).

In June 2021, the above-mentioned competent authorities adopted the second national strategic framework for consumer financial literacy for the period from 2021 to 2026. The mentioned document was used as the basis for activities in the field of financial literacy, which were intended for target groups of the population (from the youngest to the oldest, income-earners, etc.). The planned activities should be available in the Action Plan for Improving Consumer Financial Literacy. The entire work related to the promotion of financial literacy is supervised by a special group whose task is to monitor the implementation of measures and activities, during which they discuss the past activities in the previous reporting period, either quarterly or in writing (Ministry of Finance, n.d.).

Erceg et al. (2019) state that the research conducted so far has indicated that the financial literacy of citizens of Croatia, as well as their financial knowledge, is at an extremely low level. This is supported by the fact that Croatia participated in an international research conducted in 30 countries around the world, during which the average level of financial literacy was 13.7 points out of a potential 22 points. In the aforementioned research, Croatia achieved only 12 points, which means that it was below average on the scale. If a comparison is made with other international surveys, it can be seen that the financial knowledge of citizens of the United States of America is also very low. If we talk about the results of the survey in the member states of the Organization for Economic Co-operation and Development, they also indicated that the financial literacy of citizens is at a low level, which is proven by the fact that the average result of respondents in the conducted extensive survey was 13.7 points out of a potential 22 points.

The main goals of financial literacy by Šimurina et al. (2018) are to inform citizens about the types of taxes, with a special emphasis on taxes that citizens have as individuals. Furthermore, the next goal is aimed at explaining the structure of the national Croatian tax system, with an emphasis on explaining how the tax system in Croatia functions. Closely related to the above goal is the fact that citizens must be

informed about the basic elements of taxation as well as the basic forms of taxation. Two very important goals relate to raising citizens' awareness of the importance of tax risk management and the fact that it is very important to raise citizens' awareness of the importance of tax morality. The last goal of tax literacy relates to explaining the connection between paying taxes and the quality of public goods and public services.

When we talk about improving the tax behavior of citizens in Croatia, it is important to emphasize that the competent institutions, i.e. tax authorities, cooperate intensively with formal educational institutions (primary, secondary and academic institutions), state institutions, public bodies, non-profit organizations, associations or the financial industry to influence the tax behavior of individuals. The media, which are extremely present in the lives of citizens today, also have a significant impact on improving tax literacy. The media also stand out as one of the most prominent forms of communication since they are the most accessible to all age groups of taxpayers (Šimurina et al., 2018).

3. Analysis of Tax Literacy in Croatia: Sociodemographic Determinants and Management Implications

The subject of this work is tax literacy and the influence of sociodemographic factors on the level of tax literacy. The work conducts analysis of tax literacy using the example of Croatia. Primary data were collected from an online survey. Based on them, an assessment of the level of tax literacy of the respondents was conducted, as well as their attitudes and perceptions of the tax systems. Special emphasis was placed on sociodemographic factors such as age, education, and place of work, with the aim of better understanding the influence of the mentioned factors on the level of tax literacy. This research provided a deeper insight into the tax literacy of citizens and proposed guidelines for the improvement of tax education programs and educational policy. The strategic and managerial significance of the research is reflected in its contribution to the development of more effective public management practices, evidence-based policy-making and targeted educational strategies aimed at strengthening tax compliance, institutional efficiency and citizens' trust in public institutions. Furthermore, the findings provide useful implications for decision-makers and public sector managers in designing inclusive and sustainable tax governance models adapted to different population groups. Through the paper relevant recommendations are provided for improving the tax system and encouraging citizen participation in tax processes. Respondents were people aged eighteen and over. The sample of respondents was collected using the snowball sampling method. The final sample consisted of 110 respondents who are residents of the Republic of Croatia.

For the purpose of analyzing tax literacy, a quantitative method of scoring correct answers to expert questions was used. Respondents were asked a total of five expert questions, which covered key aspects of the tax system such as the VAT rate, the method of calculating corporate income tax, the calculation of VAT on invoices, the income tax rate, and the name of the tax administration organization. Each correct

answer was worth 2 points, while incorrect answers were worth 0 points. Based on the total number of points, respondents were classified into three levels of tax literacy: low tax literacy: 0-2 points, medium tax literacy: 3-6 points, high tax literacy: 7-10 points.

Overall results of tax literacy levels in Croatia were divided into three categories: low, medium and high. The majority of respondents had a medium level of tax literacy, while a smaller number of respondents had a high level, and the smallest number of respondents had a low level of tax literacy.

Below is a detailed analysis of the impact of individual socio-demographic factors on the level of tax literacy. Special attention was paid to the impact of gender, age, level of education and employment status on the tax literacy of respondents. These analyses helped to identify the specific needs of different demographic groups and develop targeted educational programs to improve tax literacy. Table 1 shows the distribution of respondents by level of achieved tax literacy in Croatia, divided by gender.

Table 1. Distribution of tax literacy levels of respondents by gender (source: Authors)

Tax literacy level	Women	Men
Low (0-2 points)	10	8
Medium (3-6 points)	40	30
High (7-10 points)	14	8

Women show a slightly higher average level of tax literacy (4.56) compared to men (4.35). This comparison shows that, although both genders show a solid understanding of tax issues, there is a slight variation in the advantage of one gender over the other. Such results indicate the need for specific approaches in education and support to further improve tax literacy among all demographic groups in different contexts.

Table 2. Distribution of tax literacy levels by age group (source: Authors)

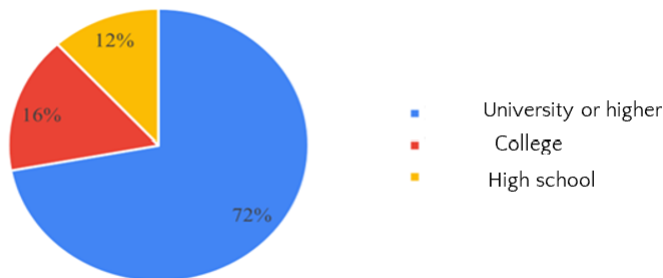
Age group	Low	Middle	High
18-24	10	15	3
25-39	5	13	7
40-54	2	22	10
55-64	1	5	4
65 or more	0	5	1

The results clearly show that middle-aged respondents, especially those in the age group of 40-54, achieved the best results in tax literacy, while younger respondents (18-24 years) and the oldest respondents (65+ years) achieved the worst results. This

analysis indicates the need for specific educational programs for younger and older age groups to improve their tax literacy. The results also suggest that with age, the level of tax knowledge increases up to a certain point, after which it decreases, which may be due to various factors such as life experience, education and exposure to tax information.

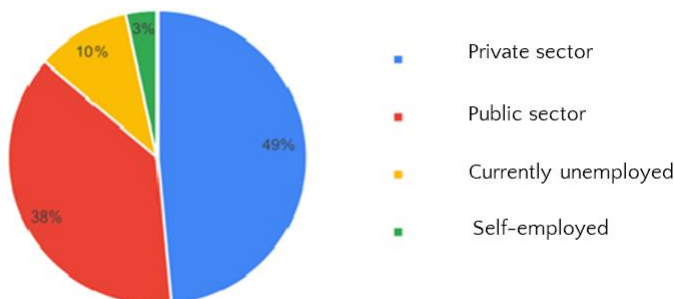
To illustrate the impact of education level on tax literacy, summary survey results are presented in Figure 1.

Figure 1. Overall distribution of tax literacy levels by education level (source: Authors)



When looking at the results for both countries together, the best results were achieved by respondents with a university or higher education level, with a total of 24.5% achieving a high level of tax literacy. The average results were achieved by respondents with a college or high school education, with 11.3% of respondents with a college education and 7.4% respondents with a high school education achieving a medium level of tax literacy. The worst results were recorded by respondents with a high school education, with 2.9% of respondents having a low level of tax literacy. Below are the overall tax literacy results based on place of work (Figure 2).

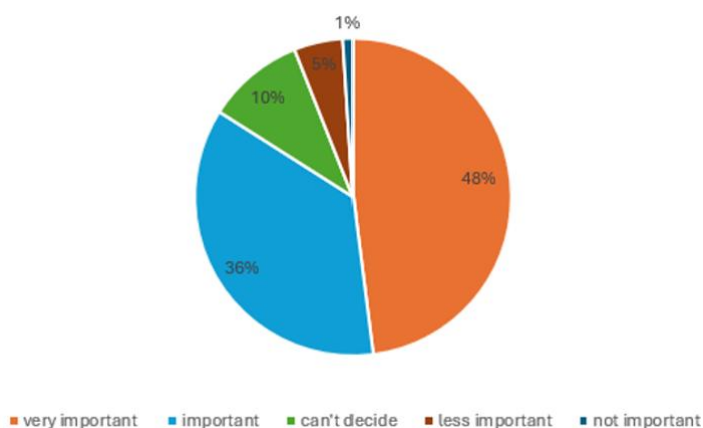
Figure 2. Overall distribution of tax literacy levels by place of work (source: Authors)



When we look at the results in Figure 2, the best results were achieved by respondents working in the private sector. Of the 49% respondents who are employed in the private sector, 34% achieved a high level of tax literacy, 50% a medium level, and 16% a low level. Among respondents working in the public sector (38% of the total respondents), 30% achieved a high level of tax literacy, 49% a medium level, and 21% a low level. Respondents who were not employed (10%) had mixed results, with 14% achieving a high level, 65% a medium level, and 21% a low level. Self-employed respondents (3%) had similar results, with 33% achieving a high level, 53% a medium level, and 14% a low level of tax literacy.

The next segment of the analysis is the perception of the importance of tax policy for social justice. The survey results show that the majority of respondents consider tax policy important for social justice. Namely, 53% respondents rated tax policy as "very important", while 40% respondents considered it "important". In total, 93% of the respondents consider tax policy important for social justice. On the other hand, 11% of respondents cannot decide on the importance of tax policy, while only 5% of them consider tax policy to be "less important", and 1% of respondents rate it as "not important". These results clearly show that citizens recognize the importance of tax policy in promoting social justice. The high percentage of positive ratings can be interpreted as a sign of trust in the system and awareness of its important role in society. Furthermore, a more detailed analysis by socio-demographic groups revealed that older respondents and those with higher education are more likely to rate tax policy as extremely important. Such data may be useful for policymakers when considering new reforms or educational programs that would further strengthen citizens' understanding and support for the tax system (Figure 3).

Figure 3. Distribution of responses to the importance of tax policy (source: Authors)



The results of the analysis clearly show how different socio-demographic factors, such as gender, age, level of education and job position, influence the level of tax literacy among respondents. It is noticeable that respondents from the public sector

in Croatia showed a higher level of tax literacy. The results also indicate a higher level of information on tax issues among employees in the private sector.

This part of the work analyzes self-assessment of tax literacy among respondents. Self-assessment of tax literacy provides insight into how confident individuals feel in their knowledge and abilities related to tax obligations and rules. This analysis is crucial because it shows not only the actual level of knowledge, but also the subjective perception that can influence individuals' behavior in tax matters. In Croatia, the majority of respondents (45%) rated their tax literacy as medium (3), while the smallest number of respondents (n=4, 3%) rated their literacy as high (5).

Further analysis shows that the level of education is a significant factor in understanding the tax system, i.e. in the self-assessment of tax literacy of respondents. The results obtained show that the majority of respondents assess their tax literacy with a mean score of 3. These results indicate the need for additional education about the tax system, especially among respondents with lower levels of education, in order to increase the overall level of self-assessment of tax literacy.

Finally, it is very important to state the main limitations of the study. First, the sample of respondents is not representative for the entire population of Croatia, which may affect the generalizability of the results. Second, self-assessment may lead to bias in the respondents' assessment of their own tax literacy. Finally, the study was conducted in a specific time frame, which means that changes in tax policies or economic conditions that occurred after the study were not considered.

4. Conclusion

The subject of this work is the analysis of the level of tax literacy and the influence of socio-demographic factors, using the example of Croatia. The aim of the work was to analyze the level of tax literacy and identify the factors that influence tax literacy in Croatia. The research covered key aspects of understanding and perception of tax policies among citizens, as well as their ability to solve tax challenges. The analysis of attitudes towards taxes showed that the majority of respondents consider tax policy to be crucial for fairness in society. This is confirmed by the high percentage of respondents who rated tax policy as very important or important. These results indicate a high level of awareness among citizens about the importance of taxes for the functioning of society and fairness. Despite this, there is a significant share of respondents who do not fully agree with the way taxes are distributed, which indicates the need for a more transparent and fair tax system.

Factors that have been shown to be particularly important for higher levels of tax literacy include education level and participation in tax education. In both countries, respondents with higher education and those who participated in educational programs performed better on objective measures of tax literacy. These findings suggest that increasing the availability and quality of tax education could have a positive impact on tax literacy and efficiency in resolving tax obligations, which would

further strengthen citizens' trust in the tax system and improve their willingness to comply with tax obligations.

In conclusion, the results of this study indicate the importance of tax education and information for citizens to increase tax literacy and the efficiency of the tax system. Increasing transparency and fairness in the tax system can further strengthen citizens' trust in the system and strengthen their willingness to comply with tax obligations. Education on the basis of the tax system should be a priority, especially among younger and less educated groups, in order to ensure a fairer distribution of tax obligations and increase the financial stability of citizens and the state itself. This work contributes to a better understanding of the influence of socio-demographic factors on tax literacy and provides guidelines for improving tax education programs and policies in Croatia.

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