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The Identification of Factors Influencing Value-Added Tax Revenue Performance in Cambodia

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ABSTRACT

This research investigated the direct effect of a VAT audit, tax education, tax resource, and tax rate on tax revenue performance, including the indirect impact of tax resources on tax revenue performance through VAT audit or tax education. In this study, five latent variables were predicted by twenty reliable manifest variables as referring to confirmatory factor analysis. We analyzed causal relationships among latent constructs based on the structural equation model. The estimation of sample parameters and statistical tests for hypotheses testing of the direct effect of all latent variables on tax resource performance were performed under the maximum likelihood estimation method. From this method, the estimated sample parameters were 0.103 for VAT audit, 0.161 for tax education, 0.014 for tax rate, and 0.583 for tax resource. These variables had a direct statistically significant effect on tax resource performance. The estimation standard errors for the indirect effect hypotheses testing were developed under the maximum likelihood method and bootstrapping technique. The test results indicated that tax resources positively affected tax revenue performance through the mediation of VAT audit or tax education. Tax resources played the most critical latent variable in explaining tax revenue performance.

Keywords: Tax resource performance; CFA; SEM; Maximum likelihood; Bootstrapping

INTRODUCTION

The Value-Added Tax (VAT) accounted for an average of 32.65 percent of the total tax revenues over the last three years. The VAT collected 2019 was 7,057.67 billion Riel; it was 6,288.22 billion Riel in 2020 and 5,645.18 billion Riel in 2021 (MEF, 2022).

As demonstrated, the VAT revenue is approximately one-third of the total tax revenue. As a result, under the supervision of the Ministry of Economy and Finance (MEF), the General Department of Taxation (GDT) has paid enormous attention to controlling this type of tax to ensure sustainable tax revenue collection and achieve the annual target to minimize tax evasion and avoidance. At the same time, the Tax Crime Investigation Department was created to investigate tax fraud. According to the International Monetary Fund's (IMF) technical assistance report for tax administration modernization 2019-23 for Cambodia, it is recommended that to conduct tax fraud investigations and achieve good results effectively, human resource recruitment and appropriate assignment play a key role in supporting tax administration. Besides human resources, technology is also considered a core factor in tax administration. Hence, a Standard Integrated Government Tax Administration System (SIGTAS) should be developed to provide tax administration easy access to all the information needed to execute their job successfully instead of using traditional manual processing. For that reason, this system can also be considered new work automation, which not only helps to speed up the work process of the tax authorities but also increases their effectiveness in successfully executing tasks, especially tax audits.

The information technology platform should develop around three systems to modernize the tax system and provide leniency to the tax administration enforcing tax laws. These include the core system component, the compliance performance system, and the management information system. First, the core system component will support the main tasks of the tax administration, such as taxpayer registration, return processing, taxpayer and revenue accounting, and payment processing. Second, the compliance performance system will support the tax audits based on the risk analysis. Finally, the management information system will help provide accurate information to tax officers for appropriate decision-making (IMF, 2018).

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In Cambodia, a tax audit is performed through the assessment of financial reports and related documents that involve the business activities of taxpayers to certify whether they have a correct tax calculation, declaration, and payment regarding the law and regulation of taxation. A desk audit is conducted at the tax administration office that verifies whether the filing for tax returns declared by taxpayers is consistent with supported documents and information collected by tax officers from other sources. A desk audit is transformed into an on-site audit in case that high risk of systematic compliance is found linked to taxpayer information and documents provided to tax officers while conducting a desk audit. On-site audits will be operated at the business enterprises under investigation to assess the actual business activities of the enterprise via accounting recording and other related documents. The on-site audit is classified into two types: limited and comprehensive. "Limited audit: is a short-term and immediate audit on some kinds of taxes such as a special tax on some goods and services, public lighting tax, value-added tax (VAT) including refund and other taxes except income tax by checking the points that are of risks in accounting records and relevant documents," while "[c]omprehensive audit: is an audit conducted on all kinds of taxes and assess the accounting records of the enterprise by reviewing the actual business operation and verify it with the accounting records, financial reports and documents related to the business to ensure that the enterprise has prepared correct accounting reports and financial reports following the law and duly fulfill the tax obligation under the law and regulations on taxation." The process of tax audit has initiated by the idea of high-ranking government officers of the MEF and GDT and was considered to be one of the strategic policies of the Revenue Mobilization Strategy, which had been established to manage and collect taxes transparently and effectively (MEF, 2019).

Both human resources and information technology systems are considered to be tax resources that the tax administration can adopt to conduct an effective VAT Audit. The main aim of this research is to investigate whether the tax resource positively impacts tax revenue through the mediation of VAT audits or tax education.

LITERATURE REVIEW

VAT audit was a vital mechanism employed by the tax authority to verify whether taxpayers declare taxable liability correctly (Khwaja et al., 2011). A study by Olaoye and Ekundayo (2019) conducted in Nigeria indicated that tax turnover positively correlated with VAT audits. Moreover, the VAT turnover was also closely related to the tax education, tax rate, and relevant technology tax officers could deploy to audit the VAT payment. The effectiveness of tax collection depended heavily on the tax officers' capacity to perform auditing to prevent tax evasion. For instance, strengthening tax officers' capacity helped Ethiopia collect more VAT (Ayele, 2019). Likewise, a study on VAT collection in China indicated that the effectiveness of VAT auditing was realized on the knowledge of taxpayers, audit quality, and the state tax administration of China. The study also showed that the integrated state tax administration also had a positive statistical relationship with the effectiveness of auditing (Mattéo Godin et al., 2017).

The empirical evidence about an expanded model of taxpayer compliance from the United States and Hong Kong showed that tax education had a positive relationship with the effectiveness of the tax collection of tax authorities (Ameyaw et al., 2016). In addition to the studies above, similar research was conducted in Ghana to study the relationship between tax education and tax compliance. The researcher performed multiple regressions among committed compliance (CTC), general tax knowledge (GTK), fear-appealing messages, and compliance convenience. The null hypothesis stated that the GTK positively correlates with the CTC. The empirical results implied that the level of tax education defined the level of tax compliance (Trawule, 2017). This result corresponds to the study by Mochogu and Amayi (2013) in Tanzania. Concerning the method thereof, another study was conducted in Kenya. The result showed that the threat of fines and penalties has a positive relationship with the level of tax compliance. Also, tax compliance depends on the level of convenience to comply (Osebe, 2013).

In contrast, the lack of a tax education program, lack of capable tax officers, inadequate and loosened tax law enforcement, and lack of a mechanism to control the unregistered traders were the significant challenges at Bench Sheko Zone, Ethiopia. Those issues motivated tax evasion, which decreased tax turnover (Tebebu & Yitbarek, 2020). On the other hand, another study was conducted on the intention

of avoiding tax in Malaysia, focusing on education, gender, age, and religion. The empirical result indicated that highly educated older women were less interested in evading tax (Zandi & Rabbi, 2015).

The study in Ethiopia formulated nine variables, including tax audit resources, audit case selection, auditor capacity, tax protection system, tax automation, tax evasion, tax compliance, and amount before and after an audit, to investigate the impact of tax audits on tax turnover. The empirical result of this study showed that three variables had a positive relationship with tax turnover (Desalegn, 2020). To increase the effectiveness of tax collection, some EU members, Austria, Lithuania, Norway, and Portugal, adopted the Standard Audit File for Tax (SAF-T), which integrated the audit data from the accounting system. The study by Podik et al. (2019) confirmed that many authorities worldwide began to adopt the SAF-T thanks to the convenience of e-filing, which enabled taxpayers to easily and quickly file and pay tax. Meanwhile, the SAF-T helped tax officers quickly and easily conduct the audit. Thanks to its built-in feature, which enabled tax officers to easily access the program's audit tools, making the process of paying taxes faster and more efficient. As demonstrated, tax audits played a significant role in enforcing tax compliance. A set of questionnaires consisting of 48 items was created to study the behavior of the tax office in the Bauchi State Board of Internal Revenue, taxpayers, and private entities in Bauchi State, Nigeria. The descriptive statistic was applied to the collected data. The empirical result of this study showed that tax audits helped to reduce tax evasion and increase the effectiveness of tax collection. Likewise, increasing the capacity of tax officers to conduct tax audits remained a priority for the tax authority to strengthen tax law enforcement (Badara, 2012).

Similarly, another study was conducted in Hawassa City Revenue, South Ethiopia. The study surveyed 78 VAT-registered enterprises. The result showed that the knowledge of the taxpayers and tax officers was a significant factor that determined the level of tax compliance (Jerene, 2016). Based on the Pearson Correlation Coefficient, hypothesis testing was adopted to investigate whether the tax audit can help the collection of VAT or not. The null hypothesis was rejected, implying that the tax audit had a negative relationship with tax evasion but had a positive relationship with the tax turnover in Kaduna State, Nigeria. Furthermore, this study also indicated that the effectiveness of tax auditing depended on the resources the tax officers could use, such as computers and integrated VAT systems (Wuyah et al., 2018). Using the regression analysis by keeping the revenue protection system and tax automation constant, the result showed that the tax revenue collection would increase by 0.162 if the tax administration increased by one unit. This study also indicated that the tax audit increases the tax revenue turnover in Rwanda (Harelimana & Nyabirande, 2020).

Based on studies over the last 20 years, Indonesia's VAT turnover to GDP tended to decrease gradually. To explain such a scenario, Heru (2018) put the suspicion on three variables, tax expenditure policy, taxpayers' noncompliance, and the share of aggregate consumption in the economy. A multi-regression between VAT revenue and VAT gap due to noncompliance, VAT gap due to policy, and consumption, all as a percentage of GDP from 1995 to 2014, was conducted. The empirical results of this research indicated that tax expenditure policies and the extent of noncompliance with tax laws had a significant effect on the performance of VAT collection. The result of the research above was consistent with research conducted by Zeljko and Fareed (1993) applying the cross-section analysis in Europe and Central Asia. The study showed that tax administration and law enforcement played a vital role in VAT compliance and improving VAT collection performance. On the other hand, a study in ASEAN showed that the VAT rate significantly impacted tax revenue collection (Wijaya, 2020).

The key challenges to VAT revenue collection were due to the lack of accounting bookkeeping and the presenting and keeping of receipts related to the business transactions of the taxpayers, especially the lack of resources needed by the tax authority, such as information, communication, and technology (ICT). The lack of tax officers capable of conducting the audit and investigating tax evasion also posed a challenge to VAT revenue collection (Duangchay, 2016).

The reform of tax authority and VAT system helped the Bolivia Government successfully increase the VAT revenue. Bolivia's VAT was closed by improving tax policy and compliance gap (Matteo et al., 2017). Wuyah et al. (2018) found that strengthening the effectiveness of VAT collection took much work, especially for developing countries such as the Philippines, Vietnam, Malaysia, Thailand, and Indonesia. Those countries lacked information

technology for tax administration, particularly information technology to apply to VAT compliance for SMEs.

The literature above review indicates that Tax Revenue Performance (TRP) underlies several variables, including basic tax knowledge of taxpayers, tax rate, tax law enforcement, and particularly the ability of tax officers to audit VAT-registered taxpayers to determine whether their tax declaration and payment practices comply with tax laws. According to the studies conducted in Rwanda, Nigeria, ASEAN countries, Ethiopia, and EU member states, VAT audits positively impacted tax revenue performance. In other words, if tax officials conduct high-quality VAT audits, tax evasion by taxpayers will be as minimal as possible. However, the outcomes and effectiveness of VAT audits depend on more than just the tax expertise of the tax officers; they also require the use of available tax resources, such as computers and the Standard Integrated Government Tax Administration System, for audit purposes. It also depends on the number of tax auditors if it is sufficient to examine tax returns by VAT registered taxpayers, the tax auditors' ability to detect tax evasion and tax avoidance, and whether they are committed to professionally performing their audit activity.

The studied literature concentrates on the direct effects between tax resources and TRP or between VAT audits and TRP, but it ignores the indirect impacts that tax resources have on TRP due to VAT audit or tax education mediation functions. Thus, to fill this gap, this study evaluates the overall impact in Cambodia and the indirect relationship between TRE and TRP. In addition to TRE and VAT audits that could have an impact on TRP, tax education and tax rate will be entered as two other variables in a Structural Equation Model.

METHODOLOGY

This section covers the research methodologies employed in this paper, which include the multiple regression model, the estimated method of the model's parameters, the sampling technique and the determination of appropriate sample size, the development of the structural equation model, and the analysis of the collected data. This research employs a Structural Equation Model (SEM) to investigate the impact of four key factors: VAT Audit (VAU), Tax Education (TED), Tax Resource (TRE), and Tax Rate (TRA) on the Tax Revenue Performance (TRP) in Cambodia. All factors are unobserved variables, but they will be measured using the observed variables collected from the respondents. VAU is measured by five questions, the same as TRE and TRP, while TED and TRA are determined by six and four tools, respectively (See Table 1 for more detail). The general model of this study is presented in Equation 1 below:

$$TRP_i = \theta_1 VAU_i + \theta_2 TED_i + \theta_3 TRE_i + \theta_4 TRA_i + \epsilon_i \qquad (1)$$

Where $\Theta_1, \Theta_2, \Theta_3, \Theta_4$ are parameters to be estimated. ε_i are the residual or error terms. *i* represents individual firm from 1, ..., *n*. The estimated method of Model 1 is the Maximum Likelihood Estimation (MLE).

The likelihood function (LF) has the following form:

$$LF(\theta_1, \theta_2, \theta_3, \theta_4 | TRP_1, TRP_2, \dots, TRP_n) = \prod_{i=1}^{n} \left[\frac{1}{\sqrt{2\pi\sigma_i^2}} exp\left(-\frac{\epsilon_i^2}{2\sigma_i^2} \right) \right] \qquad (2)$$

The likelihood function can also be written as,

$$LF(\theta_1, \theta_2, \theta_3, \theta_4 | TRP_1, TRP_2, \dots, TRP_n) = \frac{1}{\sigma_i^n (2\pi)^n} exp\left(-\frac{1}{2} \sum_{i=1}^{n} \frac{\epsilon_i^2}{\sigma_i^2} \right) \qquad (3)$$

Take the logarithm of the *LF* to get,

$$lnLF(\theta_1, \theta_2, \theta_3, \theta_4 | TRP_1, TRP_2, \dots, TRP_n) = -nln\sqrt{2\pi} - \frac{n}{2} ln\sigma_i^2 - \frac{1}{2} \sum_{i=1}^{n} \left(\frac{\epsilon_i^2}{\sigma_i^2} \right) \qquad (4)$$

$$lnLF(\theta_1, \theta_2, \theta_3, \theta_4 | TRP_1, TRP_2, \dots, TRP_n) = -\frac{n}{2} ln(2\pi) - \frac{1}{2} \sum_{i=1}^{n} ln\sigma_i^2 - \frac{1}{2} \sum_{i=1}^{n} \left(\frac{\epsilon_i^2}{\sigma_i^2} \right) \qquad (5)$$

The calculus is applied to equation 5 in order to find the sample parameters $\hat{\theta}_1, \hat{\theta}_2, \hat{\theta}_3$ and $\hat{\theta}_4$ and that maximize the log-likelihood function.

In addition to studing the direct effect of a VAT audit, tax resource, tax education, and tax rate on tax revenue performance, this research has further investigated the mediation effect of TRE on TRP through the mediation of VAU or TED. The flow of the mediation effect is indicated below:

TRE --> VAU --> TRP

TRE --> TED --> TRP

This research uses primary data utilizing a survey of VAT-registered firms. A standardized questionnaire is developed and distributed to the target respondents through face-to-face meetings. The questionnaire is classified into five sections. Each section represents each factor: VAU, TED, TRE, TRA, and TRP, which all are determined to be unobserved variables. The observed data were collected using a 5-point Likert scale where one represents "Strongly Disagree," and five indicates "Strongly Agree."

The evaluation of the model's fitness is defined by applying the reliability and validity tests. The reliability test is carried out to determine the model's internal consistency. If the composite reliability is more than 0.7, the questionnaire instrument is considered to have good indicator reliability. A convergent validity prerequisite exists when the minimum average variance extraction value (AVE) is 0.5. Moreover, the Confirmatory Factor Analysis (CFA) is adopted to evaluate the model's suitability.

The sample size is determined based on a formula developed by Krejcie and Morgan (1970) as follows:

$$S = X^2NP\ (1 - P) \div d^2(N - 1) + X^2P\ (1 - P) \qquad (6)$$

Where S is the required sample size, X^2 is the table value of chi-square for 1 degree of freedom at the desired confidence level, *N* is the population size, *P* the proportional proportion (0.5), *d* the degree of accuracy expressed as a proportion (0.05). 150 VAT-registered taxpayers were randomly selected from the list to reduce sampling error at a minimal level. The sample size is then established using equation 6, and only 108 VAT-registered taxpayers are chosen at random from the 150- sample for the study.

Five VAT-registered taxpayers are randomly selected to complete the questionnaire in the development stage. The questionnaire was assigned to all of them to fulfill. Any problems or questions raised upon completing the questionnaire were recorded and used to update and improve the questionnaire.

Table 1: Measurement

Factors	Items	Measurement
VAT Audit (VAU)	VAU1	Tax audit takes within the tax office or desk audit, and VAT cross-checks to verify the VAT declared by the supplier and the VAT claim by the purchaser.
	VAU2	VAT audit affords auditors to determine the accurate tax liability of the taxpayers independently
	VAU3	VAT audit requires the taxpayers to be well-informed before the commencement of the audit
	VAU4	VAT audit allows physical verification of taxpayers' claims to confirm the facts and figures of the returns
	VAU5	VAT audit is used to reveal doubtful claims of capital allowance related to the previous or current year
Tax Education (TED)	TED1	Taxpayers' tax education is fundamental for tax compliance awareness
	TED2	Taxpayers' tax education programs reduce errors by empowering taxpayers with tax knowledge
	TED3	Tax education is highly carried out through television and other media channels, workshops, seminars, and forums
	TED4	Tax education proactively encourages voluntary tax compliance
	TED5	Tax education via door-to-door brings about increased tax compliance and broadens the tax base
	TED6	Tax education reduces tax evasion to the best minimum
Tax Resource (TRE)	TRE1	The number of auditors is sufficient to audit VAT return filing
	TRE2	There is a shortage of resource materials, including computers and the Standard Integrated Government Tax Administration System (SIGTAS), for audit purposes
	TRE3	Tax auditors are under the required academic states and attain experience from other tax institutions
	TRE4	The capacity of tax auditors to find out tax evasion and avoidance is a good position.
	TRE5	Tax auditors are committed to performing their audit activity with a good attitude
Tax Revenue Performance (TRP)	TRA1	Underreporting behavior is positively related to a high tax rate
	TRA2	The high tax rate is positively related to tax evasion
	TRA3	The tax rate has no positive or negative effect on tax revenue performance
	TRA4	The current tax rate has served more than 10 years, so it should be revised soon
Tax Revenue Performance (TRP)	TRP1	An Electronic-tax system increases revenue collection
	TRP2	Audits are conducted on a timely basis to verify if the taxpayer has correctly reported and assessed their obligations
	TRP3	Taxation Department provides audit notifications to the taxpayers on time
	TRP4	Tax officer provides notifications to the taxpayers on time
	TRP5	Tax officers can identify tax evaders through audit

Source: Constructed by authors

Hypothesis 1 (H1):	VAT audit has a positive significant effect on tax revenue performance.
Hypothesis 2 (H2):	Tax resource has a positive significant effect on tax revenue performance.
Hypothesis 3 (H3):	Tax education has a positive significant effect on tax revenue performance.

Hypothesis 4 (H4):	Tax rate has a positive significant effect on tax revenue performance.
Hypothesis 5 (H5):	Tax resource has a positive significant effect on VAT audit.
Hypothesis 6 (H6):	Tax resource has a positive significant effect on tax revenue performance through the mediation of VAT audit.
Hypothesis 7 (H7):	Tax resource significantly affects tax education.
Hypothesis 8 (H8):	Tax resource positively affects tax revenue performance by mediating tax education.

EMPIRICAL RESULTS

A Structural Equation Model (SEM) was applied to assess the direct effect of Tax Resource (TRE), VAT Audit (VAU), Tax Education (TED), and Tax Rates (TRA) on Tax Revenue Performance (TRP). This research also tried to measure the indirect impact of tax resources on tax revenue performance by mediating VAT audit or tax education. All variables in this study were determined to be unobserved variables known as latent variables or latent constructs, which are predicted by the observed variables, so-called manifest variables. The five developed latent constructs were observed by twenty-five questions or items classified into five items for VAT audit, six items for tax education, five for tax resource, four for tax rate, and five for tax revenue performance. One hundred thirteen companies participated by responding to the questionnaire, but after getting through the cleaning process, one company was eliminated due to the standard error of the choices selected of that company had a value less than 0.3. With the collected data set, confirmatory factor analysis was initially carried out, and the loading factor of each item must be no less than 0.5. Otherwise, it will be deleted. Regarding CFA results, three questions were omitted from the system because their loading factors needed to pass the threshold. Those items included TRE2-There is a shortage of resource materials, including computers and Standard Integrated Government Tax Administration System (SIGTAS), for audit purposes from tax resources, TED5-Tax education via-door-to-door brings about increased tax compliance and broaden the tax base part of tax education, and TRA3-Tax rate does not have any positive or negative effect on tax revenue performance from the tax rate.

Table 2: The goodness of fit test, CFA

Indices	Value	References	Threshold
IFI	0.915	Meyer et al., 2005	> 0.90
CFI	0.938	Bentler, 1990 & Hatcher, 1994	> 0.90
NFI	0.946	Bentler and Bonett, 1980	> 0.90
RMSE	0.062	Byrne, 2001 & Meyer et al., 2005	< 0.08
SRMSR	0.073	Hair et al., 2009	<0.09

Source: Constructed by authors.

The result of the model fit indicated that the chi-square or CMIN has a value of 283.605 and a degree of freedom (DF) of 199. However, its probability value is smaller than 5 percent, indicating that the hypothesized model differs significantly from the observed model. Yet, the CMIN/DF is 1.425, considered a good result (Hair et al., 2009). Moreover, to assess the model fit, this research used the following indices: Incremental Fit Index (IFI), Comparative Fit Index (CFI), Normed Fit Index (NFI), Root Mean Square Error (RMSE), and Standard Root Mean Square Residual (SRMSR). As compared between all of the indices and concerning its threshold, it can be claimed that the model fits the data well.

It is vital to generate convergent validity, discriminant validity, and reliability when conducting the CFA; otherwise, continuing to run a causal model test is regarded as unfeasible. When we created the construct reliability, composite reliability (CR), and MaxR(H), each construct value must be greater than 0.7. Likewise, in demonstrating convergent validity, CR must have a value greater than the Average Variance Extracted (AVE). Notably, the AVE of each construct must be greater than 0.5, and the correlation between one construct and another must be statistically significant. Furthermore, the heterotrait-monotrait ratio of correlation (HTMT) is adopted to check the discriminant validity. In addition, to guarantee the constructs are discriminated, HTMT must be smaller than 0.9.

Table 3: Validity analysis

	CR	AVE	MSV	MaxR(H)	VAU	TRE	TED	TRA	TRP
VAU	0.907	0.662	0.18	0.928	0.814				
TRE	0.800	0.504	0.439	0.818	0.229*	0.71			
TED	0.835	0.507	0.18	0.857	0.424***	0.356**	0.712		
TRA	0.896	0.748	0.003	0.984	-0.055	0.034	0.014	0.865	
TRP	0.882	0.601	0.439	0.891	0.312**	0.663***	0.420**	0.028	0.775

Source: Estimated by authors using AMOS.

Regarding the validity analysis in Table 3, the CR of all the constructs is more significant than 0.7. The correlation between one construct and another is effective at the 1, 5, and 10 percent significant levels, except for the correlation between VAU, TRE, TED, and TRA, which is insignificant. In conclusion, there are no validity concerns.

The HTMT analysis in Table 4 indicates that the HTMT of all the constructs is lesser than 0.9. Based on this result, all the constructs are assumed to be discriminated. After completing the confirmatory factor analysis, the following process is conducting path analysis using a structural equation model. The objectives of using this model in this research are to assess the direct effect of a VAT audit, tax resource, tax education, and tax rate on tax revenue performance. Other main objectives of the model are to assess the indirect effect of tax resources on tax resource performance through VAT audit or tax education. Before conducting any hypotheses testing, which conclude from SEM, the assessment of the model fit was needed to perform again.

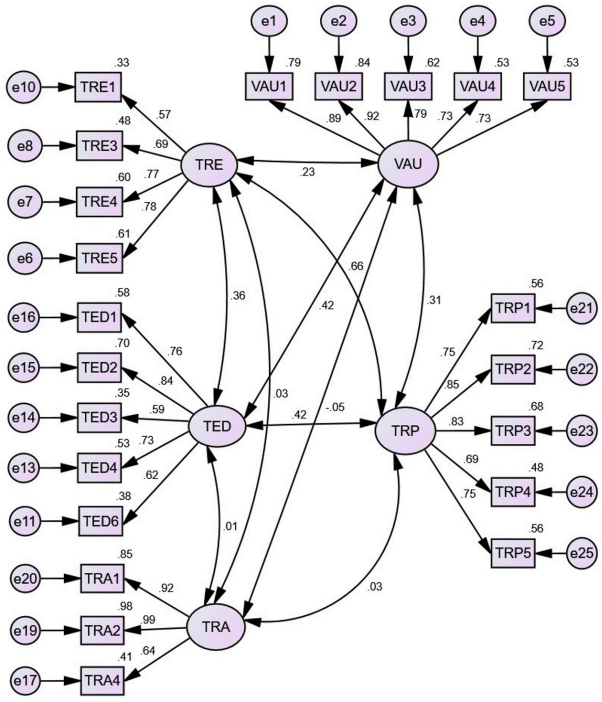

Figure 1: Confirmatory Factor Analysis

Source: Constructed by authors using AMOS.

Table 4: HTMT analysis

Later Variable	VAU	TRE	TED	TRA	TRP
VAU					
TRE	0.268				
TED	0.436	0.357			
TRA	0.067	0.074	0.018		
TRP	0.351	0.659	0.419	0.066	

Source: Estimated by authors using AMOS.

The loading factors of all items used to estimate the latent variables still exceed 0.5 (See Figure 2: Structural Equation Model). These results are consistence with the CFA; the total number of manifest and latent variables remain the same. The calculated value of chi-square is 296.401, and the degree of freedom is 202, which generates a 1.467 ratio of chi-square over the degree of freedom since the calculated ratio is less

than 0.3, as referring to Hair et al. (2005), the model is a good fit. Alternatively, the indices fit, Incremental Fit Index, Comparative Fit Index, Normed Fit Index, Root Mean Square Error, and Standard Root Mean Square Residual all pass the thresholds in Table 5.

Table 5: The goodness of fit test, SEM

Indices	Value	References	Threshold
IFI	0.932	Meyer et al., 2005	> 0.90
CFI	0.931	Bentler, 1990 & Hatcher, 1994	> 0.90
NFI	0.921	Bentler and Bonett, 1980	> 0.90
RMSE	0.065	Byrne, 2010 & Meyer et al., 2005	< 0.08
SRMSR	0.064	Hair et al., 2005	<0.09

Source: Constructed by authors.

The estimated parameters of the model were developed using the Maximum Likelihood Estimation method, and the standard errors for statistical tests were developed under Fisher Information Matrix. The sample parameters and estimated standard errors found based on this method were used in calculating statistical tests for hypotheses testing. The causal relationship among latent variables or latent constructs can be assessed through path analysis. The estimated results of path coefficients are presented in Table 6.

The empirical findings suggested that the slope coefficient of tax education was 0.161 since the critical ratio (CR) was 6.6150, and the probability value (p-value) was 0.000 lower than the significant level of 0.01 or 1 percent. Thus, the null hypothesis was rejected, which claimed that tax education had a positive significant effect on tax revenue performance. The estimated sample parameter of tax rate was 0.014, which was lower than the sample parameter of tax education. Even though the parameter was positive, it was concluded that the tax rate was weakly statistically explained tax revenue performance because the p-value of 0.079 was lower than the level of significance of 0.1 or 10 percent. This research has further shown that the increase in the efficiency of a VAT audit, the better the tax revenue performance because the sample coefficient of VAT audit was found to be 0.103 and statistically significant at 1 percent level due to the probability value associated with CR being close to zero. It is worth recalling that five observed variables determined VAT audit, VAU1-Tax audit takes within the premises of tax officials, VAU2-VAT audit affords auditors to determine the accurate tax liability of the taxpayers independently, VAU3-VAT audit requires the taxpayers to be well-informed before the commencement of the audit, VAU4-VAT audit allows physical verification of taxpayers claims to confirm the facts and figures of the returns, and VAU5- VAT audit is used to reveal doubtful claim of capital allowance related to the previous or current. One of the latent variables which play the most crucial role in this research is tax resource as indicated in the confirmative factor analysis; it had been explained by four manifest variables, including TRE1-The number of auditors is sufficient to audit VAT return filing, TRE3-Tax auditors are under the required academic states and attain experience from other tax institutions, TRE4-The capacity of tax auditors to find out tax evasion is in a good position, and TRE5-Tax auditors are committed to performing their audit activity with a good attitude.

This research has tried to investigate not just only the direct effect which might have happened between tax resources and tax revenue performance but this study has tried to find out the indirect effect which might have incurred between tax resources and tax revenue performance through VAT audit or tax education. Hypothesis 2 (H2) stated that tax resource has a positive significant effect on tax revenue performance, which was highly accepted since the probability value associated with the critical ratio was close to zero, lower than the significant level of 1 percent, especially the estimated parameter of 0.583, which was positive. More interestingly, Hypothesis 5 (H5), which described that tax resource has a positive significant effect on VAT audit, was also accepted, but at a 5 percent considerable level owing to the probability value was 0.016 and the estimated slope coefficient was 0.261. Moreover, the causal relationship between tax resource and tax education were also observed. The estimated slope parameter was 0.381 since the probability value was 0.002, lower than the 1 percent significant level; thus, Hypothesis 7 (H7) described that Tax resource has a positive significant effect on tax education was highly accepted.

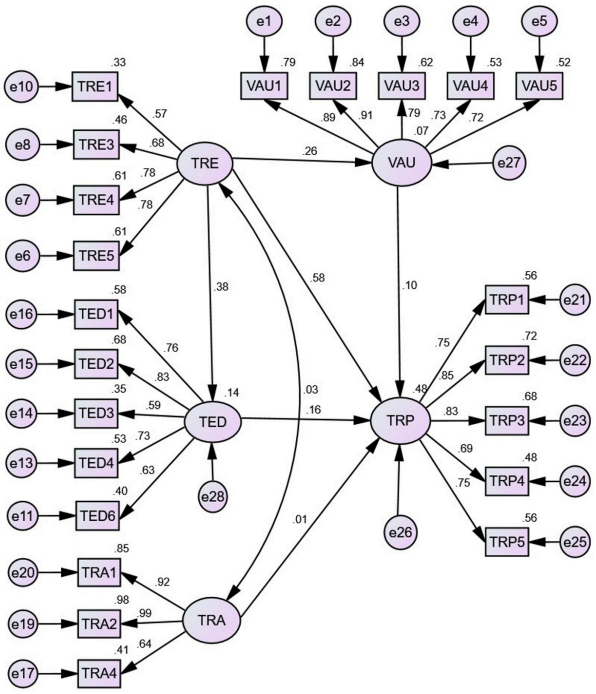

Figure 2: Structural Equation Model

Source: Constructed by authors using AMOS.

This research has also tried to investigate the indirect effect of tax resources on tax revenue performance through VAT audit or tax education. Regarding the technical measurement in the Analysis of Moment Structure (AMOS) software application, the maximum likelihood estimation method produced just only the estimated sample parameters and standard errors for statistical testing of direct effect among variables in the system, but the test of statistics was not available for indirect effect hypotheses testing. Hence, to establish standard errors for hypotheses testing, the bootstrapping technique was combined with the maximum likelihood estimation method to determine the lower and upper bounds of the 95 percent confidence interval.

Table 6: Path analysis

Latent Variable			Estimate	S.E.	C.R.	P
VAU	←	TRE	0.261	0.1088	2.3980	0.016
TED	←	TRE	0.381	0.1215	3.1358	0.002
TRP	←	TED	0.161	0.0243	6.6150	***
TRP	←	TRA	0.014	0.0079	1.7722	0.079
TRP	←	VAU	0.103	0.0197	5.2284	***
TRP	←	TRE	0.583	0.1239	4.7054	***

Source: Estimated by authors using AMOS.

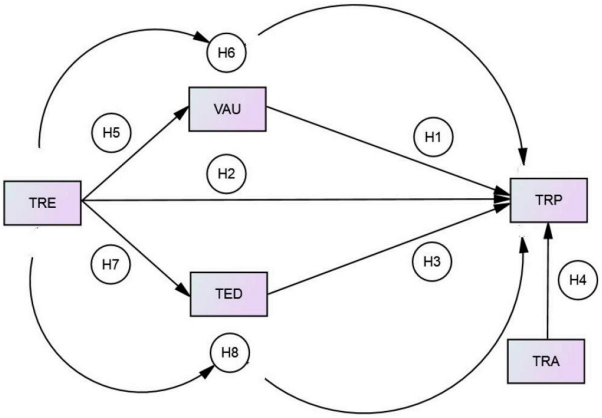

Figure 3: Hypotheses

Source: Constructed by authors using AMOS.

This study conducted 1000 bootstrapping samples. The lower and upper bounds of the 95 percent confidence interval, which represented the indirect effect of tax resources on tax revenue performance through the mediation of VAT audit, were 0.280 and 0.706, respectively. The null hypothesis was set to equal to zero, which fell outside the 95 percent confidence interval. Since the standardized coefficient of the indirect effect was 0.0269, it was concluded that tax resources had a positive significant effect on tax revenue performance through the mediation of VAT audit. In addition, the standardized sample parameter that indicated the indirect effect of tax resources on tax revenue performance through tax education was 0.061. Hypothesis 8 (H8) stated that tax resource has a positive significant effect on tax revenue performance through the mediation of tax education was accepted because the null hypothesis of zero fell outside the lower bound (0.318) and upper bound (0.827).

CONCLUSION

The objectives of this paper were to investigate the direct effect of the value-added tax audit, tax resource, tax education, and tax rate on tax revenue performance. This research further assessed whether there was an indirect effect of tax resources on tax revenue performance through VAT audit or tax education. Five latent variables were developed under the measurement of twenty-five manifest variables. After going through a confirmatory factor analysis, three observed variables were eliminated. The structural relationship between observed and unobserved variables were carried out using a structural equation model. VAT audit, tax resource, tax

education, and tax rate positively affected tax revenue performance. These effects were classified as direct effects. A latent variable, tax resource, was predicted by four manifest variables, including the number of auditors in the staff is sufficient to audit the reported VAT registered taxpayers file, tax auditors are under the required academic states and attain experience from other tax institutions, the capacity of tax auditors to find out tax evasion is in a good position, and tax auditors are committed to performing their audit activity with a good personality, played the most critical indicator in explaining tax revenue performance since it produced the most excellent estimated parameter of 0.583 as compared to other independent variables. This variable had not just a direct effect on VAT audit and tax education; on the other hand, it had an indirect effect on tax revenue performance through the mediation of VAT audit or tax education. In brief, the better the tax resource, the better the tax revenue performance. Another latent variable that was also determined to be one of the most significant players influencing tax revenue performance was tax education; its path coefficient was 0.161, the second highest one. The results of this research were consistent with most of the reviewed literature. The path coefficient of the tax rate latent variable was estimated to be 0.014, the least sample parameter compared to other parameters in the model. Nonetheless, it had a weakly significant effect on tax revenue performance.

For many years, GDT, under the direction of MEF, has developed and implemented various strategic policies designed to improve the efficiency of tax collection. Among the policies that have been implemented, human resource development is a primary strategic objective for GDT. For instance, many tests are administered during recruitment for headquarters and branch personnel to choose only the most qualified applicants. Moreover, before beginning employment, the selected candidates must complete several taxation courses taught by seasoned tax officers with years of experience in the tax sector. In addition to enhancing the tax officers' capabilities, GDT regularly nominated its tax officers to participate in interviews and seminars broadcast on radio, television, and social media to increase public knowledge of tax laws and compliance. Likewise, developing an IT system for managing taxes is a crucial approach for GDT. Over the past few decades, GDT has significantly invested in developing an IT system for managing taxes, enabling firms to quickly register for taxes, declare them, and make payments via a digital system. This technology has substantially improved the effectiveness of the tax officers. The empirical results and hypothesis testing used in this study to determine the factors affecting TRP are compatible with implementing GDT strategic policies, including the tax resource and tax education crucial to enhancing TRP.

Cambodia employs a self-assessment tax system, and the size of the enterprises is categorized into three types, small, medium, and large taxpayers. The GDT has implemented several initiatives that allow taxpayers to submit their tax returns online to boost the efficiency of collecting VAT. This enables tax authorities to carry out the VAT cross-check and makes it easier for taxpayers to disclose and pay their taxes. In the meantime, GDT encourages users to submit their receipts via the GDT Lucky Draw app. The GDT's plan aids in boosting the annual growth of VAT turnover. The diligent effort of the GDT officers, who constantly assist in educating the public about tax registration, declaration, and payment processes, mainly helping educate business owners about the receipts system, is also to be commended. The tax authority's implementation of the VAT administration has produced impressive results, as seen by the yearly rise in tax income. These achievements are consistent with the empirical findings of this study's hypotheses testing.

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