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Tax literacy of entrepreneurs in the Startup phase

José Tomás Sousa Correia

Master's in Accounting and Management Control

Supervisor:

Paulo Jorge Varela Dias, Professor Auxiliar, ISCTE Business School, Department of Accounting,

Marcelo Alvaro da Silva Macedo, Professor Associado, Programa de Pós-Graduação em Ciências Contábeis da Universidade Federal do Rio de Janeiro, PPGCC/UFRJ

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BUSINESS
SCHOOL

Department of Accounting

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Dedication and Acknowledgements

A realização desta dissertação constitui o culminar de um percurso académico exigente, pautado por inúmeros desafios, aprendizagens e momentos de superação. Nenhum caminho é trilhado de forma solitária, e este não foi exceção. Assim, é com profundo reconhecimento que expresso a minha gratidão a todos aqueles que, de diferentes formas, contribuíram para que este trabalho fosse possível.

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Resumo

O empreendedorismo desempenha um papel fundamental na sociedade, por impulsionar o desenvolvimento da economia e ser responsável pela inovação, competitividade e criação de emprego. Dada a importância deste ecossistema, a fase inicial de um empreendedor é marcada por vários desafios, sendo um deles a criação da empresa, em que questões relacionadas com a fiscalidade podem comprometer a sustentabilidade do negócio. Neste contexto, a literacia fiscal assume um papel determinante, pois influencia a autonomia dos empreendedores, a sua capacidade de tomada de decisão e o cumprimento das obrigações legais. O objetivo deste estudo foi avaliar o nível de literacia fiscal de empreendedores incubados, bem como analisar os seus conhecimentos e práticas, os principais desafios relacionados com a fiscalidade e a conformidade fiscal. Para tal, foi adotada uma abordagem quantitativa, utilizando-se um questionário aplicado a empreendedores inseridos em incubadoras em Portugal. Os resultados revelaram que a literacia fiscal se encontra, em média, num nível intermédio (3,08 em 5). No entanto, 33% dos empreendedores apresentaram níveis limitados, evidenciando lacunas significativas. Verificou-se que o conhecimento teórico nem sempre se reflete na prática, resultando numa subutilização de benefícios fiscais e incentivos disponíveis. Observou-se ainda que a conformidade fiscal dos inquiridos é elevada, mas frequentemente assegurada através de apoio externo, como contabilistas e consultores. Conclui-se que a promoção da literacia fiscal deve ser encarada como um objetivo coletivo, envolvendo empreendedores, incubadoras e entidades governamentais, de forma a assegurar princípios básicos e elementos-chave na fase inicial da criação das empresas. Recomenda-se, assim, a criação de programas de capacitação e a simplificação dos processos fiscais, com o objetivo de reduzir a complexidade do sistema e permitir que os empreendedores tomem decisões informadas perante as diversas questões fiscais que possam surgir.

Palavras-chaves: Literacia Fiscal, Fiscalidade, Conhecimento Fiscal, Empreendedorismo, Empreendedores Incubados, Startups

JEL Classification System: H25; M13

Abstract

Entrepreneurship plays a key role in economic and social development by contributing to innovation, creating jobs and increasing competitiveness within the ecosystem. Given its importance to society, setting up a business can present several challenges, with taxation being one of the most significant. The Portuguese tax system is characterised by its complexity, which can hurt entrepreneurs during a particularly volatile and uncertain period, such as when they first start a business. In this context, tax literacy is crucial, as it equips entrepreneurs with the knowledge needed to manage key aspects of their business, such as selecting the appropriate legal structure (which can directly impact the tax liability), identifying applicable taxes, meeting tax deadlines, and accessing available benefits and incentives. This knowledge enables strategic decision-making and fosters autonomy, reducing dependence on external support. This study aimed to assess the level of tax literacy among entrepreneurs in incubators, identify the main taxation-related challenges, and analyse the relationship between tax knowledge, practices, and compliance. To this end, a quantitative approach was adopted in the form of a questionnaire. The results indicate that, on average, tax literacy is adequate. However, 33% of entrepreneurs demonstrated limited knowledge, revealing significant gaps. There was a weak relationship between theoretical knowledge and the practical application of deductible expenses and tax benefits. Conversely, tax compliance was found to be high, albeit often through external mechanisms. It is concluded that promoting tax literacy should be a collective goal involving entrepreneurs, incubators and government entities. Training programmes should be created and tax processes simplified to reduce the system's complexity and enable entrepreneurs to make informed and sustainable decisions when starting their business.

Keywords: Tax Literacy, Taxation, Tax Knowledge, Entrepreneurship, Incubated Entrepreneurs, Startups

JEL Classification System: H25; M13

Index

Dedication and Acknowledgements ..... *i*

Resumo ..... *i*

Abstract ..... *ii*

1. Introduction *1*

2. Literature Review *3*

2.1 Entrepreneurship 3

2.1.1 Entrepreneurship around the world 3

2.1.2 Portuguese entrepreneurship 6

2.2 Taxation 7

2.2.1 The role of taxation in the entrepreneurial context 7

2.2.2 The Portuguese Tax System 8

2.2.2.1 Types of taxes and obligations 8

2.2.2.2 Tax Regimes 9

2.2.2.3 Tax violations and risk for entrepreneurs 9

2.2.2.4 Tax Benefits and Incentives 10

2.3 Literacy 11

2.3.1 General Aspects 11

2.3.2 Tax Literacy 12

2.3.2.1 Tax Knowledge 14

2.3.2.2 Tax Compliance 15

2.3.2.3 Challenges of Entrepreneurs 16

2.3.2.4 Taxation 17

3. Methodology *19*

3.1 Research context 19

3.2 Research Design 19

3.3 Research Objectives 19

3.4 Data Collections 20

3.4.1 Data Collection Instrument 20

3.4.2 Data Collection Procedures 20

3.5 Sample and Sampling Method 21

3.6 Data Processing and Analysis Procedures 21

4. Results *22*

5. Conclusion *37*

5.1 Conclusion 37

5.2 Implications 38

5.3 Limitations and future research 39

5.4 Final Considerations 40

6. Bibliographical references 41

7. Appendix 46

7.1 Appendix of Tables 46

7.2 Appendix of Charts 50

1. Introduction

Entrepreneurship has been playing an increasingly important role in economic and social development, serving as a key driver for innovation, job creation and competitiveness. In a global context marked by rapid technological evolution and constantly changing markets, the emergence of new businesses is essential to boost the economy and foster innovative solutions to contemporary challenges.

However, the initial phase of setting up a business is often marked by multiple challenges that go far beyond the conception of the business idea. Among these challenges are issues related to financial management, bureaucracy and, in particular, the complexity of the tax system. In Portugal, the tax structure is characterised by a high level of requirements and administrative processes that are often perceived as complex and inaccessible, especially for entrepreneurs who are starting their first business.

Tax literacy, understood as the knowledge and ability to apply tax concepts appropriately in the management of a company, thus emerges as a determining factor for the success and sustainability of businesses. A lack of this knowledge can lead to excessive dependence on external support, hindering informed strategic decision-making and increasing the risk of non-compliance with tax obligations. Furthermore, a lack of tax literacy can fail to take advantage of tax incentives and benefits that could reduce costs and support the consolidation of companies, especially in the early stages of the business.

In this context, this research seeks to assess the level of tax literacy of incubated entrepreneurs, understand the main challenges they face in the initial phase of their activity, analyse their knowledge and the practical applicability of tax concepts, and explore their attitudes and perceptions regarding tax compliance. The choice of incubated entrepreneurs is justified by the relevance of this group in the entrepreneurial ecosystem, as they are considered innovators, with a risk associated with the viability of their projects. Therefore, it is important that they have basic and consolidated knowledge so as not to compromise the evolution and sustainability of their businesses.

This study is particularly important not only for its contribution to academic literature, given the lack of studies exploring this topic, but also because it explores the relationship between tax knowledge and practices, dependence on third parties, and tax compliance. In addition, it stands out for its practical impact, offering evidence that can support policies and strategies that make the entrepreneurial ecosystem in Portugal more attractive.

Thus, the main objective of this research is to assess the tax literacy of incubated entrepreneurs, identify the main obstacles and challenges faced at the start of their businesses related to taxation, as well as identify knowledge gaps and analyse how

these relate to tax compliance. More specifically, the aim is to: assess the level of tax literacy of entrepreneurs by measuring their theoretical knowledge, practical application and compliance with their obligations; understand the challenges faced when starting their businesses and complying with tax obligations; explore entrepreneurs' attitudes and perceptions regarding tax compliance, trust in authorities, and the influence of government power; and, finally, identify opportunities for improvement and propose recommendations to promote business autonomy and sustainability.

The work is structured into five main chapters. The first chapter presents a review of the literature, addressing entrepreneurship in general and in Portugal, the Portuguese tax system and its place in the entrepreneurial ecosystem, the concepts of tax literacy and its derivatives, such as tax knowledge and tax compliance, and the challenges inherent in entrepreneurial activity, as well as previous studies related to these topics.

The second chapter describes the methodology used to carry out the work, detailing the context, design and objectives of the research, as well as the data collection instrument, the sample and the analysis procedures.

The third chapter presents the results obtained through the methodology used, analysed and organised according to the defined objectives.

Finally, the fourth chapter presents the main conclusions drawn from the results, the practical implications, as well as the limitations encountered throughout the study, culminating in suggestions for future research and final considerations of the work.

2. Literature Review

2.1 Entrepreneurship

2.1.1 Entrepreneurship around the world

Entrepreneurship has been the subject of study over the last few decades, with the Global Entrepreneurship Monitor (GEM) considered one of the most comprehensive and consistent studies at the international level. In its most recent edition, the 2024/2025 report collected data from more than 50 economies, representing over 63% of the world's population and 77% of global GDP, which lends it significant statistical relevance for analysing the phenomenon (GEM, 2025).

This empirical analysis reinforces several conclusions already highlighted in the literature, particularly in the field of female entrepreneurship. Terjesen, Bosma, and Stam (2015) highlight that women represent only one-third of all entrepreneurs globally, facing significant barriers in accessing capital and support networks.

This limitation is confirmed by GEM 2024/2025, which shows that in about half of the analysed economies, women continue to face difficulties in accessing the resources necessary to start or expand businesses. Similarly, institutional obstacles, such as fiscal complexity and public policy instability identified by GEM experts, align with the structural factors highlighted by Barynienè et al. (2014), who emphasise the weak link between education systems and the business sector. These parallels demonstrate the relevance of integrating updated empirical data to complement theoretical and qualitative approaches to the entrepreneurial phenomenon.

Entrepreneurial activity is assessed based on indicators such as TEA (Total Early-stage Entrepreneurial Activity) and EBO (Established Business Ownership), as well as variables associated with individuals' motivations and perceptions. The data reveal that countries such as Ecuador, Chile, Saudi Arabia, and Canada have particularly high levels of entrepreneurial activity, with TEA rates above 20%. However, fear of failure remains a significant barrier: in 43 of the 51 economies analysed, more than 40% of adults indicated that they avoided entrepreneurship because of this fear. In addition, it was found that in higher-income economies, such as Norway, individuals tend to feel less prepared to start a business.

The report also shows that in about half of the economies, women continue to face significant restrictions in accessing entrepreneurial resources, reinforcing the persistence of gender inequalities in access to entrepreneurship. In addition to these quantitative data, GEM 2024/2025 also includes the views of national experts (NES – National Expert Survey), who contribute a qualitative perspective on the conditions that

influence entrepreneurship in each country. Among the factors considered most critical are excessive bureaucracy, instability in public policies, and fiscal complexity, which, according to experts, hinder business creation and sustainability, especially in the early stages.

The concept of entrepreneurship has been widely discussed, particularly concerning its evolution, structure, and the characteristics that an entrepreneur must possess to overcome adversity and face the obstacles that arise. Audretsch (2012) states that there is no single, rigid definition of entrepreneurship, considering it a concept that can vary depending on the organisational structure, the results achieved, or the behaviours observed. In this sense, Mishra and Zachary (2015) argue that entrepreneurship is not just about starting a business. Still, it is a process that begins with entrepreneurial intent, moves on to the creation of opportunities and the development of skills, and culminates in the appropriation of the value generated.

According to Smirnov (2017), the evolution of the concept of entrepreneurship can be divided into three phases in scientific development: classical, non-classical, and post-non-classical. The classical phase is represented by authors such as Cantillon (1755), who viewed the entrepreneur as the agent who takes the risk of buying at a certain price to sell at uncertain prices, thereby differentiating them from the capitalist and the worker. Jean-Baptiste Say (1803) described the entrepreneur as the main person responsible for creating economic value, coordinating the production process, and combining labour, capital, and natural resources.

This view evolved into the non-classical phase, with Schumpeter (1911) associating the entrepreneur with the role of innovator, while Kirzner (1997) identified him as someone who can recognise market imbalances and exploit profit opportunities. Finally, in the post-non-classical phase, the entrepreneur comes to be seen as a more complex agent, integrating not only economic factors but also social, cultural, and contextual values.

More recent approaches later complemented these views. Mishra and Zachary (2015), for example, structure entrepreneurship into two major stages: the first related to the formulation of the initiative, i.e., the identification of the opportunity and the development of skills; and the second focused on the monetisation of the initiative, where the entrepreneur draws on external resources, creates value and obtains a return on their activity.

Terjesen, Bosma, and Stam (2015) identify three main categories of entrepreneurship: high-growth, female, and social. For these authors, high-growth entrepreneurship is characterised by the most significant economic impact, distinguishing it from self-employment. They argue that public policies and incentives

should focus on companies with the capacity and intention to grow, as these are the ones that generate more employment and economic dynamism.

This distinction is also highlighted by Rytkönen (2022) in his study on rural entrepreneurship, when he differentiates between the 'self-employed', generally motivated by necessity, and the true entrepreneur, driven by the identification of opportunities. In this sense, Faggian, Partridge, and Malecki (2017) note that the self-employment rate does not have a discernible positive effect on economic growth and may even be negative after controlling for endogeneity. In the same rural context, Saghaian et al. (2022) identify previous experience, risk propensity, interest rates, and available start-up capital as key factors for success and profitability.

Regarding female entrepreneurship, Terjesen, Bosma, and Stam (2015) note that it accounts for only about one-third of the global total, with access to capital being a significant barrier. Still in this field, Muthukrishnan and Bhattacharyya (2024) demonstrate that women with strong pro-social motivation tend to show greater resilience in the face of adversity. When supported with adequate training in entrepreneurial skills, these women can transform social initiatives into sustainable businesses with significant impact.

According to Terjesen, Bosma, and Stam (2015), social entrepreneurship is deeply conditioned by the legal and cultural contexts of each country. It is characterised by objectives geared towards creating social value. Samuelsson and Witell (2022) identify three profiles of social entrepreneurs: 'discoverers', driven by personal curiosity and a desire to try something new; 'seekers', motivated by external recognition and alignment with their own identity; and 'rangers', who are more action-oriented and focused on practical problem-solving in the contexts in which they operate.

Barynienè et al. (2014) highlight the existence of a discrepancy between political discourse and the practical application of entrepreneurship education, pointing out that the education sector and the business community remain poorly coordinated. In the academic sphere, Kolb and Wagner (2015) note that entrepreneurs linked to universities tend to be less open to experience, more agreeable, and less risk-prone. This analysis is based on the Five Factor Model, which includes: Conscientiousness, Emotional Stability, Extraversion, Openness to Experience, and Agreeableness. In the same field, Mueller (2023) analyses the impact of the EXIST programme, a German public subsidy that supports academic start-ups. The author demonstrates that the programme has significant positive effects on product development, business planning, and the attraction of external funding.

Other studies reinforce the role of the ecosystem in stimulating entrepreneurial activity. Carayannis and Von Zedtwitz (2005) argue that physical and virtual incubators

can reduce digital, economic, and social inequalities by connecting entrepreneurs to global networks. Lexa (2004) explores the potential of medical entrepreneurship in the United States, highlighting the strong presence of venture capital and an environment conducive to innovation, while also underscoring the ethical and regulatory challenges. Regarding access to finance, Lawal et al. (2018) demonstrate that in Nigeria, the requirements imposed by the banking sector severely limit entrepreneurship, creating a need for alternative solutions, such as microcredit or crowdfunding.

2.1.2 Portuguese entrepreneurship

According to the Directorate-General for Economic Activities (DGAE), in Portugal, entrepreneurship represents a fundamental component in a globalised and competitive market economy, as a driver of employment and economic growth, and is therefore at the heart of monetary policy.

Portugal has established itself as an emerging hub for innovation and entrepreneurship in Europe. The Startup Ecosystem Report 2024, published by Startup Portugal, reveals a growing scenario, with 4,719 active startups in 2024, representing a 16% increase compared to the previous year and a 27% increase since 2022. These companies are responsible for more than 26,000 jobs and €1.502 billion in exports, corresponding to about 1.4% of national exports (Startup Portugal, 2024).

The Portuguese entrepreneurial ecosystem stands out for its substantial investment in the information and communication technology sector, which accounts for 63% of startups' turnover. Most of these companies are micro-enterprises, with up to 9 employees, representing 89% of the total. Additionally, more than 68% of startups were founded in the last five years, underscoring the recent vitality of the ecosystem.

At the same time, levels of investment in research and development (R&D) have increased. Portuguese companies invested 2.834 billion euros in R&D in 2023, up from 2.572 billion in 2022, indicating a continued commitment to innovation as a driver of growth. In terms of external financing, the capital raised by startups and scaleups based in Portugal increased from €240 million in 2023 to €306 million in 2024, according to data from Dealroom. Although the figures remain below the global average, this represents a notable increase.

The report also highlights structural challenges in the Portuguese ecosystem, including a shortage of specialised technical talent, difficulties in retaining qualified professionals, and asymmetry in access to financing during the early stages. Despite the presence of universities that are well-positioned in international rankings and a growing commitment to innovation, the phenomenon of ‘brain drain’ and salary constraints continue to compromise the country's competitiveness in this field.

As will be explored in the next chapter, these dynamics are closely related to the tax conditions and incentive mechanisms currently in place, which directly influence the attractiveness and sustainability of the Portuguese entrepreneurial ecosystem.

2.2 Taxation

2.2.1 The role of taxation in the entrepreneurial context

Taxation influences entrepreneurial dynamics from the decision to enter the market to the capacity for growth and innovation of companies. In addition to its impact on operating costs, taxation affects the type of entrepreneurship that prevails, and may favour innovative initiatives or, conversely, discourage more risky and ambitious projects. Understanding how different tax models shape the behaviour of entrepreneurs is, therefore, essential for designing effective and inclusive public policies.

Entrepreneurs' response to taxes varies depending on their type of motivation. According to Rusu and Dornean (2023), necessity entrepreneurs are less sensitive to tax rates, while opportunity or improvement entrepreneurs react strongly to the tax burden and are encouraged by tax reductions. In this context, Fleischer (2016) criticises the widespread belief that tax cuts automatically lead to job creation, arguing that this relationship is more ideological than empirical.

Several studies confirm that taxation affects not only the quantity but also the quality of entrepreneurship. Venâncio et al. (2022) show that a reduction in the tax burden can increase both aspects. However, Asoni and Sanandaji (2014) warn that, although taxation can increase the number of new businesses, it can simultaneously compromise their quality, especially in contexts with progressive taxes. Batrancea et al. (2024) add that the initial costs of starting a business also have a negative impact, especially in emerging economies.

The quality of entrepreneurship is closely linked to the capacity for innovation, both in companies and among their founders. Darnihamedani et al. (2018) argue that high taxes reduce incentives for innovation by limiting the available capital. Progressive taxes, according to Asoni and Sanandaji (2014), also discourage entrepreneurs with ambitious projects. Bilan et al. (2018) identify taxes on profits, employee charges, payment terms, and bureaucracy in registration processes as critical factors in reducing business creation.

Formulating public policies based solely on self-employment indicators can be counterproductive, as it ignores the fiscal impact on high-potential entrepreneurship (Asoni & Sanandaji, 2014). Fazio et al. (2020) argue that policies should consider the composition of entrepreneurship and its long-term effects, rather than focusing solely on

the raw number of new businesses. Darnihamedani et al. (2018) reinforce the importance of differentiating between innovative and non-innovative entrepreneurs, as the former are more sensitive to profit taxes and more likely to seek external financing. High initial costs can, paradoxically, act as a positive filter, attracting more qualified profiles.

Another obstacle to innovation is the taxation of instruments such as stock options. Henrekson and Sanandaji (2018) demonstrate that tax systems unfavourable to this type of compensation negatively affect the high-tech ecosystem and venture capital activity, hindering the attraction of talent.

2.2.2 The Portuguese Tax System

2.2.2.1 Types of taxes and obligations

The Portuguese tax system is regulated by a set of legal instruments, including the Corporate Income Tax Code, the Personal Income Tax Code, the VAT Code, the Tax Benefits Statute, and the General Tax Offences Regime (RGIT). This regulatory diversity, although justified by the specific nature of the matters involved, can represent an additional challenge for entrepreneurs, especially in the early stages of their business. Startups in Portugal are, as a rule, subject to the same tax framework as other business entities.

The main applicable taxes are the following. IRC (Corporate Income Tax): levied on the taxable profit calculated by companies during the tax period (Art. 1 of the CIRC). For entities classified as SMEs or Small Mid-Caps, a reduced rate of 16% is applied to the first €50,000 of taxable income and 20% to the surplus (see point 2.2.4).

IRS (Personal Income Tax): covers income earned by individuals, classified into various categories (Art. 1, no. 1 of the CIRS), of which the following stand out: Category A: income from employment; Category B: business and professional income, covering sole traders and self-employed workers; Category E: capital income, such as dividends and stock options; Category F: property income (e.g., rents); Category G: capital gains; Category H: pensions.

VAT (Value Added Tax): applies to transfers of goods, provision of services, imports, and intra-Community transactions carried out in national territory (Art. 1, no. 1 of the VAT Code).

The associated tax obligations include the periodic submission of returns (e.g., Form 22, IES, VAT returns), the timely payment of taxes, and the reporting of inventories and invoices. Non-compliance may result in fines, interest on arrears, and, in more serious cases, the subsidiary liability of managers (Art. 24 of the LGT).

2.2.2.2 Tax Regimes

The tax regime applicable to an entity depends on its legal form and stage of development. In the context of this study, we highlight the Simplified Taxable Income Determination Regime, provided for in Article 86-A of the CIRC, which is particularly relevant for entrepreneurs starting up.

This regime can be adopted by resident taxpayers who primarily engage in commercial, industrial, or agricultural activities and who cumulatively meet the following conditions: annual income of less than €200,000; total balance sheet of less than €500,000; not subject to mandatory statutory audit; at least 80% of the share capital held by entities that meet the above requirements; application of the accounting regime for micro-entities; not having renounced the regime in the last three years.

In this context, the taxable amount does not result from the difference between income and expenses (actual profit), but from the application of fixed coefficients to the different types of income (Article 86-B of the CIRC), such as: 0.04 for sales and catering, hotel, and similar services; 0.75 for professional activities (e.g., doctors, dentists); 0.10 for other services and operating subsidies; 0.30 for non-operating subsidies.

This regime has clear advantages for small businesses, namely due to its low administrative complexity and ease of tax compliance. However, it may not be suitable for innovative companies, whose costs are high and variable, as they are penalised by the application of fixed coefficients on turnover, which can distort the taxable result. Nevertheless, it is an essential tool for encouraging formalisation and market entry (Ordynskaya et al., 2016), especially in an entrepreneurial ecosystem that seeks to grow with agility and legal certainty.

2.2.2.3 Tax violations and risk for entrepreneurs

The complexity of the tax system and the lack of technical knowledge among entrepreneurs can lead to unintentional tax violations. Bilan (2018) notes that one of the main causes of the decline in new businesses is related to tax payment deadlines, which sometimes contribute to non-compliance by entrepreneurs. In Portugal, these offences may result from failure to submit tax returns or late payment of taxes, as mentioned above.

Tax offences are outlined in the General Tax Offences Regime (RGIT), which defines administrative offences and tax crimes, along with the corresponding penalties. In tax matters, administrative offences may occur with the submission of returns and documents, including refusal, delay, or omission, as well as with the information provided, such as falsification, inaccuracies, or omissions.

In the case of tax crimes, the RGIT provides for various situations, such as: tax fraud, provided for in Article 103, which consists of the intention to reduce the State's tax revenues; aggravated fraud, when two actions described in Article 104 are committed cumulatively; and breach of trust, defined in Article 105, which refers to the appropriation of tax amounts that the taxpayer is legally obliged to pay. There are also crimes of the exact nature applicable to Social Security, covered by Articles 106 and 107 of the RGIT.

To avoid these situations, it is essential that entrepreneurs are aware of their tax obligations, including both reporting and payment deadlines, and are also informed about possible infringements and associated penalties. A lack of information or technical support can compromise the viability of new businesses, especially in the early stages when resources are limited and the risk is greater.

2.2.2.4 Tax Benefits and Incentives

In response to the structural challenges identified in the national entrepreneurial ecosystem, the Portuguese government has launched a set of strategic initiatives with a direct impact on the taxation of start-ups. These measures include changes to income taxation, incentives for research and development, special remuneration schemes, and instruments to attract talent.

One of the main incentives is the reduced corporate income tax rate for startups, provided for in Article 87 of the Corporate Income Tax Code. Companies that qualify as small or medium-sized enterprises (SMEs) or Small mid-caps benefit from a rate of 16% on the first €50,000 of taxable income. If they are also recognised as start-ups under Law No. 21/2023, this rate is reduced to 12.5% following Article 87(8) of the CIRC.

Another relevant mechanism is the tax incentive for acquiring shares in start-ups, such as stock options, which, as mentioned above, is seen in the literature as aiming to attract talent. Furthermore, taxes on stock options are significantly reduced, which in turn reduces venture capital activity (Henrekson & Sanandaji, 2018). In this way, Article 43 of the Tax Benefits Statute allows gains obtained by employees or members of corporate bodies with this stock option plan assigned by startups recognised under Law No. 21/2023 to be taxed at only 50% of their value, provided that the securities are held for one year.

The Tax Incentive, SIFIDE II - Tax Incentive System for Research and Development II, brings to Portuguese innovative entrepreneurship, under Article Article 38 of the CFI, the possibility of deducting up to 82.5% of their R&D expenses from corporate income tax, combining a base rate of 32.5% with an incremental rate of 50% on the increase in costs compared to the average of the previous two years.

Given the complexity of taxation and its impact on entrepreneurial activity, it is clear that entrepreneurs will be more effective if they have the knowledge to interpret and apply it. The chapter on taxation demonstrates how taxes can impact the creation, growth, quality, and innovation of companies. For entrepreneurs to take advantage of incentives and support, as well as to avoid situations of non-compliance, it is necessary to have a certain level of tax understanding. In this sense, the following chapter explores the concept of literacy, with a special focus on financial and tax literacy, to highlight the key skills entrepreneurs need to make informed, responsible, and strategic tax decisions.

2.3 Literacy

2.3.1 General Aspects

Nowadays, the concept of literacy has evolved significantly, encompassing a wide range of domains beyond traditional reading and writing. Among the main types of literacy identified in academic literature are scientific, health, emotional, environmental, cultural, digital, legal, financial, and tax literacy, among others.

Scientific literacy encompasses the understanding of scientific concepts and processes essential for informed decision-making, active participation in civic and cultural matters, and economic productivity (Yore, Pimm, and Tuan, 2007; Lavonen et al., 2009). It includes components such as cognitive and metacognitive skills, specific language, mental habits, and ICT strategies (Yore, Pimm, and Tuan, 2007).

Health literacy is defined as the ability to access, understand, and use information to promote and maintain good health (Neter and Brainin, 2012). Its components include cognitive and social skills, motivation, and the ability to manage health-related issues. Emotional literacy is the ability to recognise, understand, and manage emotions, including emotional awareness, regulation, and expression (Machin-Mastromatteo, 2025). The same author also defines legal literacy as the understanding of legal rights and responsibilities, including knowledge of legal processes, rights, and obligations.

Environmental literacy refers to the understanding of environmental issues and making informed decisions, involving knowledge of ecological sciences, awareness of current issues, and engagement in responsible practices (Lavonen et al., 2009). Cultural literacy refers to the ability to understand and participate fluently in artistic practices, encompassing knowledge of customs, values, and traditions (Weldh and Wright, 2010).

Digital literacy refers to the ability to utilize technologies to search for, evaluate, create, and communicate information effectively (Stordy, 2015). Regarding digital financial literacy, Pattnayak and Sahoo (2024) define it as the ability to use digital

platforms and tools to manage economic activities, involving users' awareness, knowledge, and behaviour with digital financial services.

Financial literacy is the ability to understand financial products and services, as well as the ability to manage finances effectively. This includes knowledge of such products, decision-making skills, and the ability to manage finances using information and communication technology (ICT) (Pattnayak and Sahoo, 2024; Vdovin et al., 2018).

Adesina, Carnaghan, and Smith (2024) examine literature on the relationship between financial education and financial literacy among young adults in Canada and the United States, showing that financial education programmes are essential in equipping young people with the skills necessary to manage their finances effectively and prepare them to make responsible financial decisions.

Moreover, Xu and Jiang (2024) highlight that entrepreneurs with stronger financial literacy skills are more likely to identify valuable business opportunities, optimise resources, and assess risks more accurately, thereby contributing to value creation in firms and the economy.

Financial literacy covers a wide range of topics related to finance, management, and taxation. Bornman and Ramutumbu (2019) consider tax literacy as a component of financial literacy, encompassing knowledge of the tax system and the ability to apply this knowledge to meet tax obligations.

2.3.2 Tax Literacy

Tax literacy encompasses understanding tax laws, knowing how to manage personal and business finances in compliance with tax regulations, and staying informed about tax-related developments (Gerger et al., 2020; Öksüz and Dogan, 2025). It is essential for improving tax compliance, as individuals with higher tax literacy are more likely to comply voluntarily with tax obligations (Gerger et al., 2020; Agusti and Rahman, 2023; Nichita et al., 2019).

In this regard, Nichita et al. (2019) emphasised that tax literacy extends beyond merely understanding taxes; it involves the practical application of tax knowledge, conducting tax operations, and interpreting tax information, which enables informed and strategic financial decision-making.

Moreover, transparency in business practices has a positive impact on compliance and trust. Higher tax literacy fosters trust in tax authorities and the perceived legitimacy of tax systems, thereby increasing voluntary compliance. Trust and power dynamics between taxpayers and tax authorities are mediated by tax literacy, influencing attitudes towards tax compliance and avoidance (Agusti and Rahman, 2023). Bekana (2024)

points out that many citizens lack access to tax information and argues that improving tax literacy could enhance tax compliance and, consequently, increase tax revenue.

In different contexts, tax literacy plays a crucial role. For instance, in the context of small and medium-sized enterprises (SMEs), tax literacy is vital for understanding tax benefits and managing business finances effectively (Agusti and Rahman, 2023; Belle Isle, Freudenberg, and Sarker, 2018). Isle, Freudenberg, and Sarker (2018) found that 25% of SBOs in their study saw no benefit in becoming 'tax literate,' believing that the responsibility for tax literacy lies with accountants or consultants.

Similarly, for individuals, tax literacy helps them understand the implications of tax policies and make informed decisions about investments and savings (Lyon and Catlin, 2020; Chardon, Freudenberg, and Brimble, 2016).

From an educational perspective, addressing gaps and demographic trends is essential. Studies indicate significant disparities in tax literacy among various demographics, with younger, less educated, and lower-income individuals often having lower tax literacy (Jiříková, 2025; Lyon and Catlin, 2020).

In support of this, Blechová and Sobotovičová (2016) and Moučková and Vítek (2018) investigated the level of tax literacy among students in the Czech Republic and at the University of Economics in Prague, respectively. Their studies highlight the importance of formal education, with Moučková and Vítek focusing on the influence of taxation courses and experience with tax returns. Similarly, Formanová et al. (2021) explored factors that influence tax literacy among economics students, identifying teaching quality, curriculum relevance, participation in practical activities, and personal motivation as key determinants.

However, educational programs focusing on practical tax knowledge are still lacking, and there is a need for integrating tax literacy into broader financial education curricula (Jiříková, 2025; Moore, Perkins, and Jeffrey, 2022). Gerger, Türegün, and Gerçek (2019) argued that a lack of tax knowledge leads to errors and evasion, emphasising the need for tax education to be prioritised in public policies.

At a societal level, the economic benefits of improved tax literacy are fundamental to achieving sustainable development. Improved tax literacy contributes to more informed financial decision-making, thereby reducing the risks associated with financial transactions and debt (Ilynykh, 2025). It also supports economic growth by fostering a more informed and compliant taxpayer base, which is crucial for the stability of public finances (Nichita et al., 2019; Ilynykh, 2025).

The literature also presents conceptual frameworks to understand the scope of tax literacy. For example, Clercq's (2023) framework identifies four domains of competence in tax literacy: knowledge, skills, attitudes, and transformative competencies. Aprea

(2023) offers a global perspective, proposing a framework that encourages citizens to actively participate in taxation matters with a high degree of fiscal morality and responsibility.

Finally, several recommendations have been proposed to improve tax literacy, including education initiatives (Jiříková, 2025; Moore, Perkins, and Jeffrey, 2022), launching public campaigns (Gerger, Türegün, and Gerçek, 2019; Ilynykh, 2025), simplifying tax systems (Agusti and Rahman, 2023; Belle Isle, Freudenber, and Sarker, 2018), and providing targeted support (Jiříková, 2025; Lyon and Catlin, 2020).

In a business context, tax literacy refers to the knowledge and understanding of tax regulations, which are essential for entrepreneurs to operate within the law and adhere to their tax obligations. This also fosters a healthy business environment. Tax literacy is crucial for the success and sustainable growth of companies, as a solid understanding of tax issues directly impacts their longevity.

2.3.2.1 Tax Knowledge

Tax knowledge enables individuals and businesses to make more informed and strategic decisions, effectively optimising resources. Bhalla, Sharma, and Kaur (2022) explored the impact of tax knowledge and technological advancements on corporate performance, concluding that companies with a strong understanding of their tax responsibilities are better positioned to optimise financial outcomes. Additionally, the integration of new technologies within tax systems allows businesses to streamline processes, reduce errors, and enhance tax compliance.

These findings reinforce that tax literacy is not only essential for regulatory adherence but also plays a fundamental role in business efficiency and growth. Similarly, Nagel et al. (2019) emphasise that tax knowledge drives positive business outcomes, underscoring its significance beyond mere compliance.

Reddy (2023) examines how entrepreneurs' perceptions of tax rates vary depending on the nature of their business, the stage of the firm's life cycle, and the economic environment. The study reveals that while some entrepreneurs regard taxes as a necessary cost for business development, others perceive them as a barrier to growth.

In a similar vein, Hien, Thao, and Tuan (2025) argue that tax knowledge alone is insufficient to ensure compliance among SMEs. Their research identifies two key factors that influence tax adherence: the perception of opportunities and an understanding of tax losses, as well as tax knowledge and conformity. These two key measures are necessary to establish a relationship that would otherwise be impossible.

Ambrus and Borbély (2024) highlight that taxpayers with higher levels of tax knowledge tend to demonstrate greater compliance. Their research underscores that

access to information, prior knowledge, and tax education are crucial elements in shaping taxpayers' understanding of their obligations, ultimately promoting higher adherence to tax regulations.

However, Appiah, Domeher, and Agana (2024) stress that the broader social and political context also plays a crucial role in shaping the relationship between tax knowledge and compliance. In South Africa, where tax evasion remains a significant challenge, Greenham, Ramlall, and Stainbank (2024) propose initiatives to improve citizens' understanding of taxation and compliance. They emphasise the importance of transparency in the use of public resources to build trust in the tax system, reinforcing that tax education is crucial in fostering a culture of compliance, particularly in environments where evasion is prevalent.

In this regard, Nagel et al. (2019) demonstrate that tax training programmes not only enhance business compliance but also increase managers' confidence in handling their tax obligations, where the collaboration between the government, the private sector and educational institutions plays a crucial role in consolidating robust entrepreneurial ecosystems (Gomes, Ferreira and Lopes, 2023).

2.3.2.2 Tax Compliance

The concept of tax compliance is understood from various academic perspectives. According to Roth (1989), tax compliance is the intention of taxpayers to fulfil the letter and spirit of tax laws and their administration without resorting to criminal action, while non-compliance leads to tax evasion and consequently affects revenue collection and the state's ability to achieve economic and social objectives (Sapiei et al., 2014). More recently, Dung, Tuan, and Thao (2023) focus on the tax compliance behavior of SMEs, identifying two factors that influence compliance with tax obligations: comprehending tax legislation and raising awareness of social responsibility, which fosters attitudes towards trust and fairness.

Agusti & Rahman (2023) examine the impact of tax literacy on trust and power, where trust and power have a positive effect on voluntary compliance, resulting in tax literacy as a factor that increases tax compliance and reduces tax evasion. When the taxpayers have confidence in how their taxes are being used, they are more likely to fulfill their obligations (Appiah, Domeher, and Agana, 2024).

Batrancea et al. (2022) investigated the attitudes of students and entrepreneurs towards tax evasion, where they found that the propensity of students to tax evasion decreases when the trust in authorities increases and power decreases. In the case of entrepreneurs, they demonstrated a conformist attitude regarding tax evasion and

exhibited the lowest evasion rates in scenarios of high trust and power among tax authorities.

Dungtripop et al. (2022) conducted a study on the acceptance of tax inspections and the education of entrepreneurs, in which they concluded that trust in the competence and integrity of the Revenue Department agents is a crucial factor, and that awareness of fines and penalties motivates them to comply. According to Baylon-Gonzales, Vega-Rosales, and Iraola-Real (2023), tax awareness and tax education had a positive effect on the tax compliance of SMEs.

2.3.2.3 Challenges of Entrepreneurs

According to the literature, entrepreneurs face several challenges when establishing and managing their businesses. Bethlendi and Urbanics (2018) analysed the financial and accounting difficulties encountered by early-stage innovative enterprises and categorised them into four main issues. The first challenge is capital and liquidity management, as startups often experience substantial initial losses and require adequate equity and liquidity management to sustain their operations.

The second challenge concerns owners' connections, where relationships between shareholders and managers can be fraught with friction, particularly in financial decision-making processes involving shareholder loans or equity financing. Another significant challenge is taxation, which is the focus of this study. The complexity of tax regulations can be a considerable obstacle for entrepreneurs, making compliance essential to avoid legal infringements. Finally, the category of ‘others’ encompasses difficulties such as the failure to capitalise expenses related to research and development properly, a crucial aspect in improving financial stability and attracting investors.

Taxation presents a particularly pressing issue for entrepreneurs, as it directly impacts their financial management and overall business sustainability. Bethlendi and Urbanics (2018) highlight that tax compliance is a fundamental concern for startups, given the complexity of tax regulations and the potential penalties for non-compliance. Chen and Lin (2025) further argue that fiscal pressure serves as a key barrier to new business creation, particularly due to unequal access to finance, which is a crucial determinant of entrepreneurial success.

Beyond taxation, broader economic and market factors also pose significant challenges for startups. Gordon (2018) identifies several market failures that impact entrepreneurial ventures. One such issue is information spillovers, where innovative ideas can be easily copied by competitors, undermining the competitive advantage of startups. Another concern is the ‘lemons problem’, which refers to asymmetric information in financial markets, making it difficult for startups to secure funding.

Additionally, high fixed costs and market power disparities can hinder the successful introduction of new products and services.

To mitigate these challenges, Gordon (2018) suggests several policy measures, such as refundable tax savings from business losses, which provide financial relief to startups and encourage innovation. Another proposal is a compensating surtax on profits, aimed at addressing asymmetric information issues by levying higher taxes on non-entrepreneurial firms to support genuine startups.

Furthermore, targeting behavioural differences through tax provisions can help distinguish entrepreneurial ventures from non-entrepreneurial startups, ensuring that fiscal policies better support new business initiatives. Reddy (2023) expands on the discussion of taxation by analysing how entrepreneurs respond to tax rates, considering factors such as the nature of their business, the stage of their firm's life cycle, and prevailing economic conditions. The study reveals that while some entrepreneurs perceive taxes as a necessary cost for business development, others view them as a hindrance to growth.

This variation in perception highlights the importance of tax literacy and tailored fiscal policies that cater to the diverse needs of entrepreneurial ventures.

2.3.2.4 Taxation

Taxation plays a crucial role in shaping entrepreneurial motivation and decision-making. Rusu and Dornean (2023) examine the impact of tax rates on entrepreneurs, highlighting that taxation can either encourage or discourage entrepreneurial activity, depending on its application. Their study emphasises that the tax burden affects entrepreneurship differently across economic contexts and national characteristics, reinforcing the need for a balance between tax collection and fostering business creation. When tax legislation allows the deduction of losses, it creates an incentive for entrepreneurship. In contrast, progressive tax structures reduce profitability and may discourage new ventures (Hansson, 2012; Watson & Kaeding, 2019).

Similarly, Gersbach, Schetter, and Schneider (2019) argue that excessive taxation on profits can deter innovation by reducing returns on research and development investments. In contrast, tax incentives targeting innovative activities can promote entrepreneurship, facilitating business creation and sustainability. The availability of venture capital can also mitigate the adverse effects of taxation by providing financial support that enables entrepreneurial aspirations to progress (Reddy, 2022).

However, Dimitrova and Eswar (2023) point out that high capital gains tax rates can discourage investment in startups, as they lower expected returns for venture capitalists, ultimately restricting access to funding for innovation. Darnihamedani, Block, Hessels,

and Simonyan (2018) further explore the link between taxation and entrepreneurship, noting that startup costs, such as notary fees and registration expenses, can act as barriers to entry. These costs influence not only the number of new businesses but also their quality and growth potential. Dimitrova and Eswar (2023) reinforce that tax policies encouraging innovation, such as tax incentives for research and development, help stimulate venture capital inflows, fostering an environment more conducive to startup growth. The most innovative entrepreneurs tend to register their businesses as C-Corps (Sociedades Anónimas) to attract foreign investment and scale more rapidly.

According to Law 21/2023, a company must meet several criteria to be officially recognised as a startup in Portugal. It must be a legally incorporated entity, less than ten years old, employ fewer than 250 people, and have an annual turnover of less than €50 million. Additionally, it cannot be the result of a corporate restructuring of a large company or hold direct or indirect shares in one. The business must also have its headquarters, permanent representation, or at least 25 employees in Portugal. Furthermore, it must meet at least one of the following conditions: be an innovative company with high growth potential, offering a novel business model, product, or service, and be recognised by ANI - Agência Nacional de Inovação, S.A. for its research and development activities or certification process in the technology sector; have completed at least one round of venture capital funding from authorised entities; have received investment from Banco Português de Fomento, S.A. or its subsidiaries.

The legal structure chosen by entrepreneurs also has significant tax implications. Allen, Allen, Raghavan, and Solomon (2022) analyse how founders decide between different legal forms, such as sole proprietorships, limited liability companies (LLCs), and public limited companies (C-Corps). Their study finds that in the United States, most startups opt for the C-Corp structure because it is more familiar to investors. This highlights the importance of tax knowledge in financing decisions, as entrepreneurs must understand how legal structures impact taxation and investment opportunities.

The authors also note that previous research has not adequately quantified the costs and benefits of selecting a specific legal structure. The decision between a C-Corp and an LLC involves tax and financial trade-offs that directly affect investors, reinforcing the role of tax literacy in strategic business planning. Venâncio (2022) provides evidence that reducing corporate taxes can lead to the creation of more businesses, thus stimulating entrepreneurship.

Allen et al. (2022) argue that if taxation were the only differentiating factor, entrepreneurs would favour non-corporate structures (such as LLCs) to maximise after-tax cash flows. This is because C-Corp profits are taxed twice—first at the corporate

level and then on distributions to shareholders, making it less tax-efficient in specific contexts.

3. Methodology

3.1 Research context

This study is part of the Portuguese entrepreneurial ecosystem, focusing on startups that are in their early stages of development. In recent years, entrepreneurship has been growing in Portugal, thanks to government initiatives, incubation programs that support entrepreneurs in the early stages, and increasing access to venture capital. As a result, Portuguese startups are being seen as a good investment option by foreign investors. However, many entrepreneurs continue to face substantial challenges related to taxation, where access to information is not so clear and the tax system is highly complex.

The study focuses on founders and entrepreneurs of startups under the umbrella of an incubator, seeking to understand how tax literacy influences their decisions and behaviour regarding the Portuguese tax system.

3.2 Research Design

A quantitative approach was adopted in this study, aiming to collect measurable data from a large number of incubated entrepreneurs. This approach enables us to analyse patterns in the different dimensions of tax literacy, tax knowledge, and compliance, as well as their relationship with the challenges faced by entrepreneurs at the outset of their activities.

3.3 Research Objectives

The present research aims to answer four research questions, each associated with a specific objective:

Objective 1 – Assess the level of tax literacy of incubated entrepreneurs: This objective will be addressed at three different points throughout the questionnaire. Two of these points consist of self-assessment questions relating to the tax knowledge perceived by the respondents themselves. The third point corresponds to the analysis of a set of six questions, including four questions on a Likert scale and two specific questions, the performance of which will determine the average level of tax literacy in the sample.

Objective 2 – Understanding the process of starting a business and the challenges faced: the aim is to understand how entrepreneurs choose the legal form of their

business, what the main challenges encountered during the process of setting up the business were, and to what extent taxation is one of those challenges.

Objective 3 – Assessing Tax Knowledge in Specific Areas and the Impact of Previous Experience: This objective aims to analyse the degree of knowledge entrepreneurs have on topics such as deductible expenses and tax benefits, and to ascertain whether previous experience in other businesses influences this knowledge. It also aims to investigate whether this knowledge can have a positive impact on business performance.

Objective 4 – Analyse the attitudes of entrepreneurs towards compliance with tax obligations: the aim is to understand entrepreneurs' attitudes towards compliance with their tax obligations and to ascertain whether factors such as the power of the tax authorities and trust in the government influence this compliance.

3.4 Data Collections

3.4.1 Data Collection Instrument

The questionnaire used in this research consists of multiple-choice questions, questions with multiple possible answers, and Likert scale items. This instrument was developed based on a review of the literature in the areas of entrepreneurship, taxation, particularly in the fields of tax knowledge and tax compliance, as well as the challenges faced by entrepreneurs in the early stages of their businesses.

In terms of its structure, the questionnaire was organised into thematic sections, aligned with the theoretical framework of the research: the initial phase of the business and its challenges, tax knowledge, and tax compliance. The use of different types of questions enabled comprehensive data collection, allowing for the analysis of both subjective perceptions and objective knowledge among entrepreneurs.

3.4.2 Data Collection Procedures

To conduct the survey, an email was initially sent to a group of incubators to gauge their willingness to collaborate in disseminating the survey among incubated entrepreneurs. The positive response from some of these entities made it possible to validate the study's feasibility and proceed with data collection.

After completing the questionnaire, contact was resumed with the incubators that had initially responded positively, and the approach was extended to all incubators listed on the Startup Portugal website, within the scope of the National Incubator Network (RNI). The aim was to request their collaboration in disseminating the questionnaire to promote the participation of incubated entrepreneurs in the research.

However, given the low response rate, it was necessary to reinforce the contacts. Incubators that did not respond to the initial request were sent a follow-up email with a reinforced appeal about the importance of the study. Those who agreed to collaborate but did not confirm dissemination were asked to share the questionnaire effectively. Incubators that confirmed they had disseminated the survey were asked to share it again, allowing entrepreneurs who had not yet responded to have another opportunity to do so.

In addition, a complementary data collection strategy was adopted, through direct contact with start-ups whose data was publicly available. At the same time, social media (LinkedIn, Instagram, and Facebook) was used to appeal to friends and acquaintances to provide contacts of founders, co-founders, or employees of startups they knew or worked with, to ascertain whether it would make sense for them to respond to the questionnaire.

3.5 Sample and Sampling Method

The sample consists of entrepreneurs from start-up incubators in Portugal. Since participation depended on the availability of contacts and the willingness of the incubated companies to collaborate, this is a non-probabilistic sample.

In total, 98 responses were collected, but only 53 valid responses met the inclusion criteria for this study, which required respondents to be founders or managers of incubated companies involved in strategic business decisions.

3.6 Data Processing and Analysis Procedures

After data collection, the responses were organised and entered into Microsoft Excel, where their validity was checked and invalid responses were excluded. The variables were organised according to their nature, namely into ordinal scales (Likert from 1 to 5) or multiple-choice questions.

The analysis focused on descriptive statistical methods, namely the calculation of absolute and relative frequencies, measures of central tendency (mean, mode and median) and graphical representation (tables, graphs and heat maps). In addition, variables relevant to the research objectives were cross-referenced in order to explore differences between groups and identify response patterns.

4. Results

This chapter presents the results of the questionnaire administered to incubated entrepreneurs. The analysis is conducted in accordance with the objectives defined in the research, ensuring consistency between the research questions and the proposed objectives.

The sample is characterised by a predominance of male entrepreneurs, representing 71% of the total (Chart 1). It also shows that more than half of the respondents are aged between 31 and 45 (Chart 2). The entrepreneurs operate in various sectors, with a particular emphasis on technology (Chart 3).

The primary objective of this research is to evaluate the tax literacy of entrepreneurs incubated in the program. This objective was analysed in two ways: measuring the level of tax literacy and self-assessment by the entrepreneurs themselves.

To measure the level of tax literacy, a set of questions included in the study's other objectives was used, which will be analysed later. For this purpose, the questions from objective 3, related to tax knowledge (questions 17, 18, 19, and 20), were considered, as it is essential not only to have technical knowledge but also the ability to interpret and apply that knowledge in practice (Nichita et al., 2019). Finally, questions from objective 4 were included, which refer to attitudes and compliance with tax obligations (question 23).

Based on the analysis of the responses on a Likert scale, it was possible to measure the tax literacy of the sample (Table 2). The average obtained (3.08) corresponds to a level considered adequate for tax literacy, falling in the middle of the scale.

Chart 4 shows that approximately 33% of entrepreneurs have a limited level of tax literacy, while 56% have an adequate level, and only 10% reach an advanced level (levels 4 and 5). These results indicate that lower levels of tax literacy can limit entrepreneurs' autonomy, resulting in greater dependence on third parties and external support, as argued by Gerger et al. (2020).

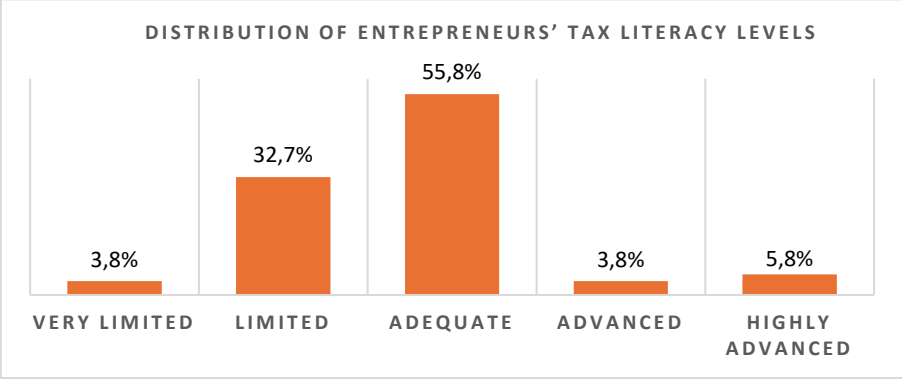


Chart 4 - Distribution of Entrepreneurs' Tax Literacy Levels

This limitation is also reflected in entrepreneurs' self-assessment of their tax knowledge in their first business. The results show that, among entrepreneurs who are in their first business venture, 48% self-assess themselves as having limited knowledge. Among those who have had more than one business, about 23% indicated that they had limited knowledge in their first experience, while 36% said their knowledge was very limited. In comparison, only 17% of entrepreneurs in their first business rated their knowledge as very limited (Chart 5).

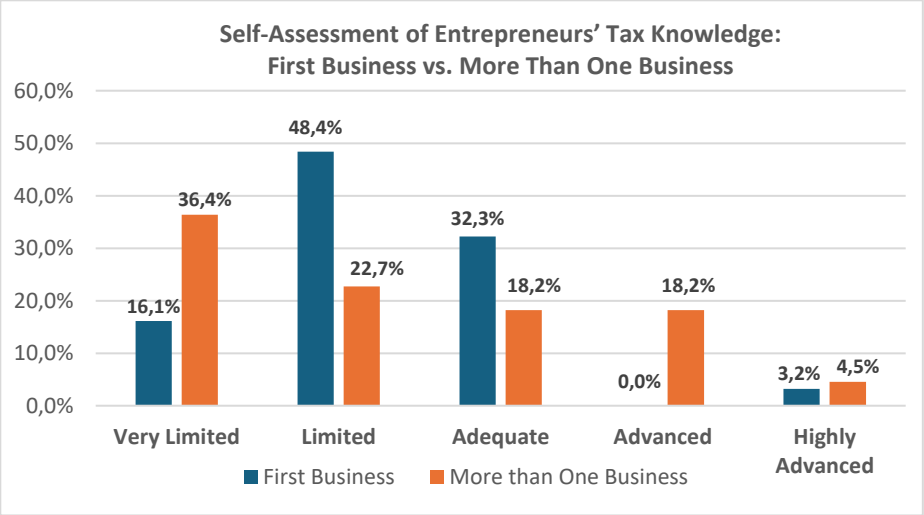


Chart 5 - Self-Assessment of Entrepreneurs' Tax Knowledge: First Business vs. More Than One Business

Thus, we can say that, on average, entrepreneurs consider themselves to have limited knowledge (level 2) of taxation in their first business venture, with 62% of responses concentrated between the levels "very limited" and "limited" (Tables 3 and 4). These results reinforce the idea put forward by Bethlendi and Urbanics (2018), who identify the complexity of the tax system as a significant barrier for new entrepreneurs, requiring a steep learning curve in the initial phase.

In the following objectives, it will be possible to analyse each question in more detail to understand the challenges faced by entrepreneurs and justify the level of tax literacy observed.

The second objective of the research is to understand the process of starting a business by entrepreneurs, considering two distinct moments. The first focuses on analysing the choice of legal form made by those who are in their first business experience, as well as the possible need for support from an accountant in decision-making. The second moment seeks to assess the perception of all entrepreneurs regarding the possible influence of investors on the choice of legal form and, more broadly, to analyse the start of activity, identifying whether the start-up process represented a challenge in tax terms, whether taxation is understood as one of the main obstacles at this stage and what are the most relevant tax challenges faced.

In the first stage, which refers exclusively to entrepreneurs in their first business, 48,4% indicated that they had some knowledge but sought guidance to make the decision, while about 45,2% said they needed a lot of support. Only two entrepreneurs stated that they knew exactly what legal form they wanted, requiring only technical support (Chart 6). These results reinforce the perception that there is a strong need for guidance at this early stage.

Regarding external influence, particularly from accountants, approximately 74,3% of entrepreneurs acknowledged that this professional had some degree of influence on their decision, while only 19,4% indicated that they had not been influenced by any external factors (Chart 7). These data show that many entrepreneurs rely on the technical knowledge of accountants or other consultants to support crucial decisions at the start of their businesses. This dependence arises because, when tax literacy is insufficient, strategic decisions tend to be strongly influenced by external factors (Nichita et al., 2019).

A cross-analysis of the level of knowledge in deciding on the legal form and the influence of third parties shows a clear relationship between the need for support and external dependence. Entrepreneurs who need a lot of support are also those who are most influenced by third parties, revealing a strong dependence on external advice. Those who have some knowledge tend to seek guidance, but with varying levels of influence, some make more autonomous decisions, while others remain conditioned by the advice they receive. This confirms that some entrepreneurs continue to rely heavily on specialised technical support (Table 5).

Q.3 x Q.4		**Level of Account´s influence**				
		1	2	3	4	5
Knowledge	1	**0%**	**0%**	**0%**	**0%**	**0%**
	2	**26%**	**10%**	**0%**	**3%**	**6%**
	3	**19%**	**10%**	**10%**	**0%**	**10%**
	4	**0%**	**0%**	**0%**	**0%**	**0%**
	5	**0%**	**0%**	**0%**	**3%**	**3%**

Table 5 - Comparison of Entrepreneurs' Knowledge Level and Accountants' Influence in Choosing a Legal Form (Heat Map)

In addition to this initial technical influence, the data show that entrepreneurs with previous experience tend to recognise a more decisive role for investors in choosing the legal form. On the other hand, entrepreneurs who are in their first business reveal more scattered perceptions, reflecting uncertainty and less familiarity with investment attraction processes.

These results suggest that accumulated experience provides a clearer view of the strategic role of investors and the influence they can exert (Allen et al., 2022), while novice entrepreneurs are still in the process of learning and adapting to these dynamics (Chart 8).

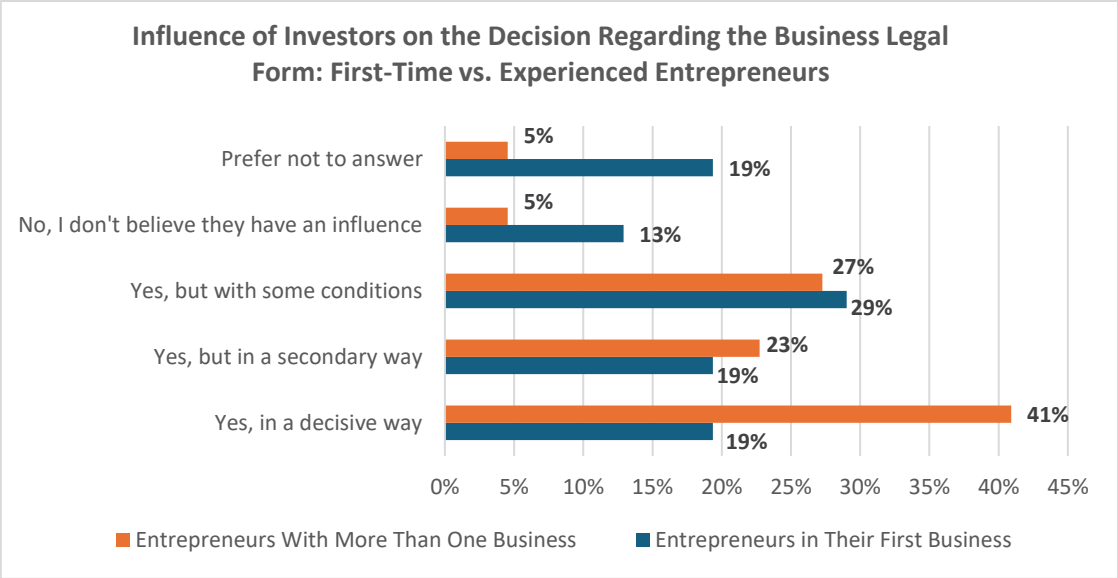


Chart 8 - Influence of Investors on the Decision Regarding the Business Legal Form: First-Time vs. Experienced Entrepreneurs

In the second stage, the analysis covered all entrepreneurs, seeking to understand their perceptions of the process of starting a business. The objective was to assess whether taxation is considered one of the main challenges, identify the tax obstacles faced and compare the perceptions of entrepreneurs in their first business with those who have previous experience.

It was found that 38% of entrepreneurs considered the start-up process, in tax terms, to be quite challenging, but surmountable with some guidance. Next, 23% rated it as not very challenging, with few obstacles, while 15% perceived it as extremely challenging and with several challenges. Only 8% said they handled everything without difficulty (Chart 9). These results reveal that, for most entrepreneurs, the start-up process requires guidance and specialised support, reflecting the complexity of the tax and bureaucratic procedures involved in this phase, as argued by Bethlendi and Urbanics (2018).

When comparing the groups in Chart 10, important differences can be observed. Entrepreneurs with previous experience tend to consider the process more challenging, suggesting that they are more aware of the tax complexity and associated risks. In contrast, entrepreneurs in their first business tend to give answers that are more concentrated in the categories indicating less difficulty, possibly because they depend on the support they receive or because they do not have sufficient knowledge to identify all the challenges they face.

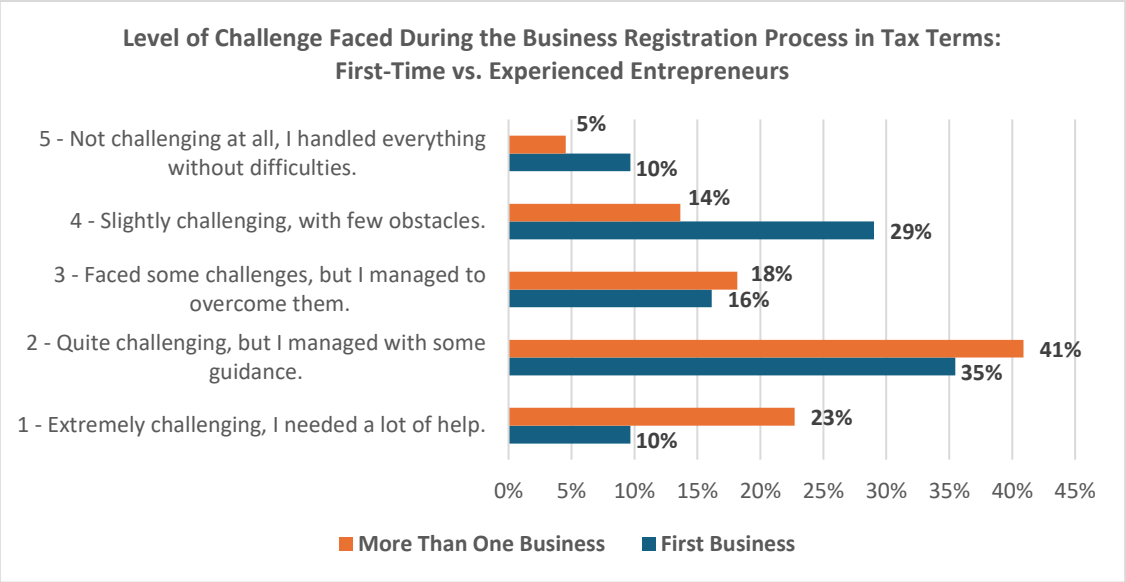


Chart 10 - Level of Challenge Faced During the Business Registration Process in Tax Terms: First-Time vs. Experienced Entrepreneurs

When asked about the relevance of taxation in the start-up process, all entrepreneurs identified it as an important factor, albeit to varying degrees. More than half ranked taxation as one of the main challenges at this stage, while 32% considered it relevant but not the most decisive factor. Only 15% indicated that they did not directly experience this challenge, explaining that these issues were handled by accountants (Chart 11). The fact that all entrepreneurs recognise taxation as an obstacle confirms its central importance in starting a business, regardless of previous experience.

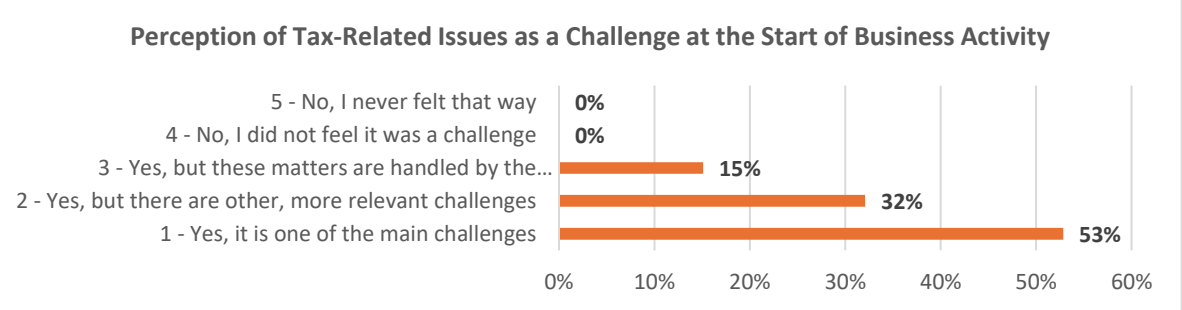


Chart 11 - Perception of Tax-Related Issues as a Challenge at the Start of Business Activity

When analysing specific challenges (Chart 12), it appears that bureaucratic procedures and the necessary documentation are identified as the main obstacles by both groups.

Despite this commonality, there are differences in how challenges are prioritised. Among entrepreneurs in their first business, the main obstacles are: choosing the legal form, bureaucratic procedures, and initial costs and tax burdens. These costs are identified by Damihamedani et al. (2018) as barriers to entry for new companies, being primary difficulties in setting up a business, as indicated by Bilan (2018).

Entrepreneurs with previous experience, on the other hand, attach greater importance to bureaucratic processes and the necessary documentation, as well as to obtaining financial support or incentives. This shows that, for these entrepreneurs, the challenges are more related to issues linked to the growth and sustainability of the company

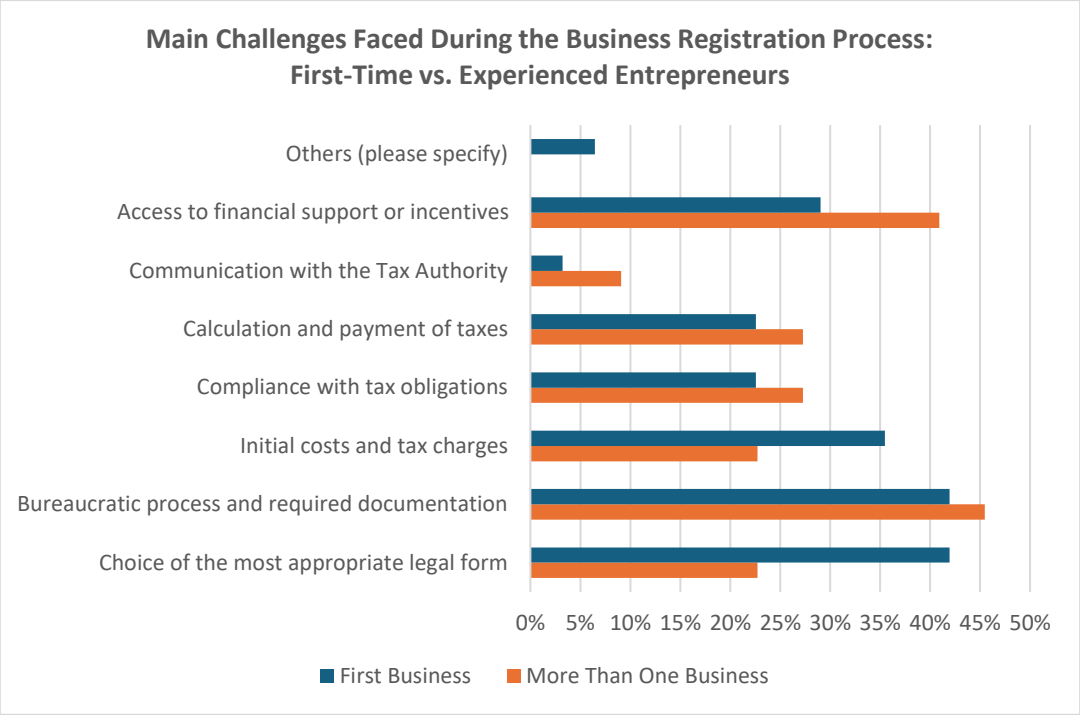


Chart 12 - Main Challenges Faced During the Business Registration Process: First-Time vs. Experienced Entrepreneurs

Overall, the results reveal that the initial phase of starting a business is strongly influenced by a lack of tax literacy. The high dependence on accountants and the need for guidance show that many crucial decisions are made based on external advice. These findings reinforce the importance of training and awareness programmes that promote tax literacy, increasing the autonomy of entrepreneurs and reducing their dependence on third parties in the process of setting up companies.

The third objective of this study is to analyse the level of tax knowledge of the entrepreneurs in the sample, focusing on two key areas: deductible expenses and tax benefits. The aim is to understand not only whether entrepreneurs are familiar with these concepts, but also whether they are able to apply them correctly in the management of their business.

Thus, this objective allowed us to assess the tax literacy of entrepreneurs, identifying possible gaps between theoretical knowledge and effective practice, since both elements are an integral part of tax literacy (De Clercq, 2023; Aprea, 2023). In addition, we seek to understand whether this knowledge has an impact on business performance by analysing the relationship between tax literacy and the ability to effectively manage tax

obligations, as this factor can contribute to the optimisation of business results (Bhalla, Sharma and Kaur, 2022).

Regarding knowledge of deductible expenses (Q17), it is observed that most entrepreneurs have some knowledge (56,6%), although they still have doubts. In contrast, only four entrepreneurs claimed to have in-depth knowledge and be able to maximise deductions, while 17% stated that they were well aware of which expenses could be deducted. On the other hand, about 19% reported having limited or no knowledge in this area.

With regard to the practical application of this knowledge (Q18), the results reveal mixed scenarios. Around 29% of entrepreneurs stated that they deduct all possible expenses, demonstrating their awareness of tax opportunities. Meanwhile, 37% acknowledged that, although they deduct various expenses, they could still optimise the process further. However, 33% admitted to having difficulty understanding all the rules or felt that they may be missing out on benefits (Chart 13).

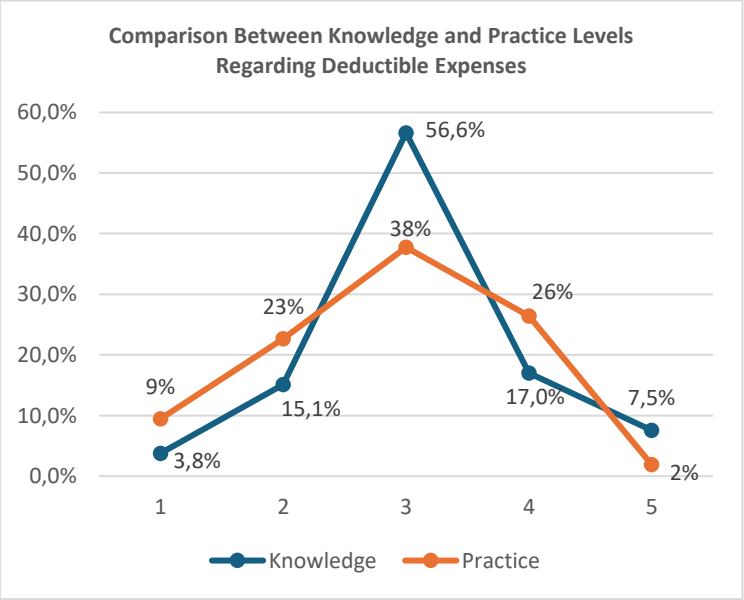


Chart 13 - Comparison Between Knowledge and Practice Levels Regarding Deductible Expenses

These results indicate that, in most cases, knowledge of deductible expenses is not sufficient to ensure efficient tax management (Nichita et al., 2019). Similarly, practical implementation does not keep pace with legal requirements or take advantage of all available opportunities.

In order to better understand this relationship, the two variables (Q17 x Q18) were cross-referenced. Figure 1 shows that 62% of entrepreneurs are in the lower quadrant, corresponding to the lowest levels (1 to 3) in both variables (Table 6). This result indicates that these entrepreneurs, in addition to having limited or partial knowledge, also

demonstrate low practical capacity in applying deductible expenses, highlighting significant gaps in tax literacy.

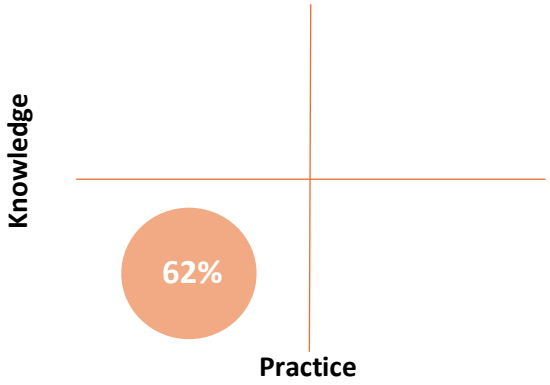


Figure 1 – Entrepreneurs´Positioning Based on Knowledge and Practice Regarding Deductible Expenses

In practice, this situation may expose entrepreneurs to errors in the deduction of expenses, resulting in the application of unnecessary autonomous taxation, increasing the company's tax burden, and compromising its financial management (Ambrus & Borbely, 2024).

Moving on to tax benefits, the results follow the same trend observed in expense deductions, but even more markedly.

Concerning knowledge, the vast majority of entrepreneurs have limited or insufficient levels of knowledge, revealing weaknesses in terms of available tax incentives and support. Only 19% of respondents said they were familiar with or had in-depth knowledge of these mechanisms. In terms of practical application, more than half of entrepreneurs reported being unable to access tax benefits due to a lack of information or doubts about procedures. Only a small minority (13%) demonstrated effective mastery in the use of these benefits (Graph 14).

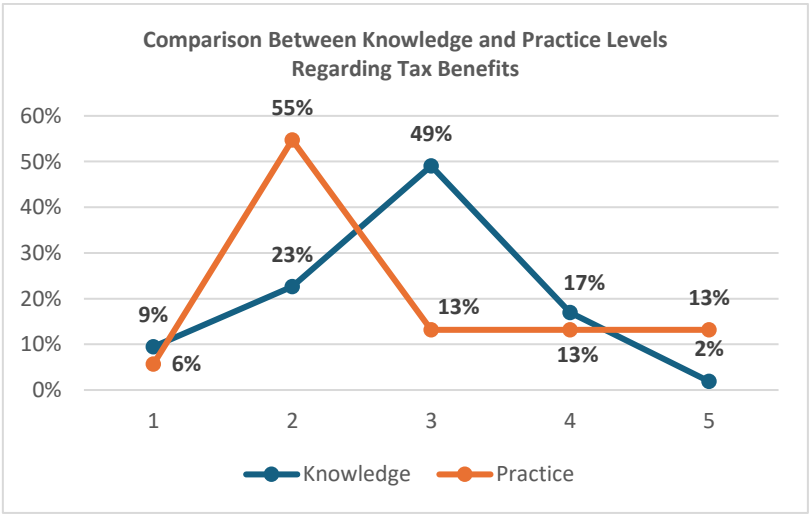


Chart 14 - Comparison Between Knowledge and Practice Levels Regarding Tax Benefits

The cross-analysis between knowledge and practice (Q19 x Q20) confirms this reality: 65% of entrepreneurs are in the lower quadrant (levels 1 to 3), reflecting low and moderate levels in both dimensions. In contrast, only a small portion combines high standards of knowledge and practice (levels 4 and 5) (Figure 2).

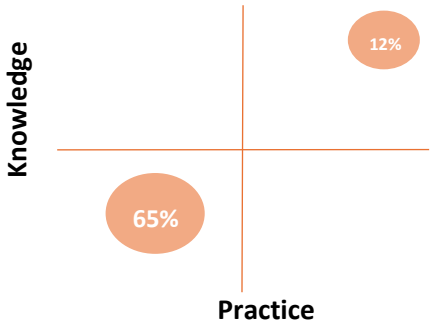


Figure 2 - Entrepreneurs´Positioning Based on Knowledge and Practice Regarding Tax Benefits

These results show that a large part of the sample is at a competitive disadvantage, since it does not use tax incentives and benefits that could reduce costs and support business sustainability. Thus, the gaps in tax literacy are clear, reinforcing the importance of knowing and properly using these mechanisms, which are fundamental to the competitiveness of companies (Augusti & Rahman, 2023; Belle Isle, Freudenberg & Sarker, 2018).

In analysing the impact of tax knowledge on business performance, the results reveal widespread agreement on the relevance of this factor. It is observed that 70% of entrepreneurs consider that tax knowledge has a decisive influence on the performance of their companies, while 28% recognise its importance, but with a moderate impact. These data show that entrepreneurs widely value tax literacy as an essential factor for the management and sustainability of their businesses (Chart 15).

In addition to this overall perception, we analysed how this knowledge translates into practical results. Most entrepreneurs identified tax cost optimisation as the main impact, allowing them to reduce costs and increase profitability. It was also highlighted that tax knowledge contributes to better financial management, playing a strategic role in running the business, and prevents legal problems by ensuring proper compliance with tax obligations (Chart 16). Thus, the results show that entrepreneurs not only recognise the importance of tax knowledge, but also identify the areas of greatest impact, namely: tax efficiency; legal compliance; and strategic decision-making.

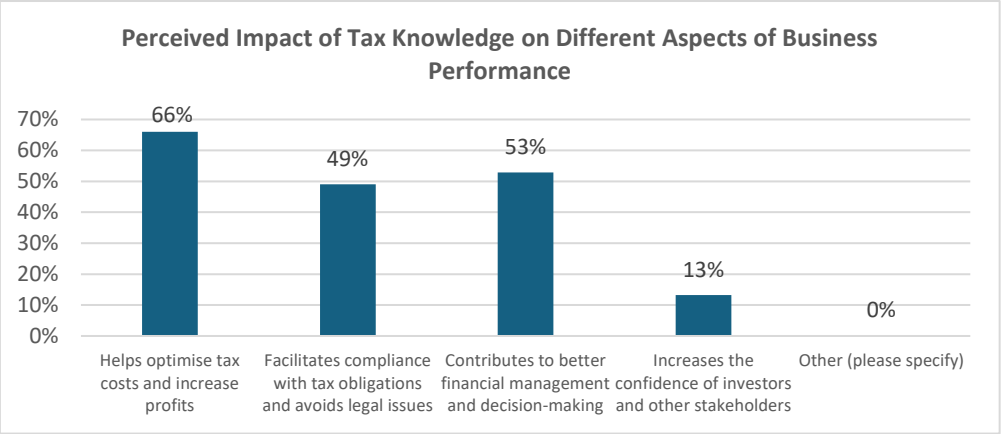


Chart 16 - Perceived Impact of Tax Knowledge on Different Aspects of Business Performance

These findings reinforce the need to strengthen tax literacy, not only as a requirement for legal compliance but also as an essential tool for business competitiveness and sustainability.

The fourth and final objective analyses entrepreneurs' attitudes and perceptions regarding tax compliance, considering both effective compliance with tax obligations and trust in the responsible authorities, and the factors that may influence it. According to Roth (1989), tax compliance refers to taxpayers' intention to comply with the letter and spirit of tax laws and their administration, without resorting to illegal acts. This objective thus allows us to understand the behavioural and contextual elements that shape entrepreneurs' relationship with the tax system, as well as their importance in promoting greater tax compliance.

When analysing the history of entrepreneurs' tax compliance (Q23), it appears that 44% claim to always comply strictly, while 25% indicate that they almost always comply within the deadlines. These results show that most entrepreneurs have high levels of compliance. In contrast, 7.7% report facing challenges in regularly complying with their obligations, and 11.5% report complying only most of the time or sometimes with occasional difficulties (Chart 17).

Regarding the main challenges faced in tax compliance (Q24), 44% of entrepreneurs pointed to the complexity of processes and bureaucracy as the most significant obstacle. Next, 35% mentioned dependence on third parties, such as accountants, to deal with these issues, while 31% highlighted the lack of clear information on tax obligations. Other challenges mentioned include difficulty in understanding deadlines and requirements (23%) and problems related to cash flow and liquidity management at the time of payment (23%) (Chart 18). These factors are in line with the views of Bethlendi and Urbanics (2018), who consider the complexity of the tax system to be a significant barrier, requiring greater administrative simplification.

With regard to trust in tax authorities and government power as factors influencing tax compliance (Q25), 37% consider them very important and 40% recognise that they have some influence. Only a minority sees trust as not very relevant (12%) or without significant impact (10%) (Chart 19). As for how this trust translates into tax compliance (Q26), 38% of entrepreneurs indicated that government tax support or incentives are the main factor encouraging compliance. Other factors mentioned include trust in tax policies (21%), penalties for non-compliance (21%), and good relations with the tax authorities (15%) (Chart 20).

Overall, these results show that, although most entrepreneurs have high levels of tax compliance, structural and informational challenges persist that hinder compliance. In addition, trust in the authorities and government support measures are seen as key factors in promoting tax compliance behaviour, reinforcing the need for public policies that combine efficient enforcement with clear and accessible incentives.

Following this descriptive analysis, it became essential to understand the factors that can directly influence entrepreneurs' behaviour in relation to tax compliance. To this end, three dimensions were explored: knowledge, experience, and trust in the authorities, assessing the impact of each on compliance with tax obligations.

When analysing the relationship between entrepreneurs' level of tax knowledge (Q1) and their history of tax compliance (Q23), a significant discrepancy between these two dimensions is observed. While 45% of entrepreneurs claim to always comply strictly, only 8% rate themselves as having a high level of tax knowledge.

This result shows that the two dimensions do not follow the same pattern. Around 47% have low or intermediate levels of knowledge (1 and 2), and 38% are at the intermediate level (3). In contrast, 70% are at the highest levels of compliance (4 and 5), showing that, in most cases, compliance is ensured regardless of the level of tax literacy (Chart 21).

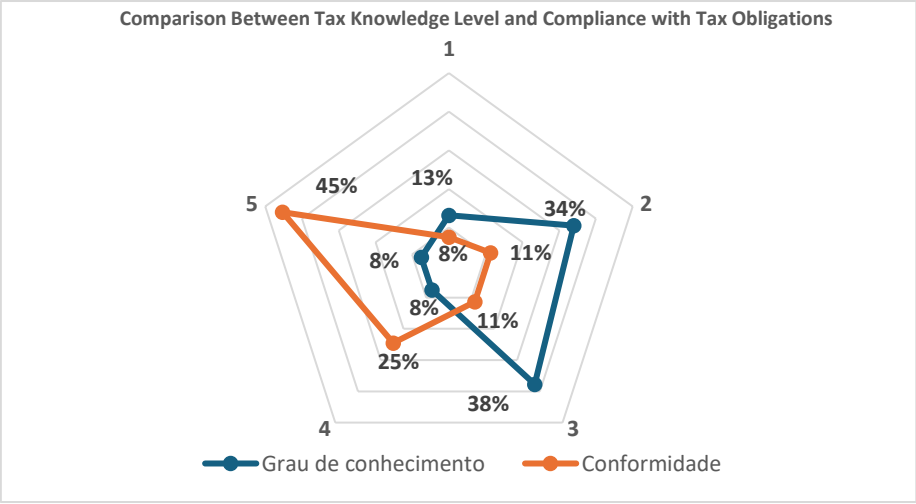


Chart 21 - Comparison Between Tax Knowledge Level and Compliance with Tax Obligations

This suggests a strong presence of external support, particularly from accountants, in the compliance process, in line with Gerger et al. (2020), who highlight the dependence of entrepreneurs with limited knowledge on tax consultants.

Figure 3, which crosses variables Q1 and Q23, reinforces this interpretation by showing that 58% of entrepreneurs combine low or moderate levels of knowledge (2 and 3) with high levels of compliance (4 and 5).

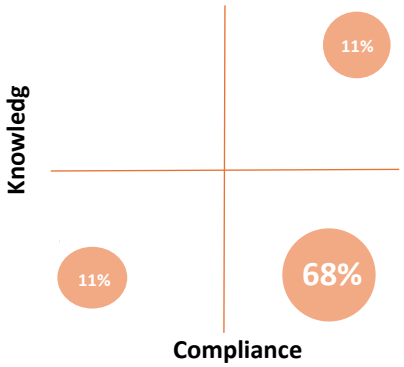


Figure 3 - Entrepreneurs´ Positioning Based on Self-Assessment of Entrepreneurs' Tax Knowledge and Compliance Levels

On the other hand, it can be seen that the highest risk zone, low levels in both variables (1 and 2), represents 11% of the sample, a figure identical to the zone of excellence, which combines high knowledge and consistent compliance (4 and 5). This balance shows that only a minority needs urgent improvements in both knowledge and compliance, while another minority represents good practices to be replicated.

The intersection between the entrepreneurs' previous experience (Q2) and the main challenges faced in tax compliance (Q24) reveals striking differences between the groups analysed (Graph 22). The complexity of tax processes and bureaucracy is unanimously recognised as the main obstacle by both groups, confirming the need for greater administrative simplification, as argued by Bethlendi and Urbanics (2018).

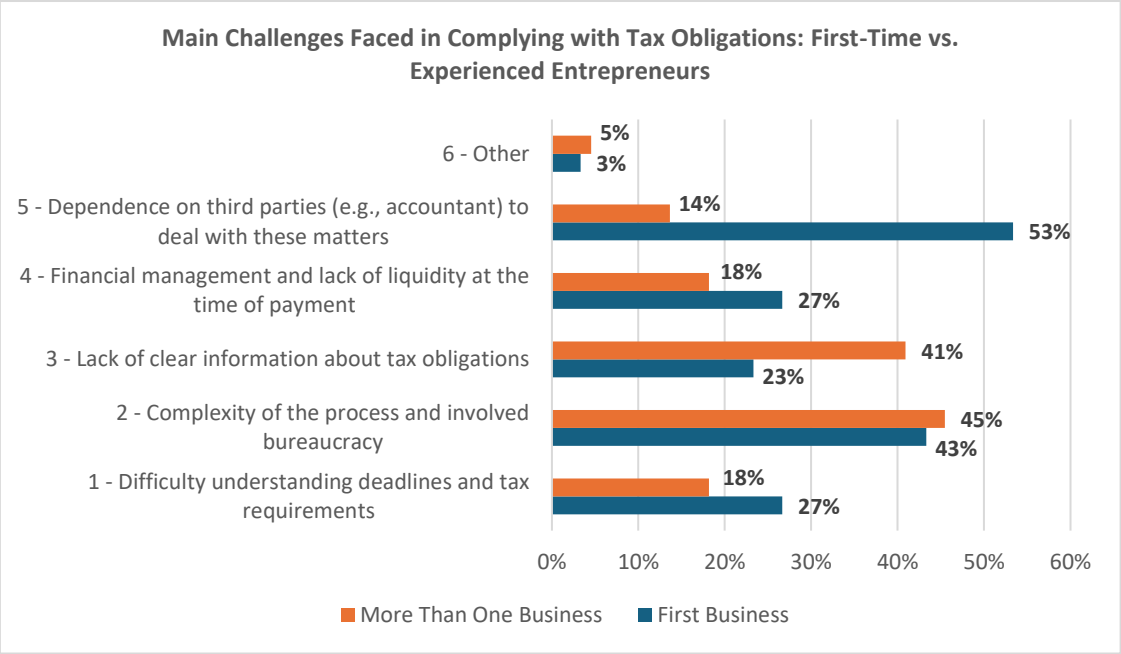


Chart 22 - Main Challenges Faced in Complying with Tax Obligations: First-Time vs. Experienced Entrepreneurs

A detailed analysis shows that first-time entrepreneurs face greater difficulties on several fronts. More than half of this group indicated that they rely heavily on third parties, such as accountants, in contrast to only 14% of more experienced entrepreneurs. In addition, problems related to understanding tax deadlines and requirements, and difficulties related to financial management and liquidity at the time of payment, highlight the initial learning curve and lack of familiarity with tax obligations.

On the other hand, entrepreneurs with previous experience, although they show greater autonomy, continue to face significant obstacles. The lack of clear information on tax obligations is pointed out, showing that, even with accumulated practice, challenges related to the complexity and ineffective communication of tax rules persist.

Thus, the results demonstrate that experience contributes to reducing external dependence, but does not eliminate structural barriers. This reinforces the need for public policies that encourage the training of new entrepreneurs and, at the same time, simplify tax processes, promoting transparency and efficiency for all.

Figure 4, which crosses trust in tax authorities (Q25) with compliance history (Q23), shows a positive association between these variables: as trust increases, so does the proportion of entrepreneurs with high levels of compliance. These results are in line with Agusti and Rahman (2023), who highlight the impact of trust in promoting voluntary compliance.

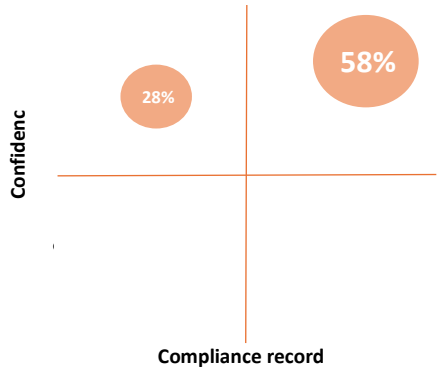


Figure 4 - Cross-Analysis of Tax Compliance History and Perceptions of Trust in Authorities and Government Power

More than half of the sample (58%) is in the upper quadrant, where trust and compliance are at high levels (levels 4 and 5). On the other hand, 28% have low levels of compliance (1 to 3), despite reporting moderate or high trust (3 to 5). This scenario suggests that, even though they trust the tax system, these entrepreneurs face other obstacles, such as bureaucracy, lack of knowledge, or financial difficulties, aspects highlighted by Bethlendi and Urbanics (2018). In contrast, 11% of entrepreneurs reveal that, despite seeing trust as irrelevant, they have maximum levels of compliance (level 5). This profile may indicate that, for this group, compliance stems from other factors, such as penalties or specialised external support.

Overall, trust emerges as a relevant factor in promoting compliance, but it is not sufficient on its own. There are structural barriers that limit the effectiveness of this factor, reinforcing the need for combined interventions that combine clear incentives and adequate enforcement (Reddy, 2023).

The intersection between trust in tax authorities (Q25) and how this influences compliance with obligations (Q26) shows that entrepreneurs who attribute moderate to high trust (levels 3 to 5) mainly highlight government support and tax incentives as a central factor in promoting compliance, representing 37% of the sample (Table 11). At the highest levels of trust, government incentives are complemented by other factors, such as trust in tax policies, good relations with the tax authorities, and, to a lesser extent, penalties for non-compliance, often cited as external stimuli to ensure compliance (Baylon-Gonzales et al., 2023).

Q25 x Q26		Impact Factors on Tax Compliance				
		1 - Confidence in tax policies	2 - Government support or tax incentives	3 - Penalties for non-compliance	4 - A good relationship with tax authorities	5 - Other
Confidence in Tax Authorities and Government Power	1 - I do not know	0%	0%	2%	0%	0%
	2 - No, I do not see a significant impact	0%	2%	4%	2%	2%
	3 - Yes, but in a less relevant way	2%	9%	0%	0%	0%
	4 - Yes, they have some influence	8%	15%	11%	4%	2%
	5 - Yes, they are very important factors	13%	11%	4%	9%	0%

Table 11 - Cross-Analysis of Confidence in Tax Authorities and Government Power with Impact Factors on Tax Compliance (Heat Map)

Among entrepreneurs who see trust as less relevant, the influence of these factors is considerably lower, showing that trust and incentives work together to promote compliance.

The analysis of the data allowed us to identify clear patterns in the behaviour of entrepreneurs in the start-up phase, ranging from the opening of the company to their tax practices and attitudes. These results highlight the importance of promoting greater tax literacy, simplifying processes, and strengthening trust in the authorities, creating an environment that favours voluntary tax compliance. These points will be explored in more depth in the discussion in the next chapter, relating them to the research objectives and questions.

5. Conclusion

5.1 Conclusion

The main objective of this study was to assess the challenges of tax literacy among entrepreneurs incubated in Portugal, seeking to identify the challenges faced in the initial phase of their businesses, understand how tax knowledge translates into practice, and analyse attitudes related to compliance. Data analysis identified patterns that highlight the relationship between tax literacy, dependence on external support, and business performance.

The results reveal a reality marked by contrasts. On average, entrepreneurs have an adequate level of tax literacy, with a score of 3.08 on a scale of 1 to 5. However, approximately 33% have limited levels, confirming the existence of significant gaps, while only 10% reach advanced levels. This distribution shows that a considerable proportion of entrepreneurs start their business with insufficient tax skills, which is reflected in a strong dependence on external support. This was corroborated by their own self-assessment, in which more than half stated that they had limited or very limited knowledge.

This limitation is particularly evident in the process of starting a business. Choosing the legal form presented a challenge for most entrepreneurs, with 74% seeking advice from accountants to make this decision. Among entrepreneurs with previous experience, the influence of investors was also noted, indicating that experience provides greater awareness of strategic factors that shape the business structure. In general, the initial phase is perceived as bureaucratically complex, with high documentary requirements that hinder the business creation process.

When analysing the differences between profiles, it was observed that first-time entrepreneurs focus mainly on issues related to costs and choice of legal form, while experienced entrepreneurs highlight bureaucracy and obtaining support as the biggest challenges. These results reinforce the perception of taxation as one of the main obstacles to business creation, highlighting the need for administrative simplification and specific training.

Although they recognise the importance of tax literacy, the data show a significant gap between theoretical knowledge and practical application, especially concerning deductible expenses and tax benefits. Although 57% of respondents claim to have some knowledge of deductions, only a minority apply this knowledge effectively. Cross-referencing the variables revealed that more than 60% combine low knowledge with low practical ability, a situation that can result in deduction errors and an unnecessary increase in the tax burden. In terms of tax benefits, the weaknesses are even more

evident: only 19% claim to be familiar with the mechanisms available, and only 13% use them appropriately. This discrepancy shows that existing tax incentives are underutilised, representing a loss of opportunities for cost optimisation and strengthening competitiveness.

This scenario puts many entrepreneurs at a competitive disadvantage, especially at the beginning of their business, as they lose support that could strengthen the sustainability of their company. Even so, 70% of participants recognise that tax knowledge has a decisive influence on business performance, pointing to cost optimisation, legal compliance and improved financial management as the main positive impacts.

As for attitudes towards tax compliance, the results indicate high levels of compliance: 70% of entrepreneurs said they always or almost always comply with their tax obligations. However, this compliance is mainly the result of the intervention of accountants and external factors, rather than consolidated intrinsic literacy.

Among the main obstacles to compliance are the complexity of processes and bureaucracy (44%), dependence on third parties (35%) and lack of clear information (31%). These barriers reveal that the tax system remains structurally complex, requiring additional efforts on the part of entrepreneurs to achieve compliance. Trust in the tax authorities emerges as a factor that favours compliance, but it is not sufficient on its own to ensure consistent practices.

In summary, it can be concluded that incubated entrepreneurs recognise the importance of tax literacy, but have weaknesses in both their knowledge and its practical application. Dependence on external support, excessive bureaucracy and a lack of accessible information limit the autonomy of these entrepreneurs and restrict their ability to make strategic decisions independently. Although tax compliance is high, it relies mainly on external technical support, which can weaken companies in the medium and long term.

This reinforces the need for tax literacy programmes, as well as public policies aimed at administrative simplification and improving communication of tax obligations. These measures are essential to promote the autonomy, efficiency and sustainability of start-ups incubated in Portugal, contributing to a more competitive and resilient entrepreneurial ecosystem.

5.2 Implications

This study has important implications for entrepreneurs and for the authorities responsible for policies affecting entrepreneurs.

For entrepreneurs, it is important to promote tax training programmes, including workshops and practical materials that explain basic concepts related to starting a business and the respective tax obligations they need to be aware of. These programmes should aim to support entrepreneurs in understanding initial tax processes, helping them to better manage their responsibilities and reduce their exclusive dependence on external accountants and consultants.

For policymakers, it is essential to simplify administrative processes and ensure greater clarity and accessibility of information for entrepreneurs. It is also important to strengthen and create new incentives for technology-based companies with a higher risk of failure, to support their consolidation in the market. In addition, integrating tax literacy into entrepreneurship programmes can be an effective tool for combating misinformation and reducing the complexity of the tax system, promoting a more favourable environment for business development.

5.3 Limitations and future research

Although it offers relevant contributions, this research has some limitations that should be considered when interpreting the results.

Firstly, the size and control of the sample are significant limitations. The study focused exclusively on incubated entrepreneurs, with contact made through the incubators themselves. This method did not allow for full control of the number of responses, nor did it guarantee that the questionnaire was distributed uniformly by all incubators, which may have influenced the response rate and, consequently, the representativeness of the data obtained.

With regard to future research, there are several opportunities to explore this topic in greater depth. One relevant avenue would be to analyse specific taxes, identifying in detail the knowledge gaps associated with each type of tax. This approach would allow for a more granular understanding of the challenges faced by entrepreneurs and contribute in a more targeted way to strengthening the entrepreneurial ecosystem.

Another interesting line of research would be the integration of objective business performance indicators. Although this study analysed entrepreneurs' perceptions of the impact of tax literacy on business performance, future research could use more robust measurement mechanisms, cross-referencing levels of tax literacy with actual financial data. This methodology would allow for objective validation of the relationship between tax literacy, efficient resource management, and business sustainability.

5.4 Final Considerations

Overall, this study shows that tax literacy is a determining factor for entrepreneurs' autonomy and competitiveness, especially in the early stages of business. However, the current reality shows that many entrepreneurs remain dependent on external support, not only for convenience, but out of necessity imposed by the complexity of the tax system.

Thus, promoting tax literacy should not be seen as an individual responsibility of entrepreneurs alone, but rather as a collective goal involving incubators, government authorities, and policymakers.

The simplification of processes, continuous training and the creation of effective incentives are fundamental steps towards building a more sustainable, transparent and competitive ecosystem, where entrepreneurs can manage their businesses with greater autonomy and confidence, contributing to the strengthening of the economy and the balanced growth of the business fabric.

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7. Appendix

7.1 Appendix of Tables

Objective	Research Question	Type of Question		Question Number	Question
1	Understand the level of tax literacy of entrepreneurs	Self-assessment at the beginning of the questionnaire		1	Before starting the questionnaire, how would you rate your level of tax knowledge?
		Level = 5 questions (Likert Scale of 1 to 5)			The result is in objectives 3 and 4
		Self-assessment of entrepreneurs who have had more than one business		10	Your first business must have been a memorable experience. Thinking back, how would you rate your tax knowledge at the time?
2	How was the process of opening your company?	Number of businesses	Section 2	2	Is this your first business?
			If you answer "NO" Section 2 - Answer in Section 5	9	How many businesses did you have before this one?
		Legal form	If you answer "YES" Section 2 - Answer in Section 3	3	On a scale of 1 to 5, how would you describe your level of knowledge when deciding on the legal form of your business?
				4	From 1 to 5, how much influence did your accountant have on your legal form decision?
				5	Do you agree with the following sentence: "Can new investors/venture capitalists influence the decision on the legal form of the company in investment rounds?"
			If you answer "NO" Section 2 - Answer in Section 5	13	
		Start of business	If you answer "YES", Section 2 - Answer in Section 4	6	At the start of an entrepreneur's activity, do you agree that one of the challenges can be tax-related issues?
				7	From 1 to 5, how challenging was the process of opening your company in tax terms?
				8	What was or were the main challenge(s) in starting your business?
			If tou answer "NO" Section 2 - Answer in Section 5	11	From 1 to 5, how challenging was the process of starting your first business in tax terms?
				12	What was or were the main challenge(s) in starting your business?
				14	At the start of an entrepreneur's activity, do you agree that one of the challenges can be tax-related issues?
3	How well do entrepreneurs at the start of their business know about taxation?	Influence of experience on tax knowledge	If you answer "NO" Section 2 - Answer in Section 5	15	How has your experience in previous businesses contributed to your tax knowledge?
				16	What are the main tax issues that your experience in previous businesses has helped you understand better?
		Deductible Expenses	Section 6 - For everyone	17	How would you rate, from 1 to 5, your level of knowledge about deductible expenses in your business?
				18	In practice, how do you deal with deductible expenses in your business?
		Tax Benefits		19	How would you rate, from 1 to 5, your level of knowledge about tax benefits?
				20	And in practice, have you used any tax benefits (e.g. SEFIDE)?
		Influence of knowledge on business performance		21	Do you agree that tax knowledge can significantly influence business performance?
				22	How do you think tax knowledge can influence business performance?
4	What are the attitudes towards complying with tax obligations?	Complaince with obligations	Section 7 - For everyone	23	How would you rate your record, from 1 to 5, in terms of complying with your tax obligations?
				24	What were the main challenges you faced in complying with your tax obligations?
		Power and trust in the authorities		25	Do you agree with the following sentence: "Trust in the tax authorities and the power of the government can be important factors for tax compliance?"
				26	How do you think this influences compliance with tax obligations?

Table 1 - Research Objectives and Questionnaire Questions

Respondent	Q.17	Q.18	Q.19	Q.20	Q.23	Mean	Result
1	4	4	3	4	4	**3,80**	**Adequate**
2	3	3	3	2	3	**2,80**	**Limited**
3	3	4	2	4	2	**3,00**	**Adequate**
4	3	2	1	2	5	**2,60**	**Limited**
5	3	2	3	1	5	**2,80**	**Limited**
6	3	2	3	2	5	**3,00**	**Adequate**
7	2	1	2	2	4	**2,20**	**Limited**
8	3	2	2	2	4	**2,60**	**Limited**
9	3	1	3	2	4	**2,60**	**Limited**
10	3	1	2	2	4	**2,40**	**Limited**
11	3	2	3	3	1	**2,40**	**Limited**
12	3	2	3	2	5	**3,00**	**Adequate**
13	4	3	2	2	1	**2,40**	**Limited**
14	3	3	3	4	5	**3,60**	**Adequate**
15	1	1	1	1	5	**1,80**	**Very Limited**
16	1	1	1	2	2	**1,40**	**Very Limited**
17	3	2	3	3	4	**3,00**	**Adequate**
18	4	3	3	2	3	**3,00**	**Adequate**
19	4	5	4	5	4	**4,40**	**Advanced**
20	5	4	4	2	4	**3,80**	**Adequate**
21	2	3	3	2	5	**3,00**	**Adequate**
22	2	4	2	2	5	**3,00**	**Adequate**
23	3	4	3	2	5	**3,40**	**Adequate**
24	3	3	4	5	1	**3,20**	**Adequate**
25	3	2	3	3	5	**3,20**	**Adequate**
26	3	4	4	2	1	**2,80**	**Limited**
27	3	3	3	5	5	**3,80**	**Adequate**
28	3	3	2	2	5	**3,00**	**Adequate**
29	3	3	4	1	5	**3,20**	**Adequate**
30	4	3	3	3	4	**3,40**	**Adequate**
31	4	3	4	5	4	**4,00**	**Advanced**
32	3	3	3	4	5	**3,60**	**Adequate**
33	3	3	3	4	5	**3,60**	**Adequate**
34	3	4	3	3	5	**3,60**	**Adequate**
35	3	3	3	2	5	**3,20**	**Adequate**
36	4	4	4	3	2	**3,40**	**Adequate**
37	3	3	3	4	4	**3,40**	**Adequate**
38	3	2	2	2	2	**2,20**	**Limited**
39	4	4	3	2	4	**3,40**	**Adequate**
40	2	2	1	2	3	**2,00**	**Limited**
41	2	2	2	2	3	**2,20**	**Limited**
42	2	3	1	2	2	**2,00**	**Limited**
43	3	3	2	3	2	**2,60**	**Limited**
44	5	4	5	5	5	**4,80**	**Highly Advanced**
45	2	4	3	2	3	**2,80**	**Limited**
46	3	3	3	4	4	**3,40**	**Adequate**
47	3	3	2	2	5	**3,00**	**Adequate**
48	4	4	3	2	5	**3,60**	**Adequate**
49	2	4	2	2	3	**2,60**	**Limited**
50	3	2	3	2	5	**3,00**	**Adequate**
51	5	4	4	5	5	**4,60**	**Highly Advanced**
52	5	4	4	5	5	**4,60**	**Highly Advanced**
53	3	3	3	2	5	**3,20**	**Adequate**
						3,08	**Adequate**

Table 2 - Results of Entrepreneurs' Tax Literacy Levels

Sample Descriptive Statistics	Values
N (Sample Size)	53
Mean	2,28
Median	2
Mode	2
Min	1
Max	5
Std. Dev. (Standard Deviation)	1,0447

Table 3 – Sample Descriptive Statistics of Self-Assessment of Entrepreneurs' Tax Knowledge

Relative Frequency of Knowledge Levels	Percentage
Very Limited	25%
Limited	38%
Adequate	26%
Advanced	8%
Highly Advanced	4%

Table 4 - Relative Frequency of Self-Assessment of Entrepreneurs' Tax Knowledge

Q17 X Q18		Practice				
		1	2	3	4	5
Knowledge	1	4%	0%	0%	0%	0%
	2	2%	4%	4%	6%	0%
	3	4%	19%	25%	8%	0%
	4	0%	0%	8%	8%	2%
	5	0%	0%	0%	8%	0%

Table 6 - Entrepreneurs´Positioning Based on Knowledge and Practice Regarding Deductible Expenses (Heat Map)

Q19 X Q20		Practice				
		1	2	3	4	5
Knowledge	1	2%	8%	0%	0%	0%
	2	0%	19%	2%	2%	0%
	3	2%	23%	10%	12%	2%
	4	2%	4%	2%	0%	10%
	5	0%	0%	0%	0%	2%

Table 7 - Entrepreneurs´Positioning Based on Knowledge and Practice Regarding Tax Benefits (Heat Map)

Q2 X Q23		Compliance				
		1	2	3	4	5
Knowledge	1	0,0%	3,8%	7,5%	0,0%	1,9%
	2	3,8%	3,8%	0,0%	9,4%	17,0%
	3	3,8%	1,9%	1,9%	11,3%	18,9%
	4	0,0%	1,9%	0,0%	1,9%	3,8%
	5	0,0%	0,0%	1,9%	1,9%	3,8%

Table 8 - Cross-Analysis of Self-Assessment of Entrepreneurs' Tax Knowledge and Compliance Levels (Heat Map)

Q.23 x Q.25		Compliance record				
		1	2	3	4	5
Confidence	1	2%	0%	0%	0%	0%
	2	0%	0%	0%	0%	9%
	3	4%	2%	4%	0%	2%
	4	0%	6%	4%	13%	17%
	5	2%	4%	4%	11%	17%

Table 9 - Cross-Analysis of Confidence in Tax Authorities and Government Power with Compliance Record (Heat Map)

7.2 Appendix of Charts

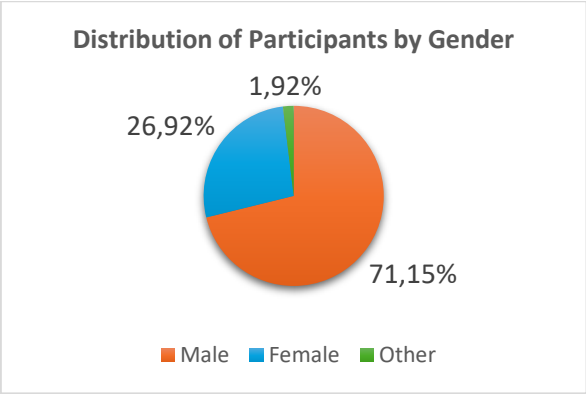


Chart 1 - Distribution of Participants by Gender

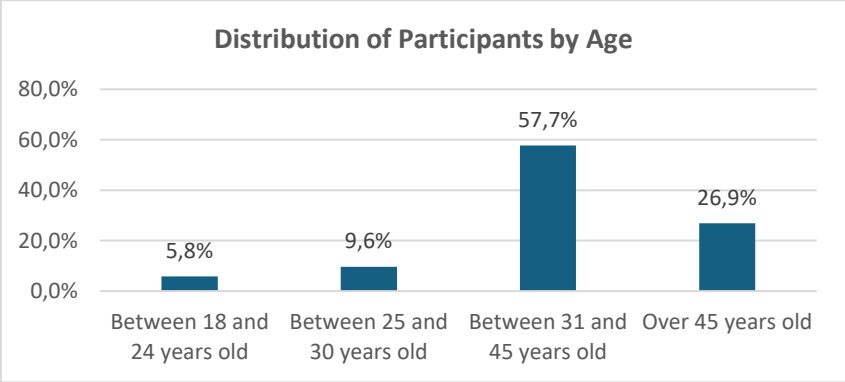


Chart 2 - Distribution of Participants by Age

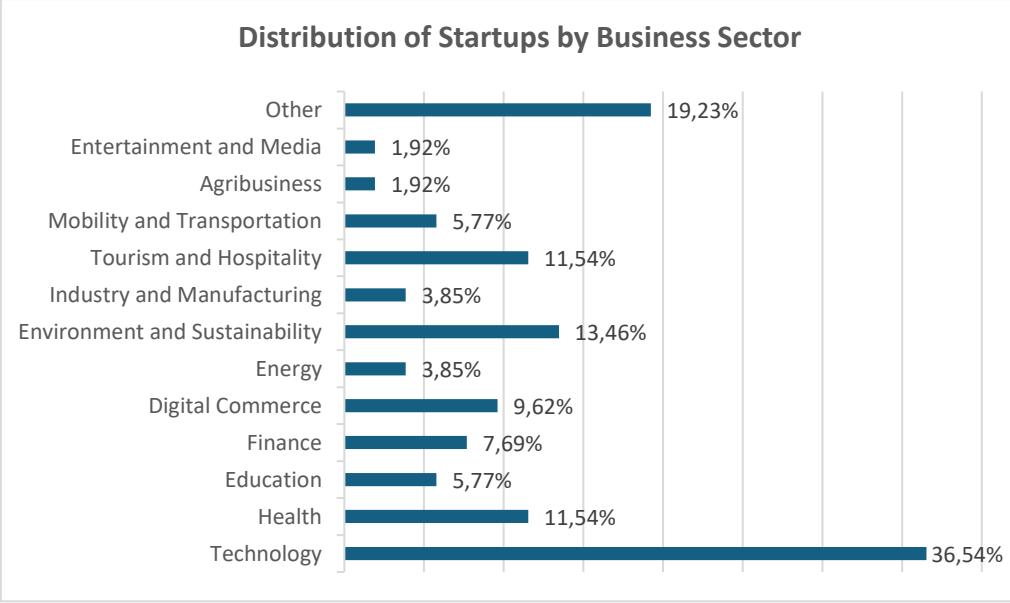


Chart 3 - Distribution of Startups by Business Sector

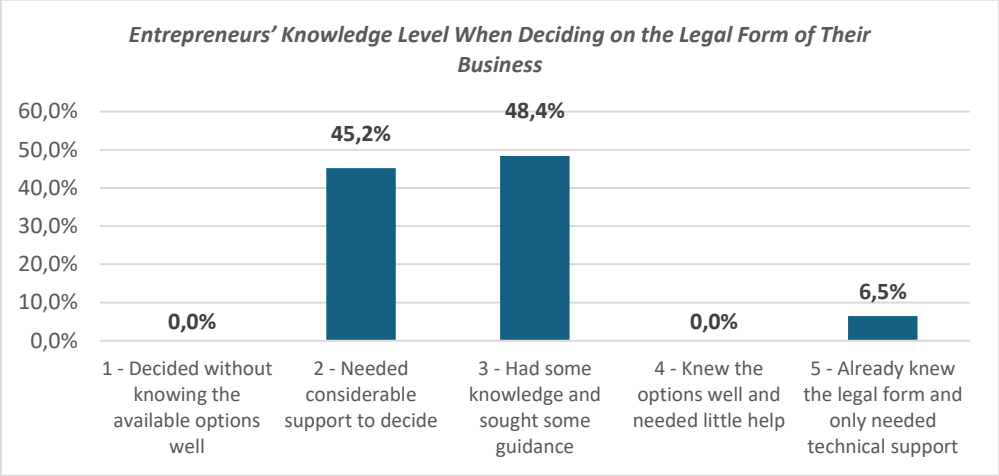


Chart 6 – Entrepreneurs' Knowledge Level When Deciding on the Legal Form of Their Business

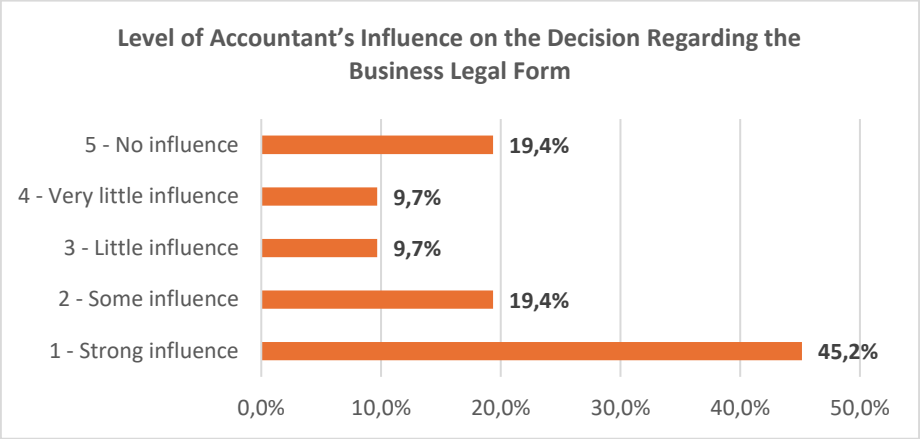


Chart 7 – Level of Accountant's Influence on the Decision Regarding the Business Legal Form

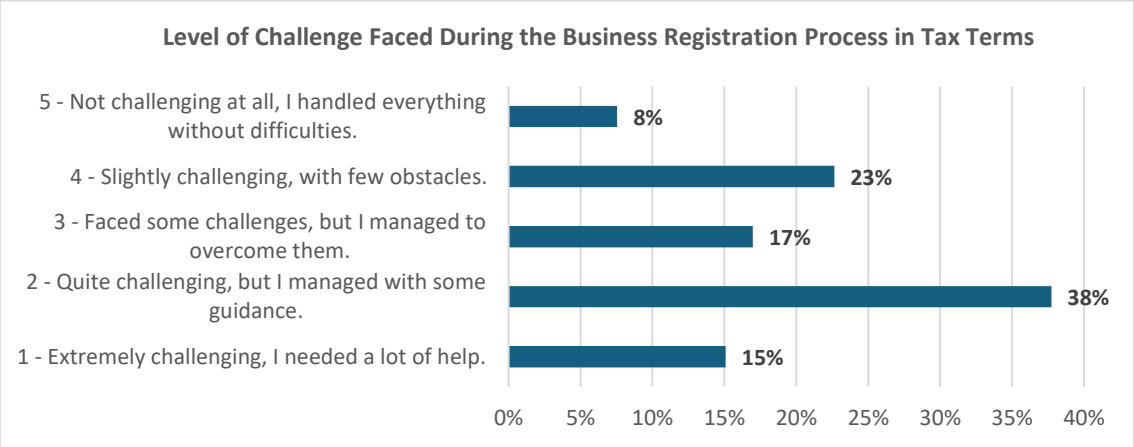


Chart 9 - Level of Challenge Faced During the Business Registration Process in Tax Terms

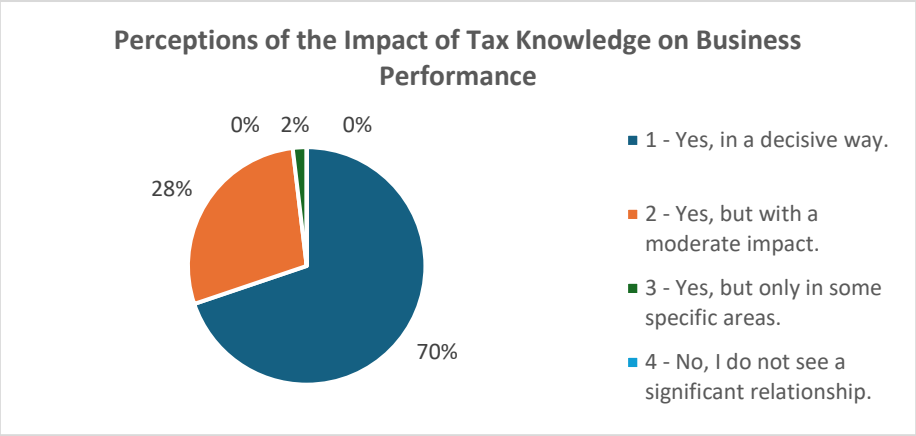


Chart 15 - Perceptions of the Impact of Tax Knowledge on Business Performance

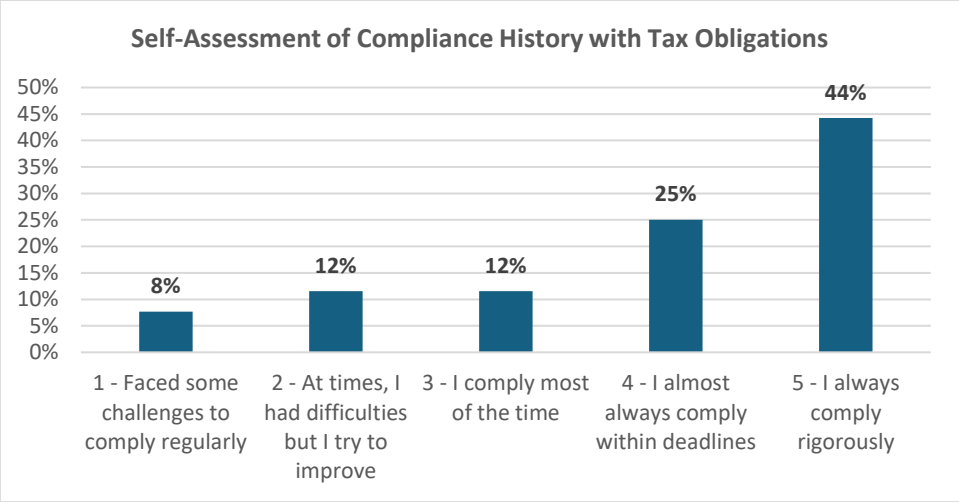


Chart 17 - Self-Assessment of Compliance History with Tax Obligations

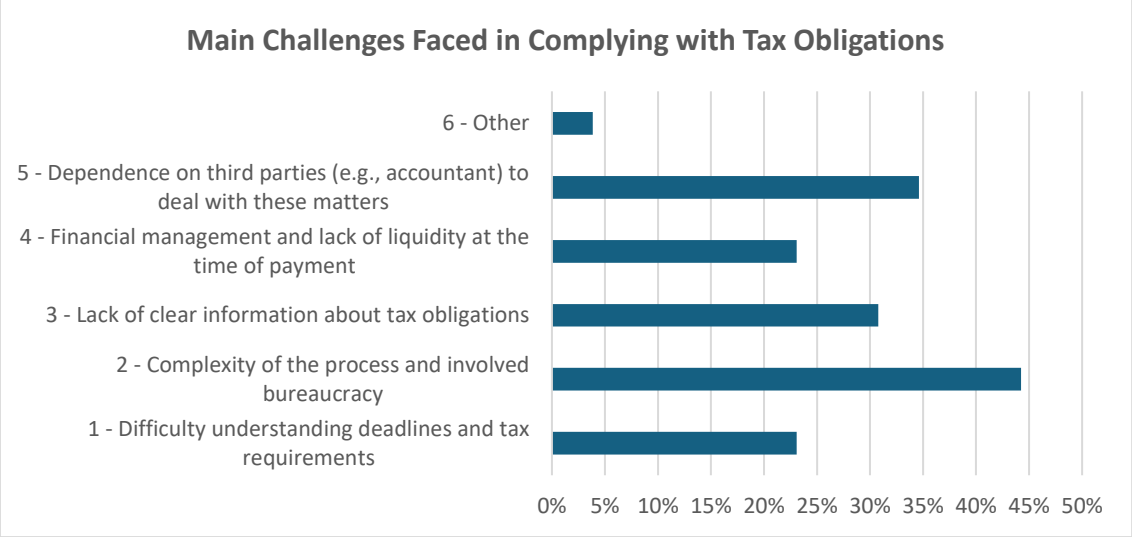


Chart 18 - Main Challenges Faced in Complying with Tax Obligations

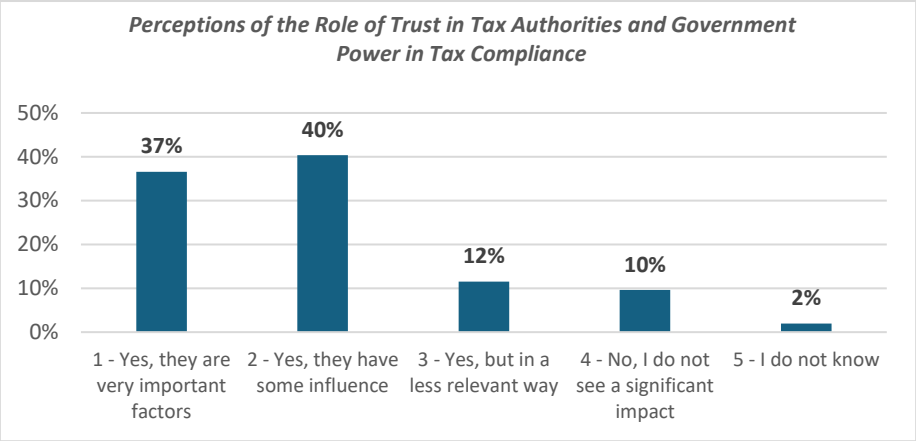


Chart 29 - Perceptions of the Role of Trust in Tax Authorities and Government Power in Tax Compliance

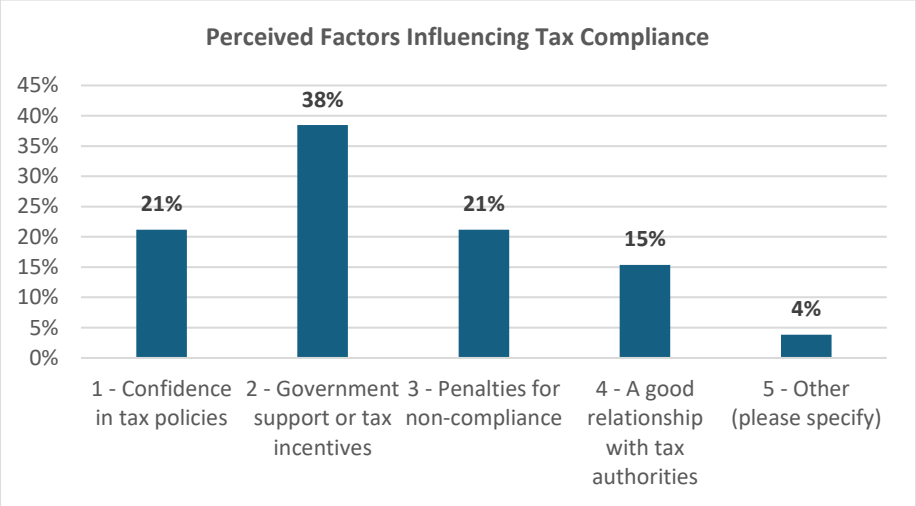


Chart 40 - Perceived Factors Influencing Tax Compliance