

Identifying the tax compliance intention of SMEs in Cambodia: An analysis with the PLS-SEM

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Abstract: The aim of this study was to identify the factors that influence behavioral intentions to comply with value added tax (VAT) in small and medium enterprises (SMEs) in Cambodia. Five latent variables such as attitude (ATT), patriotism (PAT), perceived behavioral control (PBC), subjective norms (SUN), and behavioral intention (BEI) to comply with VAT regulation, which was a dependent variable, were included in the Partial Least Square Structural Equation Modelling (PLS-SEM). After the two critical evaluations of the model—measurement model and structural model—two of the four independent variables—attitude and patriotism—were found to have a statistically significant positive influence on Cambodian SMEs' intention to comply with VAT regulation, at a 1% level for each coefficient. The f^2 value of the two constructs was estimated to be 0.202 (ATT) and 0.242 (PAT). The R^2 value was 0.914, which means that 91.4% of the variance in the BEI was explained by the independent variables, specifically ATT, PAT, PBC and SUN. The computed Q^2 value of 0.248 indicated that the model demonstrates a moderate degree of predictive relevance concerning the endogenous variables, implying that it had the capacity to explain roughly 24.8% of the variance present in the data.

Keywords: PLS-SEM, Tax Compliance, VAT, SMEs.

1. Introduction

The General Department of Taxation (GDT) functions under the oversight of the Ministry of Economy and Finance (MEF). It plays a crucial role in the collection of tax revenues from the citizens of Cambodia. Taxation in Cambodia is divided into four primary categories. The first category includes taxes on income, profits, and capital gains, applicable to both individuals and corporations. The second category comprises four types of taxes, which include general taxes on goods and services, value-added taxes (VAT), turnover taxes, and excise taxes. The third category is made up of customs duties and other import taxes, along with taxes levied on exports. Lastly, the fourth category covers a range of additional taxes. Furthermore, both income tax and profit tax are categorized as direct taxes [1].

In 2019, the GDT reported a total tax revenue collection of 21,302.65 billion Riels, coinciding with a real GDP growth rate of 6.8%. However, the COVID-19 pandemic severely affected the global economy, including Cambodia's, leading to a contraction of 3.1% in real GDP for the year 2020. Although the economy began to recover in 2021 with a growth rate of 3%, GDT's tax revenues declined from approximately 18,827.23 billion Riels to 17,967.07 billion Riels. In 2022, however, the GDT witnessed a substantial increase in tax revenues, reaching 22,088.51 billion Riels, which represented a growth rate of 22.94% compared to the previous year. This recovery was supported by a real GDP growth rate of 5.3% in 2022. Looking ahead to 2023, the Asian Development Bank forecasts that Cambodia's real GDP growth rate will remain at 5.3%. As of September 2023, the GDT had already collected approximately 18,458.2 billion Riels in tax revenues [2].

Between 2019 and 2022, the GDT collected tax revenues, with an average of 57.93% derived from the tax on goods and services. Tax on income, profit, and capital gains closely followed, accounting for

29.89% of total tax revenues. Tax on international trade and transactions contributed 12.17%, while other taxes represented approximately 0.02% of the total revenue. Of the overall tax revenues collected by the GDT, approximately 70% were classified as indirect taxes, with the remaining 30% categorized as direct taxes, specifically tax on income, profit, and capital gains. Within this direct tax category, corporations and other enterprises contributed 24.50%, while individuals accounted for 5.39% [1].

The enhancement of tax revenue collection was achieved through two primary efforts. On one hand, the commitment demonstrated by officials at all levels within the General Department of Taxation played a crucial role. On the other hand, the active involvement of taxpayers was equally significant. This study aims to identify the factors that substantially affect VAT compliance among small and medium enterprises (SMEs) in Cambodia. The research is organized into five distinct sections: the first section introduces the topic, the second section synthesizes previous studies related to tax compliance, the third section outlines the research methodology, the fourth section presents the research findings, and the fifth section concludes.

2. Literature Review

Tax compliance has been a subject of significant academic discourse, particularly concerning small and medium-sized enterprises (SMEs), which play a crucial role in economic development. Researchers developed various methods to identify the factors that influence the behavioral intention to comply with tax regulations. In essence, the Theory of Planned Behavior (TPB) is a popular method and has been widely applied in tax compliance research [3, 4]. The TPB suggests that individual behavior is driven by three core constructs: attitude, subjective norms, and perceived behavioral control, which collectively shape behavioral intention. Prior research has extended TPB by incorporating additional constructs such as patriotism to better explain tax compliance behavior [3, 5, 6]. For example, Bani-Khalid, et al. [3] in an attempt to determine the factors that influence tax compliance behavior among Jordanian SMEs, constructed a survey-based research focusing on the TPB. The study used Partial Least Squares Structural Equation Modeling (PLS-SEM) for analysis. The result indicated that all four determinants—attitude, subjective norms, perceived behavioral control, and patriotism—are significantly related to the intentions toward tax compliance. Similar findings were observed in Indonesia Inasius, et al. [7] and Malaysia Abd Hamid, et al. [8] reinforcing the robustness of the TPB framework. Empirical studies utilizing PLS-SEM confirmed that tax compliance is a multifaceted behavior influenced by both economic deterrents and behavioral factors. On the other hand, Devos [9] and Alm [10] argued that punitive measures alone are insufficient; rather, fostering positive taxpayer attitudes and strengthening social norms contribute to long-term compliance.

Several studies have also examined the impact of tax regime changes on compliance behavior. Heinemann and Kocher [11] explored how changes in tax structures affect compliance, while Tauchen, et al. [12] used compliance measurement program data to analyze taxpayer behavior. Additionally, Batabyal and Beladi [13] provided a theoretical analysis of tax evasion and optimal auditing strategies in developing countries. Similarly, Alshira'h and Abdul-Jabbar [6] adopted survey-based research focusing on the TPB and applied PLS-SEM to analyze the factors that affect tax compliance among Jordanian SMEs. The study found that tax audits and tax penalties have a positive significant association with sales tax compliance. In contrast, the tax rate was found to be statistically insignificant with the intention to comply with the sales tax. Moreover, the study also suggested a moderately significant influence of patriotism on the relationship between tax penalties, tax audits, and tax rates with the intention to comply with the sales tax in Jordan.

Furthermore, researchers such as Taing and Chang [4] adopted a quantitative approach using structured questionnaires to assess tax compliance determinants. The study collected data from 402 respondents based in Phnom Penh, Cambodia. The result indicated that tax morale, tax fairness, and tax complexity have a significant statistical relationship with the tax compliance intention. Other determinants such as the power of authority, trust in government, tax information, and tax awareness have no statistical relationship with the tax compliance intention. The use of PLS-SEM in similar

studies has demonstrated its effectiveness in analyzing complex models with latent variables, supporting the methodological choice for this research. These studies provide a broader context to tax compliance research, linking economic deterrence theories with behavioral insights.

In this research, the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach is adopted to investigate the factors influencing tax compliance intention among SMEs in Cambodia. The study is guided by four hypotheses: (1) Attitude toward taxation positively affects tax compliance intention, (2) subjective norms influence tax compliance intention, (3) perceived behavioral control has a significant impact on tax compliance intention, and (4) patriotism positively influences tax compliance intention.

2.1. Positive Attitude Toward Taxation

A positive attitude toward taxation is a significant predictor of tax compliance intention [14]. Several studies found a positive correlation between a positive attitude towards taxation and tax compliance Abdul-Razak and Adafula [14]; Guerra and Harrington [15] and Bani-Khalid, et al. [3]. Allingham and Sandmo [16] economic deterrence model suggested that taxpayers comply due to risk aversion, but the behavioral models emphasized the importance of intrinsic motivation. Casey and Scholz [17] argued that beyond deterrence, behavioral decision theory plays a significant role in tax compliance, reinforcing the idea that a positive attitude fosters voluntary compliance. Similarly, Onu [18] also agreed that taxpayers with a positive attitude toward the contribution of tax to national development are likely to comply with tax regulations voluntarily. Other research by Mei Tan and Chin-Fatt [19] and Guerra and Harrington [15] also emphasized that fairness in the tax system and government transparency are the determinants of taxpayers' attitudes, thereby affecting tax compliance behavior. Additionally, the behavioral decision theory also suggests that compliance attitudes stem from psychological and economic considerations [17]. A current study by Bani-Khalid, et al. [3] also found a significant relationship between attitude and the tax compliance intention of Jordanian SMEs.

In contrast, Guerra and Harrington [15] conducted cross-national surveys to examine attitude-behavior consistency in tax compliance. The results indicated that individuals' attitudes toward tax do not significantly reflect the actual evasion choices. The study went on to add that between Italians and Danish respondents, the discrepancies in tax behavior are significantly associated with gender and risk aversion. Junpath, et al. [20] further the research to investigate the role of the attitude of taxpayers toward tax compliance and tax amnesties in South Africa. The analysis emphasized that multiple tax amnesties might not enhance tax compliance intention, given that non-compliant taxpayers continue to evade taxation in anticipation of additional future amnesties. Although studies suggested contradicting results about the role of individuals' attitudes toward tax compliance intention, these methodological approaches supported the use of structured questionnaires and PLS-SEM in studying the determinants of tax compliance intention.

H₁: A positive attitude towards taxation has a significant positive effect on tax compliance intention.

2.2. Subjective Norm

Subjective norms refer to perceived social pressure to comply with tax regulations. Social norms have a strong influence on tax compliance behavior, particularly when peers, family, or professional networks encourage compliance Wenzel [21]; Cullis, et al. [22]. Jimenez and Iyer [23] surveyed 217 U.S. taxpayers and used structural equation modeling (SEM) to investigate the role of social norms and trust in government in influencing compliance behavior. The study concluded that social norms significantly affect tax compliance intention. Moreover, the study also suggested that trust in government and perceived fairness play an important role in shaping social norms. Similarly, several studies employed survey-based methodologies to examine subjective norms in tax compliance. For instance, Kirchler, et al. [24] conducted psychological experiments to explore shared subjective views among taxpayers. The finding indicated that treating taxpayers fairly and reasonably, explaining rules and decisions, and providing reliable information and answers to questions will improve tax

administrators' reputations and perceived procedural fairness, potentially leading to a greater tax compliance intention. Additionally, Palil and Mustapha [25] applied stratified random sampling techniques in their survey-based research, which aligns with the methodological approach of the present study. The examination shows that tax knowledge has a significant influence on the tax compliance intention in the self-assessment tax regime in Malaysia. Studies such as Cullis, et al. [22] also highlighted how the perception of social acceptance or disapproval impacts tax compliance. The research demonstrated that taxpayers who perceive stronger social norms in favor of compliance are more likely to adhere to tax regulations. Thus, subjective norms positively influence tax compliance intention.

H₂: Subjective norms positively influence tax compliance intention.

2.3. Perceived Behavioral Control

Perceived behavioral control (PBC) refers to an individual's perception of the ease or difficulty of tax compliance. Keramati, et al. [26] suggested that PBC encompasses ease of tax filing, financial ability, and knowledge of tax regulations. Studies indicated that when taxpayers perceive tax filing as difficult, their compliance intention diminishes [8]. Conversely, simplifying tax processes and improving taxpayer education enhance compliance Palil and Mustapha [25]. Alm [10] discussed motivational factors influencing tax compliance, highlighting the role of incentives and deterrence in shaping taxpayer behavior. On the other hand, Devos [9] suggested that factors such as tax knowledge, administrative efficiency, and accessibility of compliance mechanisms significantly shape PBC and its influence on tax compliance behavior. Research by Haryani, et al. [27] supported the notion that simplified online tax systems enhance perceived behavioral control, making compliance more accessible.

Keramati, et al. [26] employed an experimental research design to assess the acceptance of e-tax payment systems. The analysis highlighted the significance of perceived ease of use leading to greater acceptance. Similarly, Haryani, et al. [27] investigated behavioral intentions toward online tax filing using survey-based methodologies. The study also emphasized the PBC as a factor that influences the taxpayers' behavioral intention. Abd Hamid, et al. [8] conducted empirical research using regression analysis to determine factors affecting SME tax compliance. The research revealed that tax knowledge plays a significant role in shaping tax compliance intention among online companies in Malaysia. These methodological insights justify the selection of survey instruments and PLS-SEM for the study of tax compliance intention.

H₃: Perceived behavioral control has a significant positive impact on tax compliance intention.

2.4. Patriotism

Patriotism has emerged as a key factor influencing tax compliance. Studies show that patriotic individuals are more likely to comply with tax obligations due to their sense of national duty [5]. Research by Alshira'h and Abdul-Jabbar [6] suggested that when taxpayers associate tax compliance with national development, they exhibit higher compliance rates. In developing countries, where trust in institutions may be lower, patriotic sentiments can act as an intrinsic motivator for tax compliance [13]. The relationship between patriotism and tax compliance has also been explored in political psychology Guerra and Harrington [15].

Gangl, et al. [5] conducted an experimental study to examine patriotism's impact on tax compliance, providing empirical evidence for its role in fostering voluntary compliance. Alshira'h and Abdul-Jabbar [6] used PLS-SEM to quantify the relationship between patriotism and tax compliance in Jordanian SMEs. Similarly, Inasius [28] employed a survey-based methodology to assess SME tax compliance in Indonesia, demonstrating the applicability of such approaches to the Cambodian context.

H₄: Patriotism positively influences tax compliance intention.

This literature review highlighted the significance of attitude, subjective norms, perceived behavioral control, and patriotism in shaping tax compliance intention. Existing research supports the

applicability of the TPB framework while emphasizing the contextual relevance of patriotism as an additional determinant. By leveraging the insights from these studies, policymakers can design more effective tax policies to enhance compliance among SMEs. Additionally, insights from deterrence theory Allingham and Sandmo [16] and Devos [9] and behavioral economics Andreoni, et al. [29] provide a broader perspective on tax compliance motivations. Several studies, including Alm [10] and Heinemann and Kocher [11] have employed regression models to examine tax compliance behavior. Future research could explore the impact of digital tax solutions on SME compliance and investigate how enforcement mechanisms shape taxpayer compliance intention.

3. Methodology

This research employs Partial Least Squares Structural Equation Modeling (PLS-SEM) to examine the impact of four key factors—attitude (ATT), patriotism (PAT), perceived behavioral control (PBC), and subjective norms (SUN)—on the behavioral intention (BEI) of VAT compliance among SMEs. All five factors are latent variables, also referred to as unobserved variables, and will be assessed through observed variables, known as manifest variables. Specifically, seven manifest variables will be used to measure ATT, six for PAT, four for PBC, four for SUN, and three for BEI [30-32]. Data collection from respondents will be conducted through a questionnaire divided into two sections. The first section gathers demographic information, while the second measures the five constructs. All items in the questionnaire consist solely of closed-ended questions. Furthermore, the items in the second section are measured using a 5-point Likert scale, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

The evaluation of the model's fit involves conducting reliability and validity assessments. The reliability assessment aims to determine the internal consistency of the model. A composite reliability score exceeding 0.7 for each indicator or manifest variable indicates that the questionnaire instrument has reliable indicators. For convergent validity, it is necessary to achieve a minimum average variance extracted (AVE) value and a Cronbach's alpha of 0.5, as recommended by Hair, et al. [33]. Furthermore, this study employs the Fornell-Larcker criterion to assess the model's discriminant validity, in accordance with the guidelines set by Hair, et al. [34].

Table 1.
Definition of Variables.

Latent Variable		Manifest Variable
Attitude	ATT	ATT1
		ATT2
		ATT3
		ATT4
		ATT5
		ATT6
		ATT7
Patriotism	PAT	PAT1
		PAT2
		PAT3
		PAT4
		PAT5
		PAT6
Perceived Behavioral Control	PBC	PBC1
		PBC2
		PBC3
		PBC4
Subjective Norms	SUN	SUN1
		SUN2
		SUN3
		SUN4
Behavioral Intention	BEI	BEI1
		BEI2
		BEI3

The examination of the connection between manifest and latent variables, as well as the testing of hypotheses to evaluate the impacts of ATT, PAT, PBC, and SUN on BEI, is conducted through PLS-SEM. This method is notable for two key features: it demonstrates resilience against non-normal data distributions and is effective even with limited sample sizes [34, 35]. In order to evaluate the significant connections between latent variables within the context of PLS-SEM, the analytical procedure must unfold in two separate stages. The first stage, commonly known as the outer model or measurement model assessment, entails estimating the model while also assessing its reliability and validity. Following this, the second stage, referred to as the inner model or structural model assessment, is dedicated to analyzing the meaningful relationships that exist among the latent variables [33]. To assess a structural model, one must consider four fundamental evaluation criteria: R^2 , f^2 , Q^2 , and the hypothesis testing related to the path coefficients [36–38].

3.1. Sample Size

The determination of the sample size is established through a statistical method devised by Cochran [39] in the following manner:

$$n_0 = \frac{z^2 pq}{e^2}$$

The confidence level (CL) chosen is 95 percent, resulting in a precision level (e) of 5 percent. With respect to the selected CL, the z -score is 1.96, and the standard curve's abscissa intersects an area at the tails of z^2 , which is 3.84. The estimated proportion (p) of an attribute present in the population is assumed to be 0.5, while q is equal to $1 - p$. In view of these values, the required minimum size of the total sample is 385 observations or small and medium enterprises (SMEs) registered with the General Department of Taxation. It should be noted that the person completing the questionnaire is the manager of the company who can decide whether or not to comply with the VAT obligation.

3.2. Pilot Survey

In the initial survey, a selection of twenty managers from registered SMEs was invited to take part. These individuals were tasked with filling out a developed questionnaire. The primary aim of this pilot survey was to uncover any possible challenges or ambiguities associated with the questionnaire prior to the execution of the official survey. Throughout the pilot phase, the questionnaire was provided to the chosen participants, who were accountable for its completion. Any issues or inquiries that emerged during this process were recorded and utilized to refine and enhance the questionnaire.

4. Research Results

A total of 400 questionnaires were distributed to participants, resulting in 360 completed responses, which corresponds to a response rate of 90%. This outcome accounts for 93.5% of the target sample size, determined using the methodology proposed by Cochran [39]. The participants in the study included 25% from small enterprises and 75% from medium-sized companies, all of which are officially registered with the General Department of Taxation.

4.1. Assessment of the Measurement Model

The evaluation of the model's measurement is conducted through the assessment of its convergent and discriminant validities. To determine the presence of convergent validity, the loading factors and Cronbach's alpha for each manifest variable, which serve to measure the corresponding latent variables, are examined, with a minimum threshold set at 0.5. As illustrated in Figure 1, item two from the subjective norms, item seven from the attitude construct, along with items four and five from the patriotism construct, have been excluded from the Structural Equation Model (SEM) due to their loading factors falling below the established threshold. Additionally, as shown in Table 2, both the Cronbach's alpha and Average Variance Extracted (AVE) values exceed 0.5. Moreover, the Composite Reliability (CR) for each latent variable is above 0.7, as noted by Hair, et al. [33] indicating the presence of convergent validity.

Table 2.
Construct Reliability and Validity

Construct	Cronbach's alpha	CR (rho_a)	CR (rho_c)	AVE
ATT	0.736	0.799	0.815	0.631
PAT	0.755	0.834	0.843	0.579
PBC	0.747	0.831	0.834	0.564
SUN	0.803	0.851	0.883	0.718
BEI	0.757	0.795	0.86	0.675

The subsequent phase entails assessing discriminant validity through the Fornell-Larcker criterion. This criterion stipulates that the square root of the Average Variance Extracted (AVE) for each construct must surpass the correlations between that construct and other constructs. In more straightforward terms, the diagonal values, which denote the square roots of the AVE, should be greater than the off-diagonal values that indicate the correlations among the constructs [34]. As illustrated in Table 3, the discriminant validity among the variables has been confirmed. In conclusion, the measurement model meets the necessary standards for both validity and reliability concerning the indicators and variables.

Table 3.
Discriminant Validity Fornell-Larcker Criterion.

	ATT	BEI	PAT	PBC	SUN
ATT	0.656				
BEI	0.536	0.822			
PAT	0.594	0.636	0.761		
PBC	0.646	0.737	0.663	0.751	
SUN	0.607	0.736	0.615	0.658	0.847

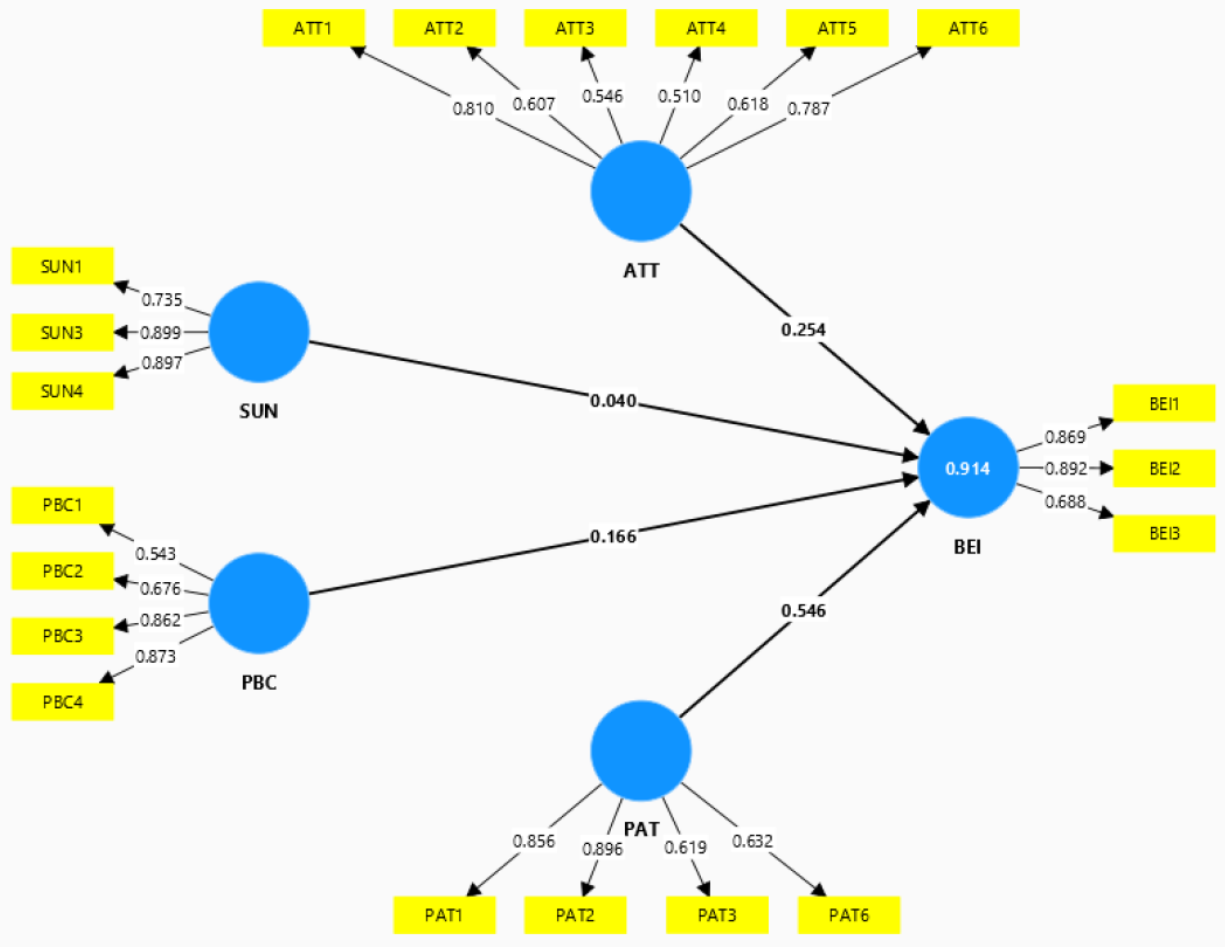


Figure 1.
Structural Equation Modelling (SEM).

In PLS-SEM, the R^2 statistic functions as a measure to assess the extent to which the variance in the dependent or endogenous constructs is explained by the independent or exogenous constructs present in the model [40]. As demonstrated in Figure 1, the R^2 value stands at 0.914, indicating that 91.4% of the variance in the dependent variable, identified as the BEI, is accounted for by the independent variables, namely ATT, PAT, PBC, and SUN.

The Variance Inflation Factor (VIF) is utilized as a measure to assess multicollinearity among predictor variables, often referred to as exogenous constructs or indicators. Multicollinearity refers to the degree of correlation that exists between independent variables, which can result in distortions in the estimated relationships within a statistical model. The data presented in Table 4 indicates that all VIF values are below 3, implying that the degree of multicollinearity remains within acceptable

thresholds. Although the predictor variables demonstrate a moderate level of correlation, the existing multicollinearity does not present any substantial concerns [41].

Table 4.
Collinearity statistics.

Manifest Variable	VIF
ATT1	1.884
ATT2	2.386
ATT3	2.144
ATT4	1.334
ATT5	1.448
ATT6	1.509
BEI1	1.847
BEI2	2.014
BEI3	1.297
PAT1	1.942
PAT2	2.294
PAT3	1.386
PAT6	1.276
PBC1	1.290
PBC2	1.443
PBC3	1.935
PBC4	1.943
SUN1	1.445
SUN3	2.497
SUN4	2.163

4.2. Structural Model Assessment

PLS-SEM is a nonparametric method; therefore, the significance of the path coefficients was assessed utilizing the bootstrapping method, based on 5000 re-samples [42].

Table 5.
Path coefficients.

Hypothesis	Relationship	Path Coefficient	T Statistics	P values	Decision	f ²
H1	ATT → BEI	0.254	3.068	0.002	Accepted	0.202
H2	PAT → BEI	0.546	4.398	0.000	Accepted	0.242
H3	PBC → BEI	0.166	1.033	0.302	Rejected	0.016
H4	SUN → BEI	0.040	0.673	0.501	Rejected	0.007

Table 5 illustrates a significant correlation between attitude and behavioral intention, with ($\beta_1 = 0.254, t = 3.068, p < 0.002$). This finding implies that an enhancement in taxpayers' attitudes is likely to foster a greater intention to comply with VAT regulations. Additionally, the data reveals a strong association between taxpayers' patriotism and their intention to adhere to VAT compliance, as indicated by ($\beta_2 = 0.546, t = 4.398, p < 0.000$). This suggests that increased levels of patriotism among taxpayers correspond to a heightened likelihood of compliance. Conversely, the study found no significant relationship between perceived behavioral control and subjective norms with respect to the intention to comply. The results presented in Table 5 further demonstrate that the impacts of perceived behavioral control and subjective norms on behavioral intention are minimal, with f^2 values of 0.016 and

0.007, respectively. In contrast, the effects of attitude and patriotism on behavioral intention are moderate, reflected in their f^2 values of 0.202 and 0.242, respectively [43].

The Q^2 statistic functions as a measure for assessing the predictive relevance of a model, especially in relation to endogenous constructs within the framework of PLS-SEM. This statistic indicates the model's ability to predict data points and the degree to which exogenous variables influence variations in endogenous variables [44, 45]. An estimated Q^2 value of 0.248 suggests that the model exhibits a moderate level of predictive relevance for the endogenous variables, implying it can explain roughly 24.8% of the variance present in the data. This outcome reveals that although the model shows a certain level of effectiveness in forecasting results, there is still room for improvement.

5. Conclusion

The aim of this research is to investigate the determinants that affect the behavioral intention of SMEs in Cambodia regarding VAT compliance. This study utilizes a framework based on PLS-SEM, incorporating five latent variables: attitude, patriotism, perceived behavioral control, subjective norms, and the behavioral intention to comply with VAT. These latent variables are operationalized through a total of 24 manifest variables, categorized into seven, six, four, four, and three items, respectively. The findings indicate the existence of convergent validity, supported by the loading factors, Cronbach's alpha, Average Variance Extracted, and Composite Reliability for each indicator. Additionally, the analysis confirms discriminant validity among the variables, as demonstrated by the Fornell-Larcker criterion.

The results demonstrate a significant positive influence of both attitude and patriotism on the intention to comply with VAT regulations. Conversely, perceived behavioral control and subjective norms do not exhibit a meaningful effect on this intention. Therefore, it can be concluded that the hypotheses $H1$ and $H2$ are validated, while $H3$ and $H4$ are not supported in this study. The f^2 statistic reveals that the effects of perceived behavioral control (0.016) and subjective norms (0.007) on behavioral intention towards VAT compliance are minimal, whereas the influences of attitude (0.202) and patriotism (0.242) are moderate. Furthermore, the Q^2 statistic value of 0.248 indicates that the model possesses a moderate level of predictive relevance regarding the endogenous variables, suggesting it accounts for approximately 24.8% of the variance in the data. This finding implies that while the model demonstrates a satisfactory capacity for predicting outcomes, there remains potential for enhancement.

Transparency:

The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

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