MODEL FOR FORECASTING TAX COMPLIANCE BEHAVIORS FOR SMALL AND MEDIUM ENTERPRISES OWNERS BASED ON OWNING TAX KNOWLEDGE

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ABSTRACT

Objective: This article aims to develop a conceptual framework of tax knowledge that can help analyze and discuss how it affects tax compliance and proposes a predictive model to better understand taxpayer behavior and compliance levels by seeking to assess the importance of different types of tax knowledge.

Method: This study follows the interpretive paradigm and utilizes a qualitative approach to gain a deeper understanding of individuals' perceptions and attitudes in different contexts. The research data was gathered by reviewing pertinent literature and data from previous studies found in academic databases like Scopus, Taylor and Francis, and Emerald. Keywords such as “taxpayer knowledge” or “tax knowledge” and related concepts were used in the search. The systematic literature review concentrated on tax legal, procedural, and general knowledge to formulate a proposed tax literacy framework.

Results: The proposed tax knowledge framework consists of three components: taxpayers’ knowledge level, awareness, and attitude toward taxes. These three components correspond to three types of knowledge: general tax knowledge, tax law knowledge, and tax procedure knowledge. This framework can be useful in (i) assessing the significance of each type of knowledge, which, when combined with cognitive ability, can signify a taxpayer’s intention to follow tax regulations and (ii) explaining taxpayer behavior, which can indicate compliance or non-compliance based on their attitudes towards taxes and different types of knowledge. Moreover, this framework can be utilized as a basis for developing scales that measure tax knowledge and compliance behavior. This can help state agencies create policies that can reduce tax violations and improve compliance overall.

Conclusions: According to the analysis, tax knowledge is an important factor in determining the tax compliance behavior of SMEs, but it is not the only factor. The model suggests that there are two key aspects to consider. Firstly, tax compliance is influenced by the level of understanding, awareness, and attitudes. Secondly, positive attitudes are more crucial than tax awareness when it comes to taxpayers' ability to comply with tax regulations, while negative attitudes are more influential than tax knowledge in terms of taxpayers' likelihood to engage in non-compliance.

Keywords: tax compliance, tax law, legal knowledge, procedural knowledge, tax authority, tax knowledge, taxpayer.
RESUMO

Objetivo: Este artigo visa desenvolver um quadro conceitual de conhecimento fiscal que possa ajudar a analisar e discutir como isso afeta o cumprimento fiscal e propõe um modelo preditivo para entender melhor o comportamento do contribuinte e os níveis de conformidade, buscando avaliar a importância de diferentes tipos de conhecimento fiscal.

Método: Este estudo segue o paradigma interpretativo e utiliza uma abordagem qualitativa para obter uma compreensão mais profunda das percepções e atitudes dos indivíduos em diferentes contextos. Os dados da pesquisa foram coletados por meio da revisão de literatura pertinente e dados de estudos anteriores encontrados em bancos de dados acadêmicos como Scopus, Taylor e Francis e Emerald. Palavras-chave como “conhecimento do contribuinte” e conceitos relacionados foram utilizados na pesquisa. A revisão sistemática da literatura concentrou-se no conhecimento jurídico, processual e geral fiscal para formular uma proposta de estrutura de alfabetização fiscal.

Resultados: A estrutura de conhecimento fiscal proposta consiste em três componentes: nível de conhecimento dos contribuintes, consciência e atitude em relação aos impostos. Estes três componentes correspondem a três tipos de conhecimento: conhecimento geral do imposto, conhecimento do direito fiscal e conhecimento do procedimento fiscal. Este quadro pode ser útil para (i) avaliar a importância de cada tipo de conhecimento, o que, quando combinado com a capacidade cognitiva, pode significar a intenção de um contribuinte seguir a regulamentação fiscal e (ii) explicar o comportamento do contribuinte, o que pode indicar conformidade ou não conformidade com base nas suas atitudes em relação aos impostos e diferentes tipos de conhecimento. Além disso, este quadro pode ser utilizado como base para o desenvolvimento de escalas que medem o conhecimento fiscal e o comportamento de conformidade. Isso pode ajudar as agências estaduais a criar políticas que podem reduzir as violações de impostos e melhorar a conformidade geral.

Conclusões: De acordo com a análise, o conhecimento fiscal é um fator importante para determinar o comportamento de cumprimento das obrigações fiscais das PME, mas não é o único fator. O modelo sugere que há dois aspectos principais a serem considerados. Em primeiro lugar, o cumprimento das obrigações fiscais é influenciado pelo nível de compreensão, consciência e atitudes. Em segundo lugar, as atitudes positivas são mais cruciais do que a consciência fiscal quando se trata da capacidade dos contribuintes para cumprir a regulamentação fiscal, ao passo que as atitudes negativas são mais influentes do que o conhecimento fiscal em termos da probabilidade dos contribuintes de se envolverem em incumprimento.

Palavras-chave: cumprimento de impostos, direito tributário, conhecimento jurídico, conhecimento processual, autoridade fiscal, conhecimento tributário, contribuinte.
INTRODUCTION

Tax non-compliance is a reality that cannot be entirely eradicated, as noted by Newman et al. (2018). However, tolerating such non-compliance can have adverse effects on the stability of national fiscal policies, especially when it comes to hindering the long-term construction of tax bases, as stated by Kastlunger et al. (2013). Developing countries like Vietnam often require more resources to invest in their economies than developed countries (Thuy & Tam, 2023) and therefore, their tax compliance requirements are generally higher. Small and medium enterprises (SMEs) in Vietnam are the primary sources of revenue, accounting for approximately 98% of enterprises, 94% of investment capital, 40% of GDP, over 20% of annual exports, and contributing 45% of annual state budget revenues, according to Trinh & Thanh (2017). However, tax avoidance and non-compliance are common among SMEs. A study conducted by Pham et al. (2020) in Vietnam estimated that SMEs lost about 10,000 billion dongs in taxes, which is equivalent to roughly 4.6% of the total annual corporate income tax. Moreover, data published by the State Audit of Vietnam reveals that out of every 100 SMEs selected for tax audits, around 90 have violated tax laws and must pay additional taxes. State management measures based on deterrence theory, as proposed by Allingham & Sandmo (1972), have been put forth to prevent revenue loss, tax fraud, and tax base erosion. However, these measures, coupled with training solutions aimed at improving tax knowledge, understanding, and patriotism, have not been effective in practice. The situation is further complicated by the fact that large tech corporations such as Google and Facebook, which make high profits, are the lowest taxpayers in host countries, while many SMEs engaged in e-commerce fail to fulfill their tax obligations.

Research shows that knowledge of taxes is crucial for taxpayers' compliance with tax regulations, whether they are employees, households, or business owners. According to the “tax knowledge” theory, tax knowledge influences taxpayers' intentions and compliance behavior, especially in cases where taxpayers are responsible for self-declaration and payment of taxes (Bornman & Ramutumbu, 2019). However, the level of tax knowledge among SMEs in developing countries is often inadequate, leading to non-compliance (Newman et al., 2018). SME owners may be particularly affected by tax knowledge, as they have less interaction with tax authorities than other groups (Kamleitner et al., 2012). However, some studies have shown that having knowledge about taxes may not necessarily lead to better compliance behavior and could even have
a negative impact (Harris, 2013; Bird, 2013; Fauziati et al., 2016). There are three reasons for this situation; one is the lack of a suitable theoretical model explaining taxpayer motivation, including both economic and social aspects (Alm, 2019); differences in tax jurisdiction between countries, regions, or types of businesses, e.g., tax incentives (Newman et al., 2018) and the measurement of the concept of tax knowledge is inconsistent across studies due to the lack of a common conceptual framework (Bornman & Ramutumbu, 2019).

The purpose of this study is two-fold. Firstly, it aims to develop a framework for understanding “tax knowledge” in order to determine tax compliance behavior among SME taxpayers. Secondly, it seeks to assess the importance of different types of tax knowledge in influencing tax compliance. To achieve these goals, the study employs a tax knowledge classification approach to identify gaps in knowledge and their impact on compliance behavior. It also incorporates aspects of knowledge acquisition (perception) and application (attitude) into the framework to explain why taxpayers with similar knowledge and qualifications may exhibit different compliance behaviors. The study proposes a predictive model to better understand taxpayer behavior and compliance levels. It also provides an index toolkit that can be used in quantitative studies to evaluate the relevance and usefulness of each type of knowledge in empirical research.

2 REVIEW OF LITERATURE

The definition of “tax knowledge” varies depending on the context and there is no universal definition provided by tax compliance theory. Fauziati et al. (2016) suggest that tax knowledge refers to an understanding of essential tax policy concepts implemented within a country. Different studies interpret tax knowledge as a “level of understanding” (Fauziati et al., 2016; Taing & Chang, 2021), “level of awareness or consciousness” (Hantono, 2021, p.3), or “attitude-sensitivity” (Oladipupo & Obazee, 2016, p.2) of taxpayers towards tax legislation.

Harris (2013) divides the level of tax knowledge into two aspects - knowledge obtained through formal or familiar education and knowledge specifically directed at potential opportunities to evade tax. Bird (2013) and Bornman & Ramutumbu (2019) classify tax knowledge into three components: general tax knowledge, tax law knowledge, and procedural (technical) knowledge. Newman et al. (2018) in a review of related studies on tax knowledge for SMEs, identify four main groups of factors affecting
tax knowledge: (i) level of tax training, (ii) complexity of the tax system, (iii) understanding of the tax declaration and payment process, and (iv) awareness of tax system, perception of tax non-compliance, and tax authorities. The level of tax awareness is that taxpayers fully comprehend why they need to pay taxes and comply with the law (Amin et al., 2022, p.2). It also involves a willingness to accept tax obligations. Meanwhile, taxpayers' attitudes help explain why they comply with or violate tax laws.

Having knowledge about taxes is crucial in determining tax compliance, according to behavioral economics (Bornman & Ramutumbu, 2019). Taxpayers who possess tax knowledge can recognize their responsibility in complying with taxes (the positive side) and identify opportunities for tax evasion (the negative side). For SME owners, tax knowledge plays an even more significant role as the decision to declare tax payable involves a “tax dependency framework” based on expected utility theory (Von Neumann & Morgenstern, 1944) and the prospect theory of Kahneman & Tversky (1979). Empirical studies conducted by Loo (2016), Kasipillai & Abdul-Jabbar (2006) in Malaysia, Harris (2013) in the UK, Ritsema et al. (2013) in New Zealand, and Olsen et al. (2018) have shown that knowledge about taxes has the most positive and significant influence on the intention and behavior of tax compliance with economic motivation. In Malaysia, studies propose that tax knowledge is the most influential factor in determining taxpayers' compliance behavior under the self-assessment system (Loo, 2016; Loo et al., 2009). Other studies claim that possessing high tax knowledge (Kasipillai & Abdul-Jabbar, 2006), sufficient tax knowledge (Ritsema et al., 2013), or additional tax information (Saad, 2014) can positively affect tax compliance behavior. Conversely, the absence of tax knowledge can lead to non-compliance behavior among taxpayers, either intentionally or unintentionally (Mckerchar & Hansford, 2012). This was noted in a study conducted in Australia, where small business taxpayers were not even aware of their tax knowledge shortfalls, leading to unintentional non-compliance behavior. Kirchler & Enachesu (2018) argue that tax non-compliance can be intentional or unintentional, but most errors are due to taxpayers' lack of tax knowledge and understanding (Loo et al., 2008). Technical factors such as tax declaration, calculation, and tax reporting can also negatively impact tax compliance decisions, as tax systems and policies are frequently changed or are too complex (Amina & Sinya (2015) in Jimma Ethiopia; Saad (2014) in Malaysia; Newman & Nokhu, 2018 in Zimbabwe). Kasipillai et al. (2003) and Olsen et
al. (2018) found that having more knowledge about tax laws and regulations can lead to a higher likelihood of tax evasion.

It has been proven through tax knowledge theory and empirical evidence that taxpayers' attitudes and morals can be influenced by their understanding of tax laws (Eriksen & Fallan, 1996). This increased awareness of tax liability can lead to changes in behavior towards being compliant with tax laws (Fjeldstad & Heggstad, 2012), especially in voluntary tax compliance systems (Kasipillai et al., 2000), and is crucial in determining accurate tax liability (Mansor et al., 2004). Studies have shown that increased tax knowledge leads to higher voluntary compliance (Kasipillai & Abdul Jabbar, 2003; Kirchler et al., 2006) as taxpayers with knowledge are better equipped to estimate tax payable, determine tax refunds/withholdings accurately (Palil, 2005), and calculate their tax liability correctly (Udin, 2015).

However, some studies have found that respondents' tax knowledge is not significantly correlated with their tax compliance behavior in general (Harris, 2013; Engida & Baisa, 2014; Bird, 2013) or provide evidence to the contrary, showing that knowledge negatively affects tax compliance behavior (Cuccia, 2013; Fauziati et al., 2016) as taxpayers who possess enough knowledge may use it to avoid taxes. Cuccia (2013) argues that higher knowledge and understanding of taxpayers do not necessarily lead to better compliance with tax regulations. Taxpayers who understand tax laws still have the potential for tax non-compliance. A better understanding of tax regulations by taxpayers only leads to a greater awareness of the sanctions that will apply when evading tax obligations. Bird (2013) supports this argument, stating that taxpayers who correctly understand the rules often need to follow the tax rules according to what is stated in the tax law.

Tax knowledge is crucial for taxpayers, especially SMEs when it comes to complying with tax regulations. Only when taxpayers possess the appropriate understanding and awareness of tax laws can they ensure compliance. However, empirical studies on the role of tax knowledge in tax compliance have produced inconsistent results, due to the lack of a consistent conceptual framework for understanding and acknowledging the role of tax knowledge. Definitions and conceptual frameworks for tax knowledge primarily focus on the type of knowledge, its origin, and the factors affecting it. Therefore, any assessment of the role of tax knowledge must consider the taxpayer's intuition regarding the purpose and extent of using tax knowledge.
A full definition of tax knowledge should include three components: knowledge, perceived importance of tax knowledge, and attitude toward applying tax knowledge. Table 1 summarizes the results of empirical research on the role of tax knowledge in tax compliance, as well as different aspects of the concept of “tax knowledge.”

3 RESEARCH METHODOLOGY

This study uses a qualitative approach, following the interpretive paradigm to gain a better understanding of subjects' perceptions and attitudes in various contexts (Creswell et al., 2007). Interpretive theory aims to comprehend how individuals view and experience the world through different cultural backgrounds and situations (Hammersley, 2013). The results of the interpretation depend on the researcher's subjective opinion (McKerchar, 2010). Therefore, this investigation uses a qualitative approach to theory building through inductive reasoning. It reviews relevant literature and data from past studies collected in academic databases like Scopus, Taylor and Francis, and Emerald, using keywords such as “taxpayer knowledge” or “tax knowledge” or related concepts. All sources utilized are from reliable academic journals, government publications, or other international organizations in the tax administration community. The literature search was systematic, focusing on topics related to tax legal, procedural, and general knowledge, to create a proposed tax literacy framework.

4 RESULTS AND DISCUSSION

4.1 CONCEPTUAL FRAMEWORK FOR TAX KNOWLEDGE

Small and medium-sized enterprises are viewed as individual taxpayers who also act as business managers. As a result, they are considered to have the most expertise and skills in tax practices. Theories on tax compliance often use behavioral economics, which is based on economic theory, to explain how taxpayers make decisions. For instance, the expected utility theory (Von Neumann & Morgenstern, 1944) is used to explain the economic motives of taxpayers. The tax compliance model of (Allingham & Sandmo, 1972) is based on the theory of criminal economics, and prospect theory by Kahneman & Tversky (1979). These models accurately estimate the degree of tax compliance or non-compliance and the economic motivation of taxpayers. However, they do not describe the behavior of those who make decisions based on rational choices. The tax compliance model based on social psychology theory explains the social motivation of taxpayers,
particularly their voluntary tax compliance intention and tax spirit. Nonetheless, the
evidence is mixed and inconsistent, as there is a gap between the intention-behavior of
individual or organization taxpayers. For example, taxpayers may say that they did not
understate the amount of tax payable because it is their duty and social responsibility.
However, in many cases, they may still do so to reduce costs. We intend to explain
taxpayers' economic and social motivations in the specific case of SME owners by
proposing a conceptual research model of tax knowledge. Figure 1 shows how we
consider tax knowledge to play a role in SME owners' overall tax compliance.

An overview of theoretical models and results of related empirical studies helps
to determine the relationship between knowledge and tax compliance behavior. First, the
studies were selected to determine the conceptual attributes and measures of tax
knowledge related to tax compliance behavior. The aim is to build a two-dimensional
conceptual framework (i) the type and role of each type of tax knowledge and (ii) the
importance and usefulness of each type of knowledge, research, and analyze tax
knowledge concepts starting from components, followed by each type of knowledge.
Next, the proposed tax knowledge conceptual framework is a two-way connection
between knowledge components and tax knowledge types.

As discussed above, in studies, “tax knowledge” is often defined based on
measuring the levels of “knowledge”, “perception”, and “attitude” formed from education
and practice (White et al., 1990). This knowledge includes understanding tax roles, tax
laws, responsibility to declare and pay taxes (Kasipillai & Shanmugam, 1997); opportunities for tax evasion (Devos, 2016); estimating the economic consequences of
making decisions (Palil, 2005); awareness of tax compliance (Wong & Lo, 2015);
taxpayers' sensitivity to tax laws and interactions with tax authorities (Hasseldine et al.,
2009).

According to Newman et al. (2018), in a review of related studies on tax
knowledge for SMEs and classified the factors affecting tax knowledge into four main
groups (i) level of tax training; (ii) the complexity of the tax, (iii) understanding of the
tax declaration and payment process; (iv) awareness of tax system, perception of tax non-
compliance and tax authorities. To ensure consistency in comparison between studies,
Bornman & Ramutumbu (2019) proposed a conceptual framework for tax knowledge,
including three components (i) general tax knowledge, (ii) tax law knowledge, and (iii)
knowledge of tax procedures. General tax knowledge is considered a taxpayer's tax
awareness related to (i) understanding the role of taxes in fiscal policy and (ii) understanding the effects of taxes on finances. Tax law knowledge is understood as the individual’s understanding and proper application of tax law provisions in determining tax obligations, including: (i) understanding of the principles/concepts to be able to make appropriate tax decisions and (ii) understanding of the specifics to make an accurate tax return. Meanwhile, knowledge of tax procedures is understood as the order, procedures, and responsibilities of taxpayers to meet tax authorities’ requirements.

The study has analyzed various definitions of tax knowledge from different perspectives (as shown in Table 1) and has identified three main components: ownership of tax knowledge (understanding), tax awareness (understanding the importance of tax knowledge), and tax attitude (application of tax knowledge in tax compliance). These components are used to define tax knowledge and indicate its role (as shown in Column 3 of Table 1). Tax knowledge has been classified in different ways in previous studies, including by level (general knowledge, tax law knowledge, and specific knowledge), by the subject of the application of tax knowledge (trust, confidence in tax authorities, fairness, and complexity of the tax system), and by the ability to apply tax knowledge (social responsibility, perceived by others, estimated economic consequences of tax non-compliance). Such classifications affect taxpayers’ tax compliance behavior, as confirmed by various empirical studies (shown in Columns 1 and 2 of Table 1), which are coded (as shown in Column 4) and described in detail (as shown in Column 5).

Table 1. Results of some empirical studies and aspects of tax knowledge

<table>
<thead>
<tr>
<th>Research</th>
<th>Research results</th>
<th>Coding the knowledge concept component</th>
<th>Coding the type of knowledge</th>
<th>Description of the concept</th>
</tr>
</thead>
<tbody>
<tr>
<td>Song &amp; Yarbrough (1978; Spicer &amp; Lundstedt (1976)</td>
<td>Tax cheating is more frequent among those who feel disadvantaged by tax inequities and who perceive their risk of detection as low</td>
<td>Awareness</td>
<td>Fairness</td>
<td>Export tax rate; the risk of tax violations being discovered</td>
</tr>
<tr>
<td>Alm et al. (1999); Bornman &amp; Ramutumbe (2019)</td>
<td>An individual believes that his or her tax rate is ‘too high’ relative to others, then the individual will tend to comply less</td>
<td>Attitude</td>
<td>Fairness</td>
<td>Tax payable is higher than other groups</td>
</tr>
<tr>
<td>Marandu et al. (2015).</td>
<td>The perceived tax burden has a negative association with tax compliance</td>
<td>Awareness</td>
<td>Fairness</td>
<td>Perceived tax burden is higher than expected, causing tax compliance to decrease</td>
</tr>
<tr>
<td>Authors</td>
<td>Key Findings</td>
<td>Learning Area</td>
<td>Technical Concepts</td>
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<tr>
<td>Wahl et al. (2010); Kastlunger et al. (2013); Lisi (2014).</td>
<td>Trust in tax authorities positively affects voluntary tax compliance. Increased tax authority reduces voluntary tax compliance.</td>
<td>Feeling – Attitude</td>
<td>Faith; Trust, respect (subjective norms); Believing in the fairness and transparency of tax authorities; Disrespect of the tax authority (power) negatively affects.</td>
<td></td>
</tr>
<tr>
<td>Alm (2019); Alm et al. (2009); Bornman &amp; Ramutumbu (2019).</td>
<td>Tax rates affect compliance, but the effects are nuanced the level of tax rates; Higher audit rates increase compliance.</td>
<td>Understanding</td>
<td>Tax law; Technical: Understanding how you are taxed; Conceptual: Understanding terminology in the midst of complex tax legislation.</td>
<td></td>
</tr>
<tr>
<td>Clotfelter (1983); Slemrod (1985).</td>
<td>Matters in an individual’s compliance decision, with an increase in tax rates generally (though not always) reducing reported income.</td>
<td>Understanding</td>
<td>Tax law; Taxpayers know what the effect of a change in yield will be.</td>
<td></td>
</tr>
<tr>
<td>Marandu et al. (2015); Bornman &amp; Ramutumbu (2019)</td>
<td>Tax knowledge/tax education positive association to tax compliance.</td>
<td>Understanding</td>
<td>General understanding of taxes; Understanding of the aims of governmental fiscal strategies; Financial literacy; Understanding own financial position and the effect of taxation on own finances.</td>
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<tr>
<td>Palil (2010); Loo et al. (2009); Saad (2014)</td>
<td>A number of studies reflect that there is a relationship between taxpayers’ ability to understand and apply the laws and legislation of taxation and their ability to comply.</td>
<td>Awareness</td>
<td>Tax law; Technical: Understanding how you are taxed; Conceptual: Understanding terminology in the midst of complex tax legislation.</td>
<td></td>
</tr>
<tr>
<td>Bornman &amp; Ramutumbu (2019)</td>
<td>Completing and submitting tax forms.</td>
<td>Understanding</td>
<td>Tax procedures; Interaction with tax authority; Record keeping.</td>
<td></td>
</tr>
<tr>
<td>Marandu et al. (2015); Bornman &amp; Ramutumbu (2019)</td>
<td>There is a positive correlation between perceiving equity and fairness and complying with taxes.</td>
<td>Awareness</td>
<td>Fairness; Tax rates, tax incentives, payable tax amounts, inspection rates.</td>
<td></td>
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<tr>
<td>Alm et al. (1992); Slemrod et al. (2001)</td>
<td>Telling individuals that they will be ‘closely examined’ (via a message) generally increases the compliance rate of these individuals.</td>
<td>Understanding and Awareness</td>
<td>Economic consequences; Estimated benefits from tax non-compliance; Assess the ability of tax authorities to inspect and detect tax violations of taxpayers.</td>
<td></td>
</tr>
<tr>
<td>Webley (1991); Kastlunger et al. (2013); Kogler et al. (2013); Karakostas &amp; Zizzo (2016).</td>
<td>Individuals who have a negative attitude towards the government tend to comply less; When people have more trust in the government, enforcement is generally</td>
<td>Attitude to tax authorities</td>
<td>Trust; Transparency, objectivity, fairness and respect from tax authorities.</td>
<td></td>
</tr>
<tr>
<td>Source</td>
<td>More effective in preventing non-compliance</td>
<td>Understanding</td>
<td>The complexity of the tax system</td>
<td>Making tax declarations and calculating payable taxes should be easy and the process should take a reasonable amount of time.</td>
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<tr>
<td><strong>Mas’ud et al. (2014); Bornman &amp; Ramutumbu (2019)</strong></td>
<td>The difficulty of tax knowledge and the complex tax system can have a negative impact on tax compliance behavior. It may be more difficult for smaller businesses to achieve procedural compliance compared to larger businesses.</td>
<td>Understanding</td>
<td>The complexity of the tax system</td>
<td>It is necessary to have a clear and consistent set of guidelines for declaring expenses that can be deducted from taxes, as there are currently insufficient regulations in place to provide proper guidance.</td>
</tr>
<tr>
<td><strong>Kirchler et al. (2012)</strong></td>
<td>Small business owners often find tax laws too complex to understand without specialized knowledge.</td>
<td>Understanding</td>
<td>The complexity of the tax system</td>
<td>Tax system complexity affects business results.</td>
</tr>
<tr>
<td><strong>Oladipupo &amp; Obazee (2016); Ramutumbu (2016).</strong></td>
<td>Many tax practitioners agree that the intricacies of tax laws make it challenging for small businesses to comply with them.</td>
<td>Attitude</td>
<td>The complexity of the tax system</td>
<td>Taxpayer's perception of tax liability as self-fulfillment.</td>
</tr>
<tr>
<td><strong>Taing &amp; Chang (2021)</strong></td>
<td>Positive tax morale is critical to improving compliance</td>
<td>Awareness</td>
<td>Social responsibility (tax spirit)</td>
<td>Altruistic orientation refers to an individual's recognition of shared social values that encourage taxpayers to voluntarily comply with tax obligations.</td>
</tr>
<tr>
<td><strong>Sikayu et al. (2020)</strong></td>
<td>Altruistic orientation increases voluntary tax compliance</td>
<td>Awareness</td>
<td>Subjective norms</td>
<td>The foundation of voluntary tax compliance lies in individuals' ethical beliefs and assessments regarding taxes and the process of taxation.</td>
</tr>
<tr>
<td><strong>Robbins &amp; Kiser (2018)</strong></td>
<td>Ethics and judgment of others positively influence voluntary tax compliance</td>
<td>Awareness</td>
<td>Social responsibility; subjective norm</td>
<td>Trust in the tax authority is analyzed as a crucial determinant for voluntary tax compliance behavior, and the tax authority's legal power, subjective norms, perceived behavioral control, attitudes towards taxes, and moral obligations as factors influencing voluntary tax compliance behavior.</td>
</tr>
<tr>
<td><strong>Malik &amp; Younus (2020)</strong></td>
<td>Factors such as trust, tax authority, subjective norms, behavioral control, and ethics have a positive impact on voluntary tax compliance.</td>
<td>Attitude</td>
<td>Trust</td>
<td></td>
</tr>
</tbody>
</table>

Source: Authors’ own summary
In order to create a framework of tax knowledge applicable to SMEs, we have connected the three conceptual components of tax knowledge with their respective indexes (as shown in Figure 1). This framework can be described as follows: Tax knowledge refers to the level of knowledge and awareness that taxpayers have about tax laws, as explained by Hantono (2021) and Oladipupo & Obazee (2016). This encompasses a general understanding of tax and related issues, a specific level of understanding of tax procedures, and a level of understanding of tax law (Bornman & Ramutumbu, 2019). Tax awareness is the willingness of taxpayers to accept tax liability, wherein they fully comprehend the reasons for paying taxes and comply with the law based on economic consequences, personal subjective perceptions, and social responsibility, also referred to as the spirit of patriotism (Amin et al., 2022; Taing & Chang, 2020). Taxpayers' attitudes and sensitivity reflect their feelings toward tax authorities and the complexity of the tax system (Bornman & Ramutumbu, 2019; Taing & Chang, 2020; Alm, 2019). To determine the correlation between taxpayers' tax knowledge and their compliance considerations based on perceptions of opportunities for tax evasion and loss, we propose that tax knowledge be defined in the model. This includes all the aforementioned aspects of tax knowledge and awareness.

- **Level of knowledge:** General knowledge of tax; understanding tax laws; understanding of tax declaration and payment procedures (Bornman & Ramutumbu, 2019; Taing & Chang, 2020);
- **Awareness of tax compliance behavior** (i) *Tax spirit:* Understanding that paying taxes is a social responsibility (Cummings et al., 2009; Amin et al., 2022; Madaan et al., 2023); (ii) *Subjective norms*- perceptions of what others think of themselves when deciding whether or not to violate tax laws (Fishbein & Ajzen, 1975); (iii) *Economic consequences*- know the likelihood of tax authorities being inspected to tax violations and tax evasion penalties (Bobeck et al., 2007; Taing & Chang, 2020).
- **Attitudes of taxpayers** when interacting with tax authorities to fulfill tax obligations compared to knowledge and perception of tax. Tax attitudes are measured through the sensitivity of taxpayers (emotions) when fulfilling tax obligations related to trust with the tax authorities, the complexity of the tax system (Kastlunger et al., 2013; Kogler et al., 2013; Karakostas & Zizzo, 2016; Bornman & Ramutumbu, 2019; Taing & Chang, 2020; Alm, 2019) and
perceptions of the fairness of the tax system (Alm et al., 1999; Bornman & Ramutumbu, 2019).

Different from the conceptual framework of tax knowledge developed by Bornman & Ramutumbu (2019) with three types of knowledge, it provides a structured approach to assess tax knowledge as a factor affecting tax compliance and the role of each knowledge to have appropriate educational orientation. However, with each type of knowledge, this conceptual framework needs to explain why and when taxpayers are tax compliant or non-compliant. We propose a way to classify the conceptual framework based on using tax knowledge in considering the selection of tax decisions.

Figure 1. Tax knowledge framework used to explain tax compliance behavior

The knowledge framework consists of three components and nine corresponding indicators, including (i) knowledge (general, tax law, and tax procedures), perceptions (social responsibility, subjective norms, and economic consequences), and attitudes (trust, fairness, and complexity of the tax system). This conceptual framework ensures
taxpayers have the necessary information to know the role of taxes and their obligations, social responsibility, considering economic and social consequences (subjective norm) based on perceived loss through interaction with tax authorities (trust), fairness and complexity of the tax system (Figure 1).

Figure 2. The predictive model of the influence of tax knowledge on tax compliance behavior

4.2. APPLICATION OF TAX KNOWLEDGE FRAMEWORK

The tax knowledge framework has two purposes. Firstly, it helps us understand how different types of tax knowledge influence tax compliance, as suggested by Bornman & Ramutumbu (2019). However, there needs to be more consistency in the findings of studies examining the effect of tax knowledge on tax compliance. Therefore, the second purpose of the tax knowledge framework is to explore how taxpayers can use their knowledge to make decisions about tax compliance. Specifically, we can look at how general tax knowledge is used in this context.

- **Regarding general tax knowledge:** The framework shows that general knowledge about taxes affects two components, with five aspects: tax perception (social responsibility, subjective norms, and economic consequences) and attitudes (trust and fairness). However, general knowledge of tax only helps us understand how complex or straightforward tax is if the taxpayer knows tax procedures and has experience in practicing tax procedures. If individual taxpayer
has enough general knowledge about taxes, they will understand that paying taxes is an obligation and responsibility, and they will be aware of the consequences of not doing so. SME taxpayers with more complete training than other taxpayers may be able to minimize the amount of tax payable to secure the financial aspect, enhance the competitiveness of the business, or follow the practices of other businesses or taxpayers. However, whether this intention comes true depends on the taxpayer's perception of the tax system and tax authorities (attitude). Therefore, general tax knowledge indicates whether a taxpayer intends to comply with tax laws and to what extent, depending on the perception and attitude of the taxpayer. Accordingly, the general knowledge of taxpayers in this conceptual framework indicates two expectations. Firstly, the more tax knowledge people have, the more accurate their perception of tax responsibilities and obligations, making it easier to share more complex tax issues with tax authorities. Secondly, social recognition of taxpayers' qualifications is also a factor in promoting higher taxpayer compliance.

- **Regarding tax law knowledge:** The conceptual framework reveals that having knowledge of tax law impacts two components and six aspects. These include the taxpayers' perception of what ought to be done and the social consequences (social responsibility) from the viewpoint of others (subjective norms). It also involves providing an accurate method of estimating the benefits of non-compliance (economic consequences). Taxpayer attitudes are another component that is affected, including trust, fairness, and complexity of the tax system. General tax knowledge can raise tax awareness, but it has little effect on tax attitudes. However, having knowledge of tax law provides opportunities and possibilities for taxpayers to shift from intent to tax compliance or non-compliance. For instance, being aware of the possibility of tax audits and penalties with comprehensive knowledge of tax law allows taxpayers to assess the benefits that can be achieved without facing the risk of tax violations. This positively affects the intention to comply with tax to reduce losses. Taxpayers' positive attitude about the tax legal system that is fair, simple, and trusting towards tax authorities affects tax compliance behavior and vice versa. Due to the complex and unstable tax system, taxpayers often need to learn what taxes they must pay. As a result, they increasingly rely on tax service practitioners who are said to have
more tax knowledge, which leads to reduced tax compliance (Erard, 1993, 1997). Therefore, knowledge of tax law provides an opportunity for taxpayers to turn their intentions into tax compliance behavior or not.

- **Regarding knowledge of tax procedures:** The conceptual framework demonstrates that understanding tax procedures affects two components and four aspects, including: (i) perception of *economic consequences* and (ii) attitudes towards the three dimensions of the tax system (*trust, fairness, and complexity*). This knowledge equips taxpayers with the necessary skills to self-filing tax, pay, and finalize their taxes. It also provides information to assist taxpayers in making decisions based on economic consequences and social responsibility considerations. The more comprehensive a taxpayer's knowledge of tax procedures, the less likely they are to make errors when fulfilling their tax obligations. However, it also increases the potential for tax avoidance and tax evasion. SME taxpayers with knowledge of tax and awareness of opportunities for non-compliance are more likely to engage in tax non-compliance than other taxpayers. Therefore, the perception of the tax authority towards the taxpayer plays a crucial role in promoting a positive attitude toward tax compliance.

Improving tax knowledge can lead to better tax compliance behavior. Figure 2 of our conceptual model clearly depicts the correlation between various factors and their combined impact on taxpayers' compliance behavior. Symbol A in the quadrant represents taxpayers who would comply with a high but uncertain tax rate. These taxpayers possess diverse tax knowledge, including general, tax law, and tax procedure knowledge, resulting in a high level of tax compliance with no errors in tax procedures. However, the degree of certainty depends on the taxpayer's attitude (Quadrant factors-Symbol B). If taxpayers have positive attitudes towards a fair tax system, trust in tax authorities, and straightforward tax procedures, their compliance level is high and sure. Conversely, negative attitudes will lead to lower tax compliance levels. Thus, the closer taxpayers are to the horizontal axis and farther from the origin, the higher their predicted tax compliance level.

Quadrant-Symbol B describes taxpayers with all kinds of tax knowledge (*general, tax law, tax procedure knowledge*) to have a high level of tax compliance. In this position, the taxpayer has a positive attitude (*fairness, trust, and perception of the uncomplicated tax system*) despite the perceived economic consequences. This speculation helps to
explain why taxpayers' economic motivations based on utility theory and prospect theory do not show consistent evidence of tax noncompliance because they also depend on socio-psychological factors. Therefore, the farther the taxpayer's position is from the origin and the horizontal axis in Quadrant- Symbol B, the more confident the tax compliance is forecasted.

Taxpayer position in the Quadrant-Symbol C indicates the lowest level of tax knowledge compared to other positions, particularly regarding tax law and procedures. This increases the likelihood of unintentional or intentional tax non-compliance. This position may result from negative attitudes towards the tax system, such as perceiving it as unfair or overly complicated, leading to a greater perceived risk of economic consequences and non-compliance behavior. Therefore, the farther a taxpayer is located from the origin and horizontal axis, the higher the predicted level of tax non-compliance.

Quadrant-Symbol D describes the taxpayer with the second lowest tax knowledge compared to the rest of the positions, especially knowledge of tax law and tax procedures. However, awareness of social responsibility and subjective standards is highest compared to taxpayers in other positions. Therefore, the closer the taxpayer's position is to the origin and the farthest from the horizontal axis in Quadrant-Symbol D, the higher the forecasted tax compliance or vice versa. However, taxpayers in this position are also concerned with the economic consequences. Therefore, the perception of loss, in this case, determines the taxpayer's level of tax compliance. Predicting taxpayer compliance in this position is challenging and thus requires greater effort.

Regarding the degree of certainty of tax compliance or non-compliance: The probability of tax compliance or non-compliance depends on the attitude of the taxpayer: (i) based on the oblique relationship from Quadrant- Symbol D to Quadrant-Symbol B (Figure 2) indicates tax compliance (symbol B quadrant) depends on the positive attitude of the taxpayer rather than the perception of the tax, and (ii) the oblique relationship from Quadrant-Symbol A to Quadrant- Symbol C explains tax non-compliance dependent on negative attitudes rather than tax knowledge. Because compared to tax knowledge, the information individuals are provided about the tax system and other individuals affects compliance, but sometimes in different ways (Alm, 2019).
5 CONCLUSION

This article puts forth a conceptual framework for tax knowledge, drawing on both theory and empirical evidence. The framework aims to explain why different types of tax knowledge are important for SMEs' tax compliance intentions and to model taxpayers' level of compliance or non-compliance. The analysis indicates that tax knowledge plays a significant role in shaping SMEs' tax compliance behavior, but it is not the only factor at play. The proposed model identifies two directions: First, the increase in tax compliance depends on the level of understanding being measured (general, tax legislation, tax procedures), awareness (social responsibility), and attitudes (trust and fairness). The reduction in tax compliance depends on tax knowledge (general understanding), taxpayer perceptions (social responsibility, subjective norms, economic consequences), and attitudes (complexity, lack of equality of the tax system). Second, taxpayers' ability to tax compliance depends more on positive attitudes than on tax awareness, and taxpayers' ability to tax non-compliance depends more on negative attitudes than on tax knowledge.

Overall, this study offers a valuable framework and model for predicting taxpayers' behavior in terms of tax compliance or non-compliance and the level of compliance. However, it should be noted that the model is based on subjective interpretation and analysis and should be verified through further experimental studies.
REFERENCES


Harris, A. (2013). Distributed leadership: Friend or foe?. Educational Management Administration & Leadership, 41(5), 545-554.


