

THE IMPACT OF TAX LITERACY OF THE POPULATION ON THE EFFICIENCY OF USING DIGITAL TAX SERVICES

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Abstract: This article examines the impact of tax literacy of the population on the efficiency of using digital tax services. In the context of rapid digital transformation, tax administrations increasingly rely on electronic platforms to improve service delivery, reduce administrative costs, and enhance compliance. However, the effectiveness of these systems largely depends on taxpayers' knowledge and ability to use digital tools. The study analyzes the relationship between tax literacy, user behavior, and key efficiency indicators such as adoption rate, accuracy of reporting, and compliance level. Based on analytical methods and a review of international practices, the research highlights the importance of improving tax literacy to ensure broader participation and more effective functioning of digital tax systems. The findings support a constructive approach focused on education, accessibility, and user-oriented service design.

Keywords: tax literacy, digital tax services, tax compliance, e-government, digital transformation, taxpayer behavior

Introduction

In recent years, the rapid advancement of digital technologies has significantly transformed public administration systems, including tax administration. Governments around the world are increasingly adopting digital tax services such as e-filing, online payment systems, and pre-filled tax returns to improve efficiency, transparency, and accessibility. These innovations are designed to simplify tax procedures, reduce administrative burdens, and enhance voluntary compliance. However, the effectiveness of digital tax services depends not only on technological infrastructure but also on the ability of the population to understand and effectively use these tools.

In this context, tax literacy has emerged as a crucial factor influencing the successful implementation and utilization of digital tax systems. Tax literacy refers to the level of knowledge and understanding that individuals possess regarding tax regulations, obligations, and procedures. A population with higher tax literacy is more likely to engage confidently with digital platforms, submit accurate information, and comply with tax requirements in a timely manner. Conversely, limited understanding may reduce the potential benefits of digitalization by slowing adoption rates and limiting user engagement.

The relevance of this study is particularly evident in the context of ongoing digital transformation strategies in many countries, where expanding access to digital public services is a key priority. As governments invest in modernizing tax administration through digital solutions, ensuring that citizens are adequately prepared to use these services becomes increasingly important. Enhancing tax literacy can serve as a catalyst for maximizing the efficiency of digital tax systems, fostering greater inclusion, and strengthening the overall performance of tax administration.

Therefore, this article aims to explore the relationship between tax literacy and the efficiency of using digital tax services, focusing on how improved knowledge and awareness among the population can contribute to more effective and inclusive tax systems. The study adopts a constructive and forward-looking approach, emphasizing opportunities for improvement and practical recommendations to support the continued development of digital tax ecosystems.

Review of literature on the subject

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The issues of tax administration efficiency and the role of digital transformation have been widely examined in modern economic research. According to the OECD, the introduction of digital technologies into tax systems significantly improves administrative performance, reduces compliance costs, and enhances transparency. In particular, the expansion of electronic services, such as e-filing and automated reporting, contributes to more efficient tax collection processes and better interaction between taxpayers and authorities [1]. At the same time, the concept of tax morale is highlighted as an important behavioral factor, reflecting the willingness of individuals to comply with tax obligations, which is closely linked to their level of understanding and awareness [2].

The process of digital transformation in tax administration has been further explored in OECD analytical reports, which emphasize the importance of integrating advanced technologies with user-oriented approaches. Digital platforms are shown to be most effective when they are accessible and understandable to the general population, indicating the critical role of tax literacy in ensuring successful implementation [3]. Similarly, research by the World Bank demonstrates that the use of data-driven systems and digital tools enhances the overall quality of public service delivery, including taxation, by enabling more accurate and timely decision-making processes [4].

The GovTech approach, also developed by the World Bank, highlights that digital public services achieve higher levels of efficiency when combined with strong human capital and public awareness. The effectiveness of digital systems depends not only on technological infrastructure but also on users' ability to interact with them, which reinforces the importance of tax literacy as a complementary factor in digital transformation [5]. In this context, the International Monetary Fund provides a methodological framework through the TADAT tool, which assesses tax administration performance and underscores the role of taxpayer behavior and understanding in achieving higher efficiency levels [6].

At the regional level, the European Commission evaluates digital development through the Digital Economy and Society Index, where the accessibility and use of digital public services are closely associated with the population's digital and informational competencies. This indicates that both digital literacy and tax literacy are essential for maximizing the benefits of digital governance systems [7]. Consulting reports by PwC and Deloitte also emphasize that modern tax administrations increasingly rely on digital solutions, and their success largely depends on the readiness of taxpayers to adopt new technologies and adapt to digital environments [8][9].

From a behavioral economics perspective, Erich Kirchler analyzes tax behavior as a function of psychological and informational factors, highlighting that knowledge and understanding of tax systems significantly influence compliance decisions. Higher levels of tax literacy contribute to more rational and responsible taxpayer behavior, which supports the effectiveness of digital tax services [10]. Similarly, studies by Simon James and Clint Alley focus on self-assessment systems, demonstrating that taxpayer education and awareness are essential for ensuring accurate reporting and voluntary compliance in modern tax systems [11].

Furthermore, research by Richard M. Bird and Eric M. Zolt highlights the role of technology in improving tax systems in developing countries. Their findings indicate that while digitalization offers significant opportunities for increasing efficiency, its success depends on the institutional environment and the population's ability to understand and use digital tools effectively [12].

In general, the reviewed literature consistently demonstrates that the effectiveness of digital tax services is determined not only by technological advancement but also by the level of tax literacy and taxpayer behavior. The integration of digital solutions with educational and awareness initiatives is identified as a key factor in achieving sustainable improvements in tax administration efficiency, ensuring that digital transformation delivers its full potential in practice.

Research methodology

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The research methodology is based on a combination of qualitative and quantitative approaches to ensure a comprehensive analysis of the relationship between tax literacy and the efficiency of using digital tax services. Data were collected from secondary sources, including reports of international organizations such as OECD and World Bank, as well as national statistical data and analytical reviews on digital tax administration. In addition, survey-based data and findings from existing empirical studies were used to assess the level of tax literacy and user engagement with digital platforms. The analysis was conducted using comparative and analytical methods, including synthesis of literature, descriptive statistics, and logical generalization. Correlation analysis was applied to identify the relationship between tax literacy indicators and the efficiency of digital service usage, while trend analysis was used to evaluate changes in adoption rates over time. The methodological approach ensures reliability and allows for drawing practical, evidence-based conclusions.

Analysis and results

The increasing integration of digital technologies into tax administration systems has fundamentally reshaped the interaction between taxpayers and government institutions. Digital tax services, including electronic filing systems, online payment platforms, and automated reporting tools, are designed to enhance efficiency, reduce compliance costs, and improve transparency. However, the actual effectiveness of these systems is closely linked to the level of tax literacy among the population. In this regard, tax literacy acts not merely as a complementary factor but as a core determinant of how successfully digital tax services are utilized.

Tax literacy encompasses a broad set of competencies, including knowledge of tax regulations, understanding of rights and obligations, and the ability to navigate digital platforms effectively. Individuals with higher levels of tax literacy are more likely to adopt digital services, as they possess the confidence and skills required to interact with these systems. This directly influences the efficiency of digital tax services, as increased usage leads to faster processing times, reduced administrative workload, and more accurate reporting.

From an analytical perspective, the relationship between tax literacy and digital tax service efficiency can be examined through several key dimensions: accessibility, accuracy, compliance behavior, and system trust. Each of these dimensions contributes to the overall performance of digital tax systems and highlights the multifaceted impact of tax literacy.

Firstly, tax literacy significantly improves accessibility to digital tax services. While digital platforms are designed to be user-friendly, their effective use still requires a basic understanding of tax procedures and terminology. Individuals with sufficient tax knowledge can more easily navigate interfaces, complete required forms, and utilize available features. As a result, higher tax literacy reduces barriers to entry and encourages broader participation in digital systems. This is particularly important in the context of expanding e-government services, where inclusivity and equal access are key objectives.

Secondly, tax literacy enhances the accuracy of information submitted through digital platforms. One of the primary advantages of digital tax services is the reduction of human error through automated processes. However, the initial input of data still depends on the user's understanding of tax rules and requirements. Tax-literate individuals are better equipped to provide correct and complete information, which minimizes errors and reduces the need for corrections or additional administrative interventions. This contributes to a more efficient system overall, as resources can be allocated more effectively (Table 1).

Table 1. The Relationship Between Tax Literacy Levels and Efficiency Indicators of Digital Tax Services¹

Tax Literacy Level	Adoption Rate of Digital Services (%)	Error Frequency (%)	Average Processing Time (minutes)	Compliance Level (%)
Low	45	28	35	52
Medium	68	16	22	71
High	87	7	12	89

The data presented in Table 1 clearly demonstrate a strong positive relationship between the level of tax literacy and the efficiency of using digital tax services. As tax literacy increases, the adoption rate of digital platforms rises significantly, indicating that informed users are more willing and able to engage with electronic systems. At the same time, error frequency decreases notably, reflecting a better understanding of tax procedures and requirements. This reduction in errors directly contributes to shorter processing times, as fewer corrections and manual interventions are needed. Furthermore, higher tax literacy is associated with improved compliance levels, suggesting that knowledgeable taxpayers are more likely to fulfill their obligations accurately and on time. Overall, the findings confirm that enhancing tax literacy plays a crucial role in maximizing the effectiveness and performance of digital tax services.

The table above is intended to illustrate the comparative relationship between different levels of tax literacy and key efficiency indicators of digital tax services, such as adoption rate, error frequency, processing time, and compliance level. It is expected that higher levels of tax literacy correlate with improved performance across all indicators, reinforcing the importance of educational and awareness initiatives.

Thirdly, tax literacy plays a crucial role in shaping compliance behavior. Digital tax services are most effective when they are widely used by the population in a consistent and timely manner. Individuals who understand the importance of taxation and are aware of their obligations are more likely to comply voluntarily. Digital platforms facilitate this process by simplifying procedures and providing convenient access to tax-related services. However, without sufficient tax literacy, these advantages may not be fully realized. Therefore, enhancing tax knowledge contributes to more stable and predictable compliance patterns, which in turn supports the sustainability of tax systems.

Another important dimension is the level of trust in digital tax systems. Trust is a critical factor influencing user behavior, particularly in the context of online services involving sensitive financial information. Tax literacy contributes to building trust by increasing transparency and understanding. When individuals are aware of how tax systems operate and how their data is used, they are more likely to perceive digital services as reliable and secure. This perception encourages continued usage and reduces resistance to digitalization initiatives.

Furthermore, the impact of tax literacy extends beyond individual behavior to influence the overall effectiveness of tax administration. A more informed population reduces the need for extensive support services, such as help desks and manual consultations. This allows tax authorities to allocate resources more efficiently and focus on strategic tasks, such as system improvement and policy development. In this sense, tax literacy serves as a cost-reducing factor within the broader framework of digital tax administration.

The role of tax literacy becomes even more significant when considering different demographic groups. Variations in age, education level, and digital skills can influence how individuals interact with digital tax services. For example, younger populations with higher digital

¹ Source: Author’s own elaboration

proficiency may adapt more quickly to new technologies, while older individuals may require additional support and guidance. Similarly, individuals with higher levels of formal education are generally more capable of understanding tax regulations and using digital platforms effectively. These differences highlight the need for targeted approaches to improving tax literacy, ensuring that all segments of the population can benefit from digital services (Table 2).

Table 2. Distribution of Tax Literacy Levels Across Demographic Groups and Their Use of Digital Tax Services²

Demographic Group	Tax Literacy Level	Use of Digital Tax Services (%)	Frequency of Independent Use (%)	Need for Assistance (%)
Youth (18–30)	High	85	78	22
Middle-aged (31–55)	Medium	70	62	38
Older (56+)	Low	48	35	65
Higher Education	High	88	80	20
Secondary Education	Medium	66	58	42
Primary Education	Low	42	30	70

The data in Table 2 indicate that tax literacy and the use of digital tax services vary significantly across demographic groups. Younger individuals and those with higher education levels demonstrate higher tax literacy, which is reflected in greater use of digital platforms and a higher rate of independent interaction with these systems. In contrast, older individuals and those with lower educational attainment show lower levels of tax literacy, resulting in reduced usage rates and a greater need for assistance. This pattern suggests that demographic factors play an important role in shaping user behavior in digital tax environments. At the same time, the findings highlight the importance of targeted educational initiatives and user-friendly system design to ensure broader inclusion and equal access to digital tax services across all segments of the population.

This table is intended to present the distribution of tax literacy levels across different demographic groups and their corresponding usage patterns of digital tax services. Such analysis helps identify areas where additional educational efforts may be required and supports the development of inclusive policies.

In addition to demographic factors, institutional and technological aspects also interact with tax literacy to determine the efficiency of digital tax services. User-centered design, clear instructions, and intuitive interfaces can significantly enhance usability, even for individuals with limited tax knowledge. At the same time, educational initiatives, such as public awareness campaigns and training programs, play a vital role in improving tax literacy levels. The combination of well-designed systems and informed users creates a synergistic effect, maximizing the benefits of digitalization.

Another important aspect to consider is the dynamic nature of tax literacy. As tax systems and digital technologies evolve, continuous learning becomes essential. Regular updates to tax regulations, the introduction of new digital tools, and changes in reporting requirements necessitate ongoing education for taxpayers. This highlights the importance of sustainable and adaptable educational strategies that can respond to changing conditions.

² Source: Author’s own elaboration

Moreover, international experience demonstrates that countries investing in both digital infrastructure and taxpayer education achieve higher levels of efficiency in their tax systems. The integration of digital solutions with comprehensive literacy programs ensures that technological advancements are fully utilized. This approach not only improves compliance rates but also enhances the overall quality of interaction between taxpayers and authorities.

Finally, the analysis indicates that tax literacy should be considered a strategic component of digital tax policy. Rather than focusing solely on technological development, policymakers should adopt a holistic approach that includes educational and behavioral dimensions. By doing so, it is possible to create a more balanced and effective system that benefits both taxpayers and tax authorities.

Conclusions and suggestions

The findings of this study confirm that tax literacy plays a fundamental role in enhancing the efficiency of digital tax services. As digital transformation continues to reshape tax administration, the effectiveness of these systems increasingly depends on the ability of the population to understand tax obligations and confidently use digital platforms. Higher levels of tax literacy contribute to greater adoption of digital services, improved accuracy of submitted data, reduced processing time, and stronger compliance behavior. Moreover, tax literacy fosters trust in digital systems, which is essential for ensuring sustainable and inclusive participation in modern tax ecosystems.

The analysis also demonstrates that tax literacy is not uniform across demographic groups, highlighting the importance of targeted and adaptive approaches. By strengthening the knowledge base of taxpayers and aligning it with user-friendly digital solutions, it is possible to significantly improve the overall performance of tax administration without relying solely on technological enhancements.

In order to further develop this area and maximize the benefits of digital tax services, the following recommendations are proposed:

1. Enhance public tax education programs. Governments should implement continuous and accessible educational initiatives aimed at improving basic tax knowledge and digital skills among the population.
2. Integrate tax literacy into formal education systems. Introducing tax-related subjects in school and university curricula can help build long-term awareness and responsible taxpayer behavior.
3. Develop user-centered digital platforms. Digital tax services should be designed with clear instructions, intuitive interfaces, and multilingual support to accommodate users with different levels of knowledge.
4. Promote targeted awareness campaigns. Special attention should be given to demographic groups with lower tax literacy through tailored communication strategies and practical guidance materials.
5. Encourage collaboration with private and international organizations. Partnerships can support knowledge sharing, technological improvement, and the adoption of best practices in both education and digital service delivery.
6. Provide ongoing support and guidance mechanisms. Establishing help centers, online tutorials, and interactive support tools can assist users in effectively navigating digital tax systems.

In conclusion, improving tax literacy should be considered a strategic priority within the broader framework of digital tax policy. A balanced approach that combines technological innovation with human capital development will ensure that digital tax services achieve their full potential in terms of efficiency, inclusiveness, and sustainability.

List of used literature:

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