

Factors Influencing Tax Awareness among E-Commerce SMEs in Malaysia: An Empirical Investigation

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ABSTRACT

The rapid growth of e-commerce has introduced new challenges in tax compliance, particularly among small and medium enterprises (SMEs). This study investigates the key factors influencing tax awareness among e-commerce SMEs in Klang Valley, Malaysia. Given the online nature of these businesses, tax evasion has become a prevalent issue, with many owners assuming that their business activities may go undetected by tax authorities. The main objective of this study is to examine how tax knowledge, taxpayer attitudes, and tax penalties impact tax awareness among e-commerce business owners. A sample of 158 e-commerce SME owners was surveyed, and the data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 27. The results of the regression analysis reveal a significant relationship between taxpayer attitudes and tax penalties with tax awareness. However, tax knowledge was found to have no significant effect on tax awareness. This study contributes to the understanding of the determinants of tax awareness in the digital business environment and provides valuable insights for policymakers and tax authorities in addressing tax evasion challenges. The findings can also assist e-commerce professionals in enhancing compliance and fulfilling their tax obligations effectively.

Keywords: E-Commerce, Small Medium Enterprise, Tax Awareness, Tax Knowledge, Taxpayers Attitude

INTRODUCTION

Small and medium-sized enterprises (SMEs) are often regarded as the backbone of Malaysia's economy, contributing significantly to employment, innovation, and overall economic growth. As reported by SME Corp Malaysia (2020), there were approximately 1.02 million SMEs in Malaysia as of December 2019, accounting for 98.5% of all registered businesses in the country. These SMEs employ around 7.3 million individuals, representing 67.2% of the total workforce, and contribute nearly 40% to the nation's Gross Domestic Product (GDP) (SME Association of Malaysia, 2020). Over the past decade, states such as Wilayah Persekutuan and Selangor have seen remarkable growth in their SME sectors, supported by initiatives like the Go Global Malaysia project, which provides a comprehensive support package for SMEs seeking to expand their market reach.

The rise of e-commerce presents a significant opportunity for SMEs to enhance their market accessibility. By leveraging digital platforms, these businesses can reduce operational costs, broaden their target audiences, and streamline business processes. However, the transition to e-commerce also poses challenges, particularly

concerning the constant need for technological and operational updates. As Ahmad et al. (2015) highlight, many SMEs in developing countries face substantial financial barriers when acquiring the necessary e-commerce infrastructure. Additionally, while e-commerce can drive economic growth, it also raises concerns about tax compliance. The reliance on tax revenues to fund government initiatives makes it crucial for businesses to adhere to tax regulations. According to Atawodi et al. (2012), significant revenue losses due to tax evasion can hinder national development, as the government anticipates losing billions in potential tax revenue from unreported e-commerce transactions (Sun et al., 2012).

The explosive growth of the e-commerce sector has led to increased scrutiny from tax authorities, who are now exploring ways to tax SMEs engaged in digital commerce. However, many e-commerce entrepreneurs believe that their online operations allow them to evade taxes more easily, with the perception that tax authorities cannot accurately assess their income. Therefore, it is essential for the government to adapt its tax systems to keep pace with technological advancements and economic changes. Furthermore, taxpayers must be adequately informed about their tax obligations and penalties to prevent instances of double taxation or non-compliance (OECD, 2003). Ultimately, addressing the gaps in tax awareness and compliance among e-commerce SMEs is vital for fostering a sustainable and equitable economic environment in Malaysia.

While Malaysian tax authorities have introduced various measures to simplify tax compliance for e-commerce businesses, there remains a significant gap in tax awareness among SMEs. Studies have shown that many SMEs either lack knowledge about the tax system or do not fully comprehend their obligations under the Goods and Services Tax (GST) or Sales and Service Tax (SST) regimes, which directly impacts their compliance behavior (Hamid et al., 2022; Sormin, 2021). This gap is particularly evident among e-commerce SMEs, who often operate in a less regulated and more dynamic environment compared to traditional businesses.

Tax awareness plays a pivotal role in ensuring that SMEs meet their tax obligations. Research suggests that the lack of tax education and guidance, coupled with the perceived complexity of tax laws, contributes to lower levels of compliance among SMEs (Suhono et al., 2022). Furthermore, without adequate awareness of the available tax incentives or clear understanding of online taxation policies, many SMEs inadvertently fall short of compliance, which can result in penalties, audits, and reputational damage.

The purpose of this study is to investigate the key factors that influence tax awareness among e-commerce SMEs in Malaysia. Identifying these factors will provide valuable insights for policymakers and tax authorities to tailor education and outreach programs that enhance tax literacy and improve compliance rates. By addressing the existing knowledge gap, this research aims to contribute to the creation of a more transparent and equitable tax system, which is essential for the sustainable growth of Malaysia's e-commerce sector.

The paper is structured into several key sections for clarity. Section 2 reviews literature on tax awareness, e-commerce, SMEs, and tax compliance, leading to the research hypotheses. Section 3 describes the research design and methodology used in the study. Section 4 presents and discusses the findings, while Section 5 concludes with a summary of the main insights and their implications for future research. This organization aims to provide a clear understanding of the research context, methods, results, and conclusions.

LITERATURE REVIEW

Tax Awareness

Tax awareness encompasses the understanding of tax obligations and the legal framework surrounding taxation. It is critical for ensuring tax compliance, as increased awareness correlates positively with the likelihood of fulfilling tax responsibilities (Hamid et al., 2022; Sormin, 2021). In Malaysia, many small and medium-sized enterprises (SMEs) exhibit a lack of adequate knowledge regarding their tax obligations, which can inadvertently lead to non-compliance or tax evasion (Hashim et al., 2020). For instance, a study by Hamid

et al. (2022) highlighted that e-commerce SMEs showed significant gaps in understanding tax regulations, underscoring the necessity for targeted education and outreach programs from tax authorities.

Globally, similar trends persist. In Nigeria, Atawodi and Adebayo (2012) noted that insufficient tax awareness among SMEs contributes to low compliance rates, indicating that enhancing tax education could improve compliance levels. Studies in Indonesia and Kenya also support the effectiveness of taxpayer education programs in increasing tax awareness and compliance rates among SMEs (Suhono et al., 2022; Mwangi & Jagongo, 2018). These findings emphasize the importance of fostering tax awareness as a foundational element for improving compliance, particularly within the rapidly evolving digital economy.

E-Commerce and SMEs

The emergence of e-commerce has fundamentally transformed the operational landscape for SMEs, presenting new growth opportunities and market access. However, this shift also introduces unique challenges regarding tax obligations. E-commerce allows SMEs to reach a global customer base, enhancing sales potential and operational efficiencies (Ahmad et al., 2015; MDEC, 2021). Nevertheless, the digital nature of transactions complicates tax compliance due to ambiguities surrounding tax liabilities associated with online sales (Sun et al., 2012).

In Malaysia, although the government has implemented measures to tax e-commerce transactions, many SMEs remain unaware of these requirements, leading to unintentional non-compliance (Hamid et al., 2022). According to a report from the Malaysia Digital Economy Corporation (MDEC, 2021), the rapid growth of e-commerce has necessitated a more robust regulatory framework to ensure clear communication of tax obligations to SMEs engaged in digital transactions.

International research reveals disparities in tax compliance across jurisdictions, driven by varying regulations and enforcement mechanisms related to e-commerce. Atawodi and Adebayo (2012) argued that businesses operating in the digital space often exploit regulatory gaps, resulting in significant tax revenue losses for governments. Consequently, tax authorities worldwide must adapt their strategies to accommodate the nuances of e-commerce and educate SMEs about their responsibilities in this new economic landscape (Suhono et al., 2022; Mwangi & Jagongo, 2018).

The rapid expansion of e-commerce has also heightened concerns regarding potential tax evasion. Practitioners worry that tax authorities may struggle to detect business income generated through online transactions, a challenge stemming from the unique nature of internet-based e-commerce compared to traditional business models (Coupey, 2001). Li (2004) and Mukti (2000) emphasized that neglecting taxation or providing preferential treatment to this sector could adversely affect tax revenue collection. Taxes are vital for national development, serving purposes beyond revenue generation. Following the tax neutrality principle, a tax system should remain neutral, guiding business decisions based on economic merits rather than tax considerations.

Despite these challenges, Malaysian SMEs are increasingly adopting e-commerce to gain competitive advantages in a globalized economy (Poorangi et al., 2013). The 2020 Fiscal Outlook indicated that although 62.4% of the 1,251,190 registered companies in Malaysia were listed with the Inland Revenue Board (IRB), only 7.8% were subject to taxation. The Royal Malaysian Customs Department (RMCD) and IRBM project significant revenue losses due to non-compliance among e-commerce businesses (Tallaha et al., 2014). These tax authorities are exploring strategies to tax individuals and SMEs engaged in digital businesses, alongside monitoring large multinational corporations. Failure to compel many e-commerce businesses, particularly SMEs, to file accurate tax returns or report correct tax liabilities could lead to substantial revenue losses for the government, ultimately hindering national development.

Tax Compliance in E-Commerce

Tax compliance in the e-commerce sector is influenced by various factors, including awareness of tax responsibilities, service quality, educational initiatives, and regulatory frameworks. Recent studies highlight

these dimensions across different geographical contexts, offering insights into how e-commerce businesses navigate compliance challenges.

Khamis and Mastor (2021) emphasize that high service quality and tax awareness significantly improve compliance rates among Malaysian e-commerce businesses. They found that a fair tax system correlates with increased voluntary compliance, suggesting the need for a positive relationship between tax authorities and businesses. Similarly, Adam et al. (2021) identified that trust in tax authorities and a clear understanding of tax obligations are crucial for fostering compliance among e-commerce users in Nigeria. This underscores the importance of transparency and effective communication from tax authorities to enhance compliance rates.

Sulastri et al. (2023) explored tax compliance factors within Indonesian e-commerce businesses, finding that increased awareness of tax regulations and effective enforcement mechanisms positively impact compliance behavior. Suhono et al. (2022) supported this view by emphasizing the critical role of tax knowledge and enforcement in promoting compliance among Micro, Small, and Medium Enterprises (MSMEs) utilizing e-commerce platforms. Their studies collectively indicate that education and robust enforcement strategies are essential for cultivating a culture of compliance in the digital economy. Meiryani et al. (2022) further highlight the necessity of comprehensive tax education to navigate the complexities of the digital marketplace.

In Nigeria, Panle and Okpara (2021) examined tax policies affecting social media businesses and argued for regulatory frameworks tailored to the unique dynamics of e-commerce. Such policies should consider the operational realities of online businesses to enhance compliance. Hamza Quddus et al. (2022) investigated tax compliance behaviors in Pakistan, finding that understanding tax obligations, combined with technological tools, significantly enhances compliance rates.

Alwi (2022) identified key predictors of tax compliance intentions in Malaysian e-commerce businesses, focusing on tax knowledge and challenges posed by recovery efforts from the COVID-19 pandemic. This suggests that as businesses adjust to post-pandemic conditions, enhancing tax education remains critical for promoting compliance. Despite the positive developments, many e-commerce SMEs still have a limited understanding of tax regulations and requirements, which can lead to penalties and legal repercussions. Familiarity with tax laws is essential for accurate calculations, especially under self-assessment systems (SAS). According to Ratnawati et al. (2021), taxpayer awareness encompasses attitudes and beliefs that shape individuals' willingness to adhere to tax laws. Negative attitudes can lead to non-compliance and associated penalties.

In summary, tax compliance among e-commerce businesses is a multifaceted issue influenced by awareness, service quality, regulatory frameworks, and the evolving digital landscape. Continuous efforts to improve tax education, enhance service quality, and develop supportive regulatory environments are essential to promote compliance within this dynamic sector. Addressing knowledge gaps and fostering positive attitudes toward compliance will be crucial for the sustained growth of e-commerce businesses.

This study aims to identify the determinants influencing tax awareness among Malaysian e-commerce SMEs, particularly in the Klang Valley. Specifically, it seeks to establish the relationship between three behavioral factors: tax knowledge, taxpayers' attitudes, and tax penalties among these SMEs. Understanding these relationships can potentially encourage voluntary tax compliance (Saad, 2009) and help policymakers recognize the significance of tax knowledge and the complexities of the tax system, leading to improved compliance efforts.

Hypothesis Development

This study aims to investigate the determinants that influence tax awareness among e-commerce SMEs in Malaysia, which is essential for enhancing compliance with tax laws and boosting national revenue generation. Tax knowledge plays a crucial role in fostering tax awareness, as a thorough understanding of the tax system enables taxpayers to maintain accurate records, make informed tax estimations, and fulfill their tax obligations

under the Self-Assessment System (SAS) (Redea, 2016). Previous research by Alabede et al. (2011) highlights the positive relationship between tax knowledge and tax awareness behavior, emphasizing that taxpayers well-versed in tax law are better equipped to navigate their responsibilities. Consequently, the first hypothesis posited is:

H1: Tax knowledge positively influences tax awareness among e-commerce SMEs in Klang Valley, Malaysia.

In addition to tax knowledge, individual psychological factors, such as moral beliefs and attitudes, are significant in shaping tax awareness (Helhel & Ahmad, 2014). Nkundabanyanga et al. (2017) argue that strong ethical principles and a sense of social responsibility enhance voluntary compliance with tax regulations. Taxpayers who perceive fairness in the tax system are more likely to comply, as demonstrated in studies by Forest and Sheffrin (2002) and Chan et al. (2000). These studies underscore that taxpayers' attitudes, encompassing perceived fairness and moral reasoning, influence their willingness to fulfill tax obligations. Research by Bobek (1997) and Bobek and Hatfield (2003) further supports this notion by establishing a connection between a positive compliance attitude and increased tax payment behavior. Thus, the second hypothesis is formulated as follows:

H2: Attitude positively influences tax awareness among e-commerce SMEs in Klang Valley, Malaysia.

Furthermore, tax penalties are also integral in fostering tax compliance and awareness. Rahmayanti and Prihatiningtias (2020) assert that consistent enforcement of tax penalties can motivate taxpayers to meet their obligations. Palil (2010) discovered a strong association between taxpayer awareness of penalties and compliance, indicating that greater awareness leads to a better understanding of the consequences of noncompliance. The implication is that awareness of tax penalties can enhance compliance rates. Therefore, the third hypothesis is presented as:

H3: Tax penalty positively influences tax awareness among e-commerce SMEs in Klang Valley, Malaysia.

The hypotheses formulated in this study reflect the interplay of these factors: the positive impact of tax knowledge on tax awareness, the influence of attitudes on compliance behavior, and the critical role of tax penalties in enhancing awareness and compliance among taxpayers. As the e-commerce sector continues to grow in Malaysia, understanding these determinants becomes increasingly important for policymakers and tax authorities aiming to foster a culture of compliance and ensure the sustainability of the tax system. The following section will delve into the research methodology employed to investigate these relationships further.

METHODOLOGY

This study investigates the determinants influencing tax awareness among e-commerce SMEs in the Klang Valley, with a particular emphasis on the insights provided by the Department of Statistics Malaysia (DOSM) Economic Census (2016). The selection of SMEs was strategically guided by the census data, which identifies Selangor as the jurisdiction with the highest concentration of SMEs. To ensure a comprehensive and accurate selection process, a detailed listing of SMEs was sourced from the Smart Selangor website (<https://sme.smartselangor.com.my/>). This approach facilitated the identification of a representative sample that accurately reflects the diverse landscape of SMEs in the region.

Data collection was conducted using a structured questionnaire distributed via Google Forms. A total of 300 questionnaires were distributed to potential respondents, resulting in 176 completed responses. However, upon thorough scrutiny, 18 responses were excluded due to non-compliance with the stipulated analysis criteria, leading to a final dataset of 158 valid responses. This represents a response rate of 35%, which falls within the acceptable range established by Kerlinger and Pedhazur (1973), indicating that response rates between 20% and 40% are suitable for analysis using statistical software like SPSS 27. This response rate is deemed adequate for drawing meaningful insights and ensuring the reliability of the findings in the context of the research objectives.

Overall, the methodology employed in this study not only aligns with established standards for survey research but also enhances the credibility and robustness of the results, ultimately contributing to a deeper understanding of tax awareness among e-commerce SMEs in the Klang Valley, Malaysia. The questionnaire is structured into five distinct sections: Demographic information, Level of Tax Awareness, Tax Knowledge, Attitude, and Tax Penalties. The questionnaires utilized in this study were adapted from established sources, namely the works of Savitri and Musfialdy (2016), Carolina and Simanjuntak (2011), and Barone and Mocetti (2011). Data screening, inferential analysis, normality, and validity tests were conducted to ensure the validity and reliability of the results obtained especially in the descriptive analysis and regression analysis. Figure 1 represents the Theoretical Framework for this research:

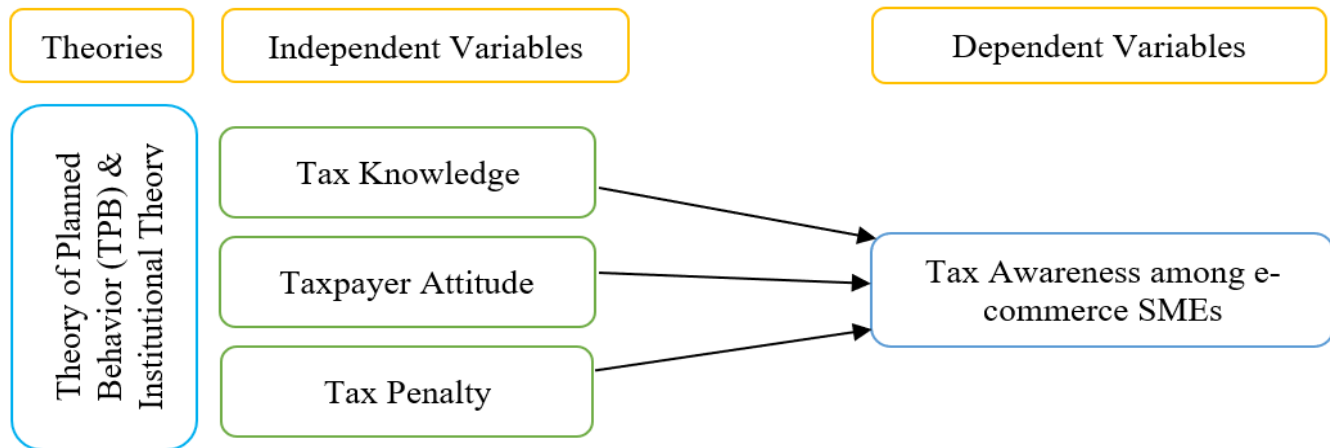


Figure 1: Theoretical & Research Framework

Source: Developed by authors

The Theory of Planned Behavior (TPB) provides insights into how attitudes, subjective norms, and perceived control influence tax awareness and compliance among small and medium-sized enterprises (SMEs). Positive attitudes towards taxation, which can stem from recognizing its societal benefits, encourage compliance. Conversely, negative beliefs about taxation can deter it (Alm et al., 2022). Subjective norms, or the perceived social pressure from peers and professional networks, also significantly affect compliance decisions; SMEs are more likely to comply if they believe their peers prioritize tax obligations (Bahl & Grown, 2018). Additionally, perceived behavioral control reflects SMEs' confidence in their ability to meet tax requirements, which can increase compliance when they feel equipped and supported (Alm & Torgler, 2011).

Institutional Theory complements TPB by examining the impact of government regulations and social norms on SME tax behavior. Effective regulations and support from tax authorities enhance tax awareness, leading to improved compliance rates (Lignier & Evans, 2013). Furthermore, social norms that view tax compliance as a civic duty significantly influence SMEs' behavior; in cultures where compliance is valued, SMEs are more likely to adhere to tax laws to avoid reputational damage (Torgler, 2007). Together, these theories highlight the interplay between individual attitudes, social influences, and institutional frameworks that shape tax compliance behavior among SMEs.

RESULTS AND DISCUSSION

The analysis of the determinants of tax awareness among e-commerce SMEs in Malaysia reveals significant insights and is divided into descriptive statistics and regression analysis results.

Descriptive Statistics

As presented in Table 1, the gender distribution indicates a notable trend: 93 (58.9%) of the participants identified as female, while 65 (41.1%) were male. This finding suggests a growing engagement of women in

online businesses, reflecting broader societal shifts toward female entrepreneurship (Orser et al., 2018; Brush et al., 2019).

In terms of age distribution, the 30-39 age group emerged as the most active demographic, with 88 (55.7%) respondents belonging to this category. This trend may be attributed to the technological proficiency often observed in this age group, making them more likely to seize opportunities in the e-commerce sector (Koe et al., 2019). Educational background also plays a critical role in shaping tax awareness, with 67 (43.4%) respondents holding either a bachelor's degree or a diploma/equivalent. This prevalence of respondents with higher educational qualifications implies a greater understanding of financial and taxation matters, which may enhance their awareness and compliance behavior regarding tax obligations (Fjeldstad & Moore, 2008; Loo & Dhanani, 2016). Overall, these demographic insights are essential for tailoring educational and support initiatives aimed at improving tax awareness among SMEs in the Klang Valley, Malaysia.

Table 1: Descriptive Analysis for demographic

Gender of respondents:	Frequency	Percentage (%)
Male	93	58.9
Female	65	41.1
Age of respondent of respondents:		
Under 30 years old	41	25.9
30- 39 years old	88	55.7
40 - 49 years old	28	17.7
Above 50 years old	1	0.6
Education Level:		
SPM or equivalent	23	14.6
Diploma or equivalent	67	42.4
Bachelor's Degree or equivalent	67	42.4
Master's Degree and PHD	1	0.6
Firm Size		
Small (5-49 employees)	136	86.1
Medium (50 -99employees)	22	13.9
Business Duration (years):		
Less than 5 years5 – 10 years	80	50.6
11 and above	72	45.6
	6	3.8

Source: Developed by authors

Assessing the size of the firms represented, most of the responses emanated from 136 (86.1%) small-size organizations. This finding highlights the prominence of small businesses in the e-commerce landscape. Additionally, the analysis revealed that a significant proportion of respondents, precisely 80 (50.6%) organizations, are relatively new, having established their businesses in the past five years. This trend implies that most of the participants hail from recently founded e-commerce ventures. In summary, most of the respondents are affiliated with small-scale e commerce enterprises that have been in operation for less than five years. The demographic insights provide valuable context for interpreting the study's findings and understanding the characteristics of the participants in this research endeavor.

Regression Analysis

Table 2: Regression Analysis

Variable	Unstandardized Coefficients	Std Error	t-stat	p-value	VIF
Constant	2.685	0.299	8.977	0.001	
Security	0.014	0.073	0.194	0.846	1.373
Innovativeness	0.295	0.081	3.639	3.639	1.788
Benefit	0.151	0.075	2.005	2.005	1.667
R (R ²)	0.486 (0.236)				
Adjusted R ²	0.221				
F-statistic (p-value)	15.835 (0.001)				
Durbin Watson Statistic (p-value)	1.992 (0.001)				

- Predictors: (C0nstant), Tax Knowledge, Taxpayers' Attitude, Tax Penalty
- Dependent Variable: Tax Awareness

Source: Developed by authors

Table 2 presents the regression analysis statistics, revealing a correlation coefficient (R) of 0.486 among all variables, with an R² value of 0.236 and an adjusted R² of 0.221. This indicates a moderate positive correlation toward tax awareness among e-commerce SMEs in Klang Valley, Malaysia. Specifically, the R² suggests that approximately 23.6% of the variation in tax awareness can be explained by the independent variables, which include tax knowledge, tax attitude, and tax penalty.

The analysis of the coefficients indicates that tax knowledge has a coefficient of 0.14 ($p = 0.846$), signifying no significant relationship between tax knowledge and tax awareness among e-commerce SMEs in Malaysia. Consequently, Hypothesis 1 (H1) is rejected, a finding that contradicts previous studies suggesting tax knowledge positively influences compliance (Ghani et al., 2020; Lin & Carroll, 2000). This lack of significance may stem from respondents' assumptions that their small-scale operations do not significantly contribute to overall tax revenues, leading to a diminished awareness of tax obligations.

While previous studies have established a strong correlation between tax knowledge and tax awareness (Hamid et al., 2022; Ratnawati et al., 2021), this study finds no significant effect of tax knowledge on awareness among Malaysian e-commerce SMEs. This contradiction suggests the need for a deeper examination of the unique factors influencing SMEs in the Malaysian context.

One possible explanation for this result lies in the concept of the "knowledge-behavior gap." Having information or knowledge about tax laws and regulations does not always translate into behavioral change or heightened awareness. Research shows that individuals may possess knowledge without taking action, often due to psychological, social, or motivational barriers (Saad, 2009). For instance, SMEs may understand the importance of tax compliance, but factors like fear of dealing with regulatory bodies, perceived complexity of tax processes, or lack of perceived immediate benefits may hinder them from applying this knowledge in practice.

Another contributing factor could be the rapid pace of digital transformation in Malaysia's e-commerce sector. As highlighted by MDEC (2021), many SMEs are still in the process of adapting to new digital tools and platforms. The sheer speed of technological advancements may outpace SMEs' ability to internalize relevant tax knowledge, leading to a disparity between what they know and what they apply.

Moreover, the cultural and regulatory environment in Malaysia may play a role in this disconnect. Malaysia's tax system has undergone numerous reforms, and frequent changes could contribute to confusion or

misunderstanding among SMEs. Cultural attitudes towards tax obligations, particularly in a region where informal business practices still thrive, might reduce the perceived importance of formal tax knowledge (Hamza Quddus et al., 2022). This underscores the need for tax authorities to consider not just education but also simplification of tax processes and tailored communication strategies to address specific gaps in awareness.

In contrast, taxpayer attitude exhibits a coefficient of 0.295 ($p = 0.001$), demonstrating a statistically significant positive influence on tax awareness, thus supporting Hypothesis 2 (H2). This aligns with prior research indicating that a positive moral outlook enhances tax compliance due to increased awareness (Alm et al., 1992; Salawati et al., 2021; Hantono, 2021). The positive relationship between taxpayer attitude and tax awareness, as evidenced by the coefficient of 0.295 ($p = 0.001$), suggests that a favorable attitude toward tax compliance enhances awareness. This aligns with previous research, which shows that individuals with a stronger moral outlook and positive perceptions of taxation are more likely to be aware of their tax obligations and comply with tax laws (Alm et al., 1992; Salawati et al., 2021; Hantono, 2021). In the context of e-commerce SMEs, this finding is particularly important. Online business owners, many of whom operate in an increasingly complex and competitive digital landscape, may possess a unique perspective on taxation. Those who view tax compliance not only as a legal obligation but as a contribution to societal development tend to exhibit higher levels of tax awareness.

Moreover, in Malaysia, where tax compliance is a growing concern for authorities, the role of taxpayer attitudes becomes even more critical. Many SME owners in the e-commerce sector may perceive taxation as burdensome or as a barrier to profitability, especially when facing competitive pressures from informal or untaxed businesses. However, those with a positive attitude toward taxation—seeing it as a necessary part of contributing to national development or accessing public goods—are likely to stay informed and aware of their obligations. Thus, fostering positive taxpayer attitudes through public awareness campaigns or outreach programs could be a viable strategy for enhancing tax compliance in this sector.

Furthermore, tax penalty reveals a coefficient of 0.151 ($p = 0.047$), suggesting that the imposition of tax penalties significantly impacts tax awareness, thereby accepting Hypothesis 3 (H3). This finding echoes Nurlis and Kamil (2015), underscoring the necessity of punitive measures in fostering tax compliance among online business owners. The looming threat of penalties encourages business owners to fulfill their tax obligations to avoid financial repercussions, thereby enhancing their overall awareness of tax laws.

The significance of tax penalties, with a coefficient of 0.151 ($p = 0.047$), indicates that punitive measures play a crucial role in fostering tax awareness. The threat of financial penalties compels business owners to comply with tax regulations, thus increasing their overall tax awareness. This finding is consistent with prior research by Nurlis and Kamil (2015), which suggests that the fear of penalties serves as a key motivator for tax compliance among businesses.

In the context of e-commerce SMEs, the significance of tax penalties is particularly relevant. Many online businesses may initially operate under informal conditions, often due to the ease of entry into the digital market. However, as they grow and scale, they become more visible to tax authorities and subject to scrutiny. The prospect of financial penalties for non-compliance can serve as a powerful deterrent against tax evasion or ignorance. This finding underscores the importance of not only educational efforts but also strong enforcement mechanisms to ensure compliance among e-commerce SMEs. Tax authorities could further strengthen awareness by improving communication regarding penalties and making the consequences of non-compliance clear to business owners, ensuring that they understand the financial risks associated with evading taxes.

By increasing the visibility and enforceability of penalties, tax authorities could create a stronger incentive for SMEs to comply with tax laws and improve their awareness of tax obligations. Additionally, streamlined digital tax platforms could be introduced to assist SMEs in avoiding penalties due to unintentional errors or oversights, thus fostering a more compliant and aware tax-paying community.

CONCLUSION

This study offers significant empirical evidence regarding the interplay between tax awareness in e-commerce SMEs and key influencing factors, including tax knowledge, taxpayer attitudes, and tax penalties. Grounded in the "Theory of Planned Behavior," the research explores three central hypotheses.

The first hypothesis posits that tax knowledge significantly influences tax awareness among proprietors of online businesses. However, the findings reveal that formal or informal tax education does not substantially enhance tax awareness levels. This observation aligns with previous studies, such as those by Ghani et al. (2020), which indicated that many respondents were unaware of their tax obligations. Furthermore, research by Lin and Carroll (2000) suggested that tax knowledge does not directly correlate with compliance behaviors. These results highlight a complex relationship between tax knowledge and awareness, suggesting that education alone may not sufficiently increase tax awareness among online business owners.

The second hypothesis asserts that taxpayer attitudes significantly affect tax awareness. The study's findings support this hypothesis, demonstrating that trust and a sense of responsibility foster compliance with tax regulations. Respondents exhibited a desire to project ethical behavior, indicating that positive attitudes towards taxation can enhance compliance awareness. This notion is supported by Torgler et al. (2008), who found that favorable taxpayer attitudes are linked to higher compliance rates. Thus, it appears that intrinsic motivation, rather than mere legal obligation, plays a critical role in shaping trust in the tax system.

The third hypothesis posits that tax penalties significantly influence tax awareness among online business proprietors. The empirical findings confirm that the expectation of punitive measures from tax authorities encourages compliance with tax laws. The Income Tax Act of 1967 empowers tax officials to impose penalties on tax evaders, thus reinforcing adherence to tax regulations. This aligns with the findings of Nurlis and Kamil (2015), which indicated that penalties effectively enhance tax awareness among business owners. The potential for financial loss due to penalties serves as a strong motivator for compliance, underscoring the critical importance of enforcement in shaping tax behavior.

These findings have several important implications for tax authorities, policymakers, and SMEs. First, the lack of correlation between tax knowledge and awareness indicates that educational campaigns alone may not be sufficient. Tax authorities could consider shifting focus toward more targeted, practical interventions, such as simplified digital tax platforms specifically designed for SMEs. User-friendly online tax portals that provide step-by-step guides or real-time assistance could mitigate the perceived complexity of tax filing processes.

Furthermore, policymakers could explore the use of behavioral nudges, such as reminders, tax incentives, or digital tools that automate tax-related tasks, to encourage compliance (Adam et al., 2021). Emphasizing the benefits of compliance, such as access to government assistance programs for SMEs, might also help change attitudes and increase tax awareness.

For SMEs, the findings suggest that building a deeper understanding of the importance of tax compliance and its long-term benefits could enhance their engagement with the tax system. Business associations, alongside tax authorities, could play a role in bridging this gap by providing ongoing, practical workshops or resources that translate tax knowledge into tangible actions.

LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

Despite its contributions, this study has certain limitations, primarily its focus on e-commerce businesses within the Klang Valley, specifically in the Selangor region. The exclusion of offline businesses may overlook diverse factors influencing tax awareness in the broader business ecosystem. Future research should seek to diversify the sample by including various business types and sizes across different geographical areas. Such a comparative approach will enrich our understanding of the dynamics that affect tax awareness and compliance.

Additionally, while this study highlights specific factors - tax knowledge, taxpayer attitudes, and tax penalties - future research should explore a broader range of elements aligned with the Theory of Planned Behavior. This comprehensive approach will yield more nuanced findings, ultimately benefiting the Malaysian economy by fostering effective tax compliance strategies among SMEs.

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