

# Research Factors Affecting Professional Skepticism and Audit Quality: Evidence in Vietnam

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This study was conducted on the basis of data collected from 513 auditors to measure the factors affecting the professional scepticism of the auditors and the quality of audit output. The methods of descriptive statistics, Cronbach's Alpha, Exploratory Factor Analysis (EFA), Confirmatory Factor Analysis (CFA) and Structural Equation Modelling (SEM) were used in this study. The research result show that: professional scepticism is highly influenced by traits, time and audit workloads. At the same time, the professional scepticism and time and audit workloads have a decisive influence on the audit quality. In contrast, the audit quality has a great influence on the auditor's knowledge and experience. However, the results of the study also show that, despite the impact on the professional scepticism of the auditor, the characteristics of evidence, incentives, knowledge and experience of auditors are not statistically significant. The results of this study are a scientific basis for managers in auditing firms to make the right decisions to improve their auditors and the quality of their services.

**Key words:** *Professional scepticism, Audit quality, Auditor, Vietnam, Structural Equation Modelling.*

## Introduction

There have been a number of studies that have examined the factors that affect professional scepticism and the quality of output audits, such as the studies Nelson (2009), Hurt (2010), Hurtt et al. (2013), Carpenter & Reimers (2013), Brazel et al (2016), Persellin et al. (2018),

Westerman et al. (2014), Zarefar et al. (2016). All these studies share the view that job scepticism is impacting on the quality of output audits and is influenced by various factors.

In Vietnam, the issue of quality audit output has been heavily discussed in the studies of various authors. However, for a deep study of professional scepticism, the factors that influence this attitude and its impact on the quality of the output audit, few authors are mentioned. There are authors like Lam (2011), Hai (2016), Thuy (2014), Pham et al (2014), Dung (2015), Hai et al (2019). It refers to the role of the auditor for auditing quality. However, these studies have not explored, explored and measured the impact of factors affecting professional scepticism, the effect of this attitude on the quality of output audits.

Recently, some authors have mentioned the basic theory of professional scepticism, such as Phuoc (2018), Van (2018). However, there is no empirical study on this issue at present. This is also the reason for the author to study and publish the results of his research in this article. The goal of this research is to help managers in auditing firms understand the causes and factors that affect the professional scepticism of the auditor in the past. The audit is performed and from there, suggestions, solutions and recommendations to enhance the professional scepticism of auditors will help to improve the quality of audit output that the company provides customers.

## **Theoretical Basis and Research Model**

### ***Theoretical Basis***

#### ***Audit Quality***

The audit quality is the study subject of many scientists and according to the research by Arezoo (2011), the audit quality is a potential area for researchers to undertake. This means many valuable research projects to come, which will provide information for the competent state authorities, audit experts, and users of the financial statements.

According to the GAO (2003,13), "the audit quality is consistent with the generally accepted audit standards (GAAS) to provide reasonable assurance that the financial statements have been audited and relevant disclosures are: (1) presented in accordance with generally accepted accounting principles (GAAP) and (2) no significant issues related to errors or fraud."

Some authors argue that the quality of the audit is questionable in terms of: (1) the possibility that auditors will (a) discover shortcomings in the customer's accounting system and ( b) make a report on these restrictions (DeAngelo, 1981; Watts and Zimmerman, 1983); (2) the possibility that auditors refuse to issue full acceptance reports for financial statements

containing major errors (Lee & Gu, 1998); (3) the level of compliance with audit standards during the audit implementation process (Aldhizer et al., 1995; McConnell & Banks, 1998; Krishnan & Schauer, 2000); (4) the possibility that auditors can reduce errors and improve the accuracy of accounting data (Wallace, 1987); The truthfulness of the financial information presented on the financial statement after audit (Beatty, 1989; Krinsky & Rotenberg, 1989; Davidson & Neu, 1993).

In Vietnam, currently, there are a lot of studies on the audit quality and basically all researchers share the same viewpoint that: The audit quality is a broad concept that is understood and expressed in many respects and is subjected to the influence of many different factors both inside and outside of the audit business. Predominantly, of all this research is the study of the authors: Lam (2011), Thuy (2014), Pham et al. (2014), Hai (2016), Dung (2015), Pham et al. (2017), Hai et al. (2019).

### **Professional Scepticism and the Factors Affecting Professional Scepticism**

According to the Vietnamese Auditing Standards (VSA 200), "professional scepticism is an attitude that is always questionable, alert to specific situations, which may be a sign of error, confusion or fraud, should be carefully assessed for audit evidence". Professional scepticism (PS) is an important component of the auditor's mindset and exercising the PSI is an essential characteristic of a quality auditor (Nelson, 2009). Hurtt et al. (2013) argue that auditors' professional scepticism may be influenced by internal and external factors.

Nelson's (2009) study argues that this professional scepticism is influenced by elements of the evidential input; the incentive of the auditing enterprise (Incentives); Characteristics of auditors (Traits); Knowledge, experience and training. Finally, this professional scepticism affects the quality of evidential outcomes and affects audit results.

***Traits and Personalities of Auditors:*** According to research results of Nelson (2009), Hurtt et al. (2013), this is the factor affecting the professional scepticism. Because each auditor has a training process with different qualifications, the personality of each person is different. Most of the auditors have a long experience of working, they are more careful, meticulous, alert to specific situations in the process of auditing.

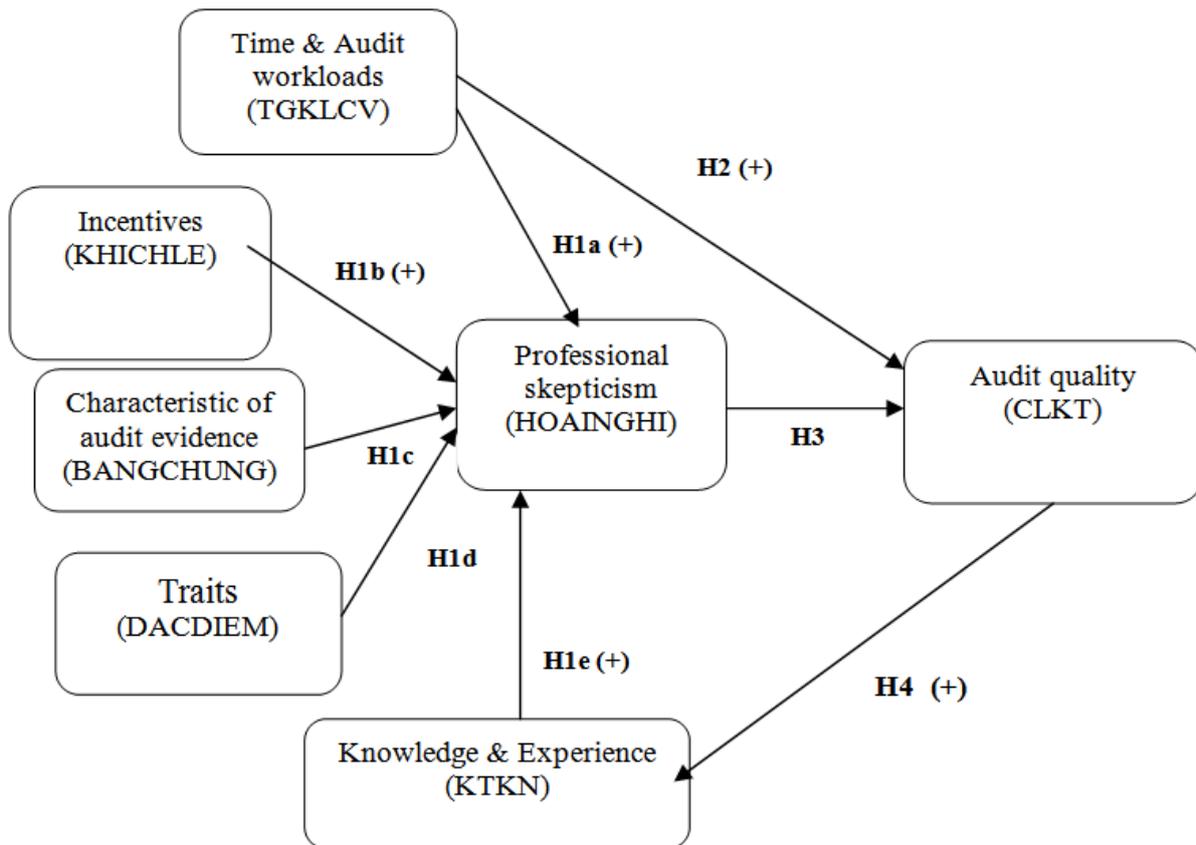
***Incentives:*** Research by Nelson (2009), Brazel et al. (2016) shows that the auditing firms' policy on reward and punishment for auditors in the audit process gives them motivation in increasing the professional scepticism, contributing to reducing audit risk and improving the quality of output audit results.

**Characteristic of Audit Evidence:** The research of Zarefar et al (2016), professional scepticism is the result of the auditor's ethics, experience and competence and has an impact on audit quality output. Earlier, Hurtt et al (2013) from the inheritance of the research model of Nelson (2009) suggested that professional scepticism is influenced by four factors: auditor characteristics, *evidence characteristics*, client characteristics and environmental characteristics..

**Time & Audit Workloads:** Studies by Persellin et al. (2014), (Brazel et al. (2016), both argue that a longer auditing time for an item can reduce the scepticism. Therefore, DNIs need to limit auditing time and rotation, and Westerman et al (2014) conclude that the amount of work assigned to large technicians increases the pressure on accountability and the completion time which then impacts professional scepticism.

**Model and Hypothesis**

**Figure 1.** The proposed reasearch model



Research hypotheses are specified as follows:

**Hypothesis H1a:** The time and audit workloads have a positive influence on the professional scepticism of auditor.

**Hypothesis H1b:** Incentives in the policy of the audit firms has a positive effect on auditor's professional scepticism.

**Hypothesis H1:** Characteristics of auditing evidence have a positive effect on auditor's professional scepticism.

**Hypothesis H1d:** Auditors' Traits have a positive effect on their professional scepticism.

**Hypothesis H1e:** Auditors' knowledge and experience have a positive effect on auditors' professional scepticism.

**Hypothesis H2:** The time and audit workloads have a positive influence on the audit of quality.

**Hypothesis H3:** Auditors' professional scepticism has a positive influence on the audit of quality

**Hypothesis H4:** Audit of quality has a positive influence on knowledge and experience of auditor.

## **Research Methodology**

### ***Data collection***

To test the hypotheses of the study, the author collected data from the auditors currently working directly in the auditing firms in Vietnam. The data collection is done by issuing questionnaires directly, sending a questionnaire via Google Drive, emails to the auditors, and the respondents answered by filling in the questionnaire independently, answering emails, filling in the available files on Google drive questions. Results were analysed using SPSS software, the scale is calibrated to determine reliability. Then the models are established for testing the research hypothesis

### ***Scale***

Researchers designed a questionnaire with 32 observations including 2 dependent variables, using the 5-level Likert scale (Score 1: Absolutely disagree, Score 5: Absolutely agree). Questionnaires and scales were checked and adjusted based on 4 bases: (1) qualitative research, (2) expert interviews (10), (3) in-depth interviews with 20 auditors, (4) Results of survey test 50 samples.

The scale of time and audit workload (symbol: TGKLCV). This scale is expressed through 5 observable variables; Scale of Incentives (Symbol: KHICHLE) with 4 observations; Scale of audit evidence (Symbol: BANGCHUNG) with 4 observations; Scale of Traits (symbol:

DACDIEM) with four observations; Scale of Knowledge and experience (symbol: KTKN) is represented by five observations; Scale auditor's professional scepticism (symbol: HOAINGHI) is represented by five observations; Scale of audit quality (CLKT) is represented by 5 observations.

The content of these scales is inherited and corrected in studies by Nelson (2009), Kathy Hurtt and her associates (2013); Noel Harding (2016); Christina Chiang (2016); Hurtt et al (2010, 2013), Arumega Zarefar et al (2016), Brazel (2018).

### ***Sample Size***

The author sent the questionnaire by issuing questionnaires, sending them via google drive, emailing to 700 auditors on the list provided by the Vietnam Association of Certified Public Accountants in the period from April 2017 to June 2018. As a result, there were about 160 auditors who did not respond to the questionnaire. After rejecting the invalid responses, 513 questionnaires were submitted. Compared with the original 32-item questionnaires, the sample size was at least  $32 \times 5 = 160$ , and the number of questionnaires was appropriate. According to Bollen (1989), the appropriate ratio for choosing the sample size with the number of parameters in the metric analysis should be 5:1.

### ***Analytical Methods***

The author tests the model using SPSS 20 software in combination with AMOS 20 through the following steps:

- Scale Verification: Scales are tested in three techniques: Cronbach's Alpha Reliability Factor, Exploratory Factor Analysis EFA, Confirmatory factor analysis CFA.
- Model testing: The proposed theoretical model and theoretical hypotheses were tested by structural equation model analysis (SEM) with AMOS 20 software.

### **Research Results**

#### ***Descriptive Statistics about the Sample***

SPSS 20.0 software was used to conduct the analysis in the study. With the valid responses from 267 auditors, information is shown in detail in Table 1.

**Table 1:** Sample survey statistics

Characteristics	Frequencies	Percent%
<b>Sex</b>	<b>N = 513</b>	<b>100%</b>
Male	344	67.1%
Female	169	32.9%
<b>Work experience</b>	<b>N = 513</b>	<b>100%</b>
Under 5 years	140	27.3%
From 5 to 10 years	193	37.6%
From 10 to 15 years	71	13.8%
From 15 to 20 years	84	16.4%
Over 20 years	25	4.9%
<b>The age of auditor</b>	<b>N = 513</b>	<b>100%</b>
Under 25 years old	142	27.7%
From 25 to 35 years old	169	32.9%
From 35 to 45 years old	88	17.2%
From 45 to 55 years old	86	16.8%
Over 55 years old	28	5.5%

### *Cronbach's Alpha*

**Table 2:** Cronbach's alpha output

Scale	Symbol	Number of observed variables	Cronbach's Alpha
<b>Independent variables</b>			
1.Knowledge and experience	KTKN	5	0.795
2.Characteristic of evidence	BANGCHUNG	4	0.743
3.Time and audit workloads	TGKLCV	5	0.762
4.Incentives	KHICHLE	4	0.704
5.Traits	DACDIEM	4	0.729
<b>Dependent variables</b>			
1.Professional scepticism	HOANGHI	5	0.759
2. Audit quality	CLCV	5	0.820

Cronbach's Alpha test results for the scale shown in Table 2 above show that these scales have a coefficient of Cronbach's Alpha > 0.6 and a total correlation coefficient of > 0.3. Thus, after the Cronbach's Alpha test, the scale of the study remained 32 observations for further use in subsequent EFA analysis.

*Analysis of the EFA and CFA discovery elements*

*Analysis of EFA Scale Factors*

From the results of the survey, the data was analysed using the SPSS 20 software, after eliminating variables with a factor of less than 0.5. The final result is shown in Table 3.

**Table 3:** Results of EFA

Observed variables	Factors						
	1	2	3	4	5	6	7
CLCV5	.738						
CLCV1	.733						
CLCV3	.729						
CLCV4	.726						
CLCV2	.720						
KTKN3		.746					
KTKN4		.729					
KTKN5		.721					
KTKN1		.701					
KTKN2		.696					
TGKLCV4			.773				
TGKLCV3			.742				
TGKLCV2			.723				
TGKLCV1			.660				
TGKLCV5			.603				
HOAINGHI2				.757			
HOAINGHI4				.702			
HOAINGHI1				.692			
HOAINGHI5				.682			
HOAINGHI3				.656			
BANGCHUNG1					.792		
BANGCHUNG4					.790		
BANGCHUNG3					.693		
BANGCHUNG2					.653		
DACDIEM1						.772	
DACDIEM4						.735	
DACDIEM2						.709	
DACDIEM3						.688	
KHICHLE1							.736

Observed variables	Factors						
	1	2	3	4	5	6	7
KHICHLE3							.687
KHICHLE4							.645
KHICHLE2							.617
Eigenvalue	4.535	3.829	2.687	2.185	1.822	1,431	1.156
% of Variance	14.170	11.965	8.396	6.828	5.694	4,470	3.612
Cumulative %	14.170	26.135	34.531	41.359	47.053	51,523	55.135
KMO	.812						
Bartlett's Test	Chi-Square		4607.863				
	df		496				
	Sig.		.000				

The analysis results show that  $KMO > 0.5$ , the Bartlett test has a p-value of  $0.000 < 0.05$ , a variance of  $> 50\%$ , the factor load factor is greater than 0.5 and the coefficient Eigen Value  $> 1$ . Thus the criteria for using the EFA discovery analysis show that the factors are consistent with the data set of the study. Seven factors were extracted from the results of the analysis, including 32 observation variables used for subsequent analysis.

### Results of Factor Analysis Confirm CFA

#### *The Suitability of the Model*

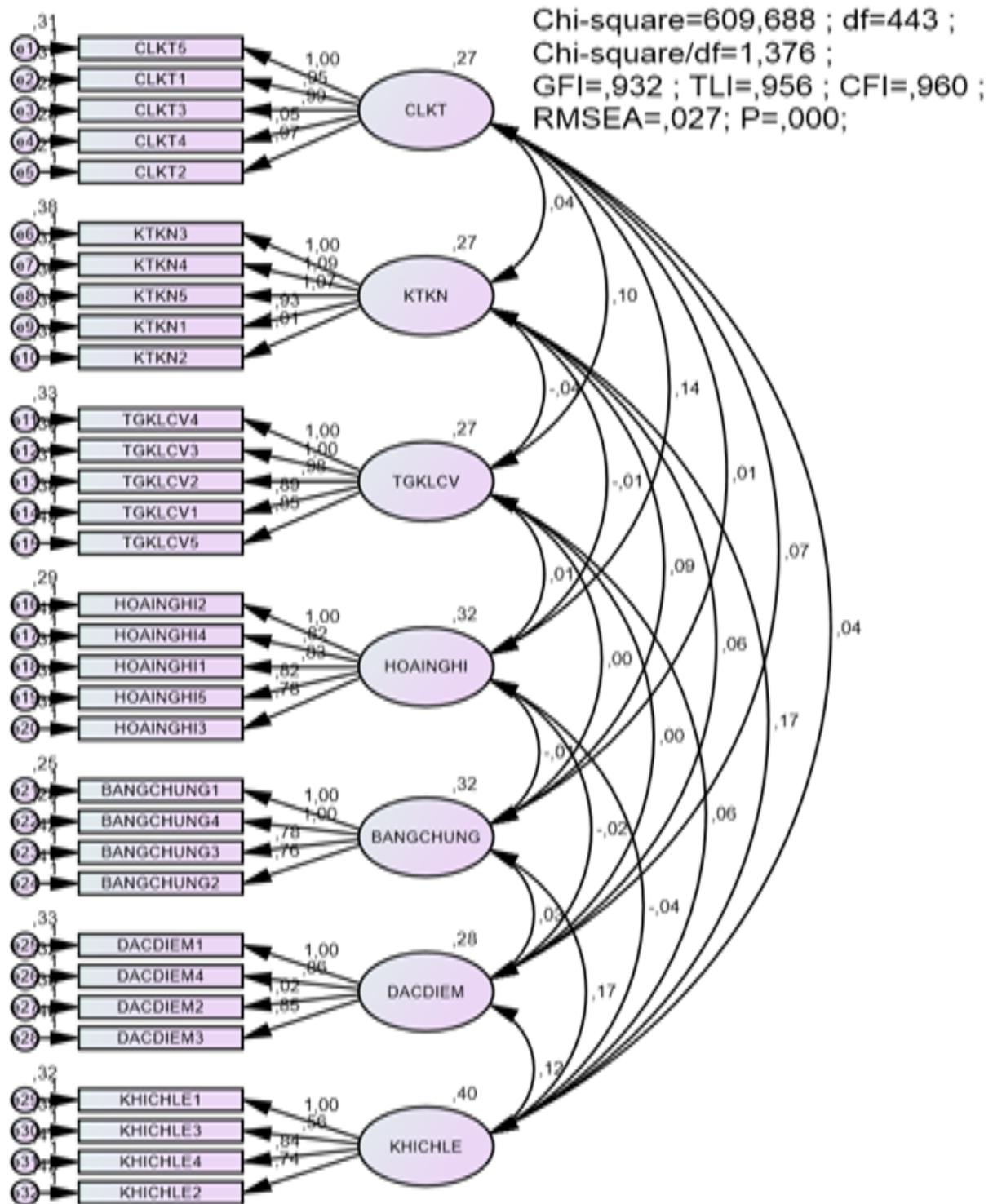
The model has 443 degrees of freedom; the CFA shows Chi-squared = 609,688 with the value  $p = 0.000$ ; A number of other indicators that are less sensitive to sample size are used to assess model fit: RMSEA = 0.027 is small; Chi-Square / df = 1.376 (less than 2); GFI = 0.932, TLI = 0.960, CFI = 0.965 were all greater than 0.9; Thus the results of the analysis show that the data is acceptable with the proposed model.

**Table 4:** The test result of the reliability and convergence of scale

<b>Scales</b>	<b>Symbol</b>	<b>Number of observations</b>	<b>Composite reliability</b>	<b>Variance extracted</b>
Knowledge and Experience	KTKN	5	0.967	0.854
Characteristic of Evidence	BANGCHUNG	4	0.895	0.705
Time and audit workloads	TGKLCV	5	0.977	0.894
Incentives	KHICHLE	4	0.875	0.645
Traits	DACDIEM	4	0.936	0.786
Professional scepticism	HOAINGHI	5	0.930	0.728
Audit quality	CLKT	5	0.979	0.903

According to Table 4, the reliability of C.R is greater than 0.7, the total deviation is greater than 50%, so it can be concluded that the components in the scale are reliable and convergent. Performing the analysis of the correlation coefficient between the factors we have the lowest value of 0.012 and the highest of 0.383 and not exceeding 0.85, the factors that satisfy the condition of the discriminative value.

**Figure 2.** Standardised CFA results



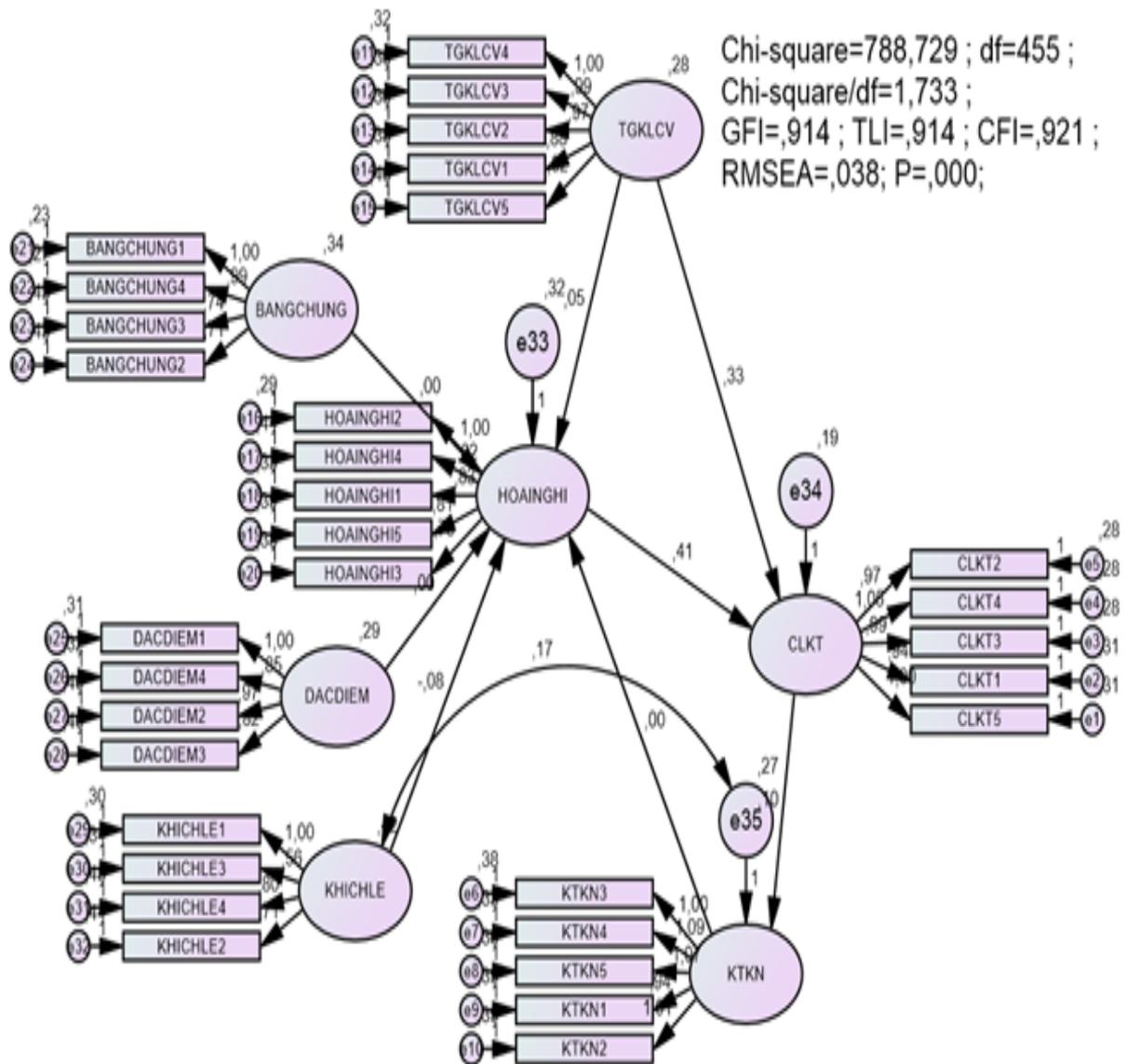
**Notes:** Chi-square/df. Ratio < 5 (Schumacker & Lomax, 2004), TLI > 0.90 (Hair et al., 2006), CFI > 0.95 (Hu & Bentler, 1999), RMSEA < 0.07 (Hair et al., 2006), p-value > 0.05 (Hair et al., 2006).

**Model Testing and Research Hypothesis**

**Verification of the Research Model**

The author uses SEM to test existing models and hypotheses. The results of the model estimation show that the test model has 455 degrees of freedom ( $p = 0.00$ ) and the indicators indicate the appropriate model for market data ( $\chi^2/df = 1.733$ ;  $GFI = 0.914$ ;  $CFI = 0.921$ ,  $TLI = 0.914$ , and  $RMSEA = 0.038$ ).

**Figure 3.** Results of the research model SEM formal (standardized)



**Notes:** Chi-square/df. Ratio < 5 (Schumacker & Lomax, 2004),  $TLI > 0.90$  (Hair et al., 2006),  $CFI > 0.95$  (Hu & Bentler, 1999),  $RMSEA < 0.07$  (Hair et al., 2006),  $p\text{-value} > 0.05$  (Hair et al., 2006).

### Research Hypothesis Testing

**Table 5:** Results of testing the research hypothesis

Variables			Estimate	S.E.	C.R.	P	Label
HOAINGHI	<---	BANGCHUNG	-.003	.056	-.050	.960	<b>Reject H1c</b>
HOAINGHI	<---	TGKLCV	.050	.062	.810	***	Accept H1a
HOAINGHI	<---	DACDIEM	.003	.061	.051	***	Accept H1d
HOAINGHI	<---	KHICHLE	-.082	.066	-1.232	.218	<b>Reject H1b</b>
CLCV	<---	TGKLCV	.327	.055	5.942	***	Accept H2
CLCV	<---	HOAINGHI	.406	.054	7.503	***	Accept H3
KTKN	<---	CLCV	.104	.059	1.760	.028	Accept H4
HOAINGHI	<---	KTKN	-.002	.089	-.019	.985	<b>Reject H1e</b>

Estimation parameters (normalised) were statistically significant ( $p < 5\%$ ). Based on the results of regression weights between the concepts we can see the test results of the hypotheses of the research model as follows:

- Accept H1a: Estimate = 0.050, p-value = 0.000. The auditor's time and workloads have a positive impact on professional scepticism.
- Reject H1b: Estimate = -0.082, p-value = 0.218. This shows that the incentives of the auditing firms in helping raise the professional scepticism in auditor's working process is unclear.
- Reject H1c: Estimate = -0.003, p-value = 0.96. This means there is no statistical significance in the results of the study, assuming that the characteristics of the audit evidence affect auditor's professional scepticism.
- Accept H1d: Estimate = 0.003, p-value = 0.000. The auditor's scepticism has a positive relationship with traits.
- Reject H1e: Estimate = -0.002, p-value = 0.985. This means that the influence of knowledge and experience on auditor scepticism through empirical research is unclear and statistically significant.
- Accept H2: Estimate = 0.327, p-value = 0.000. Time and audit workloads have a positive relationship with the audit quality.
- Accept H3: Estimate = 0.406, p-value = 0.000. The professional scepticism of good auditor staff will lead to higher audit quality.
- Accept H4: Estimate = 0.104, p-value = 0.028. Audit quality will help auditor's knowledge and experience be better.

Thus, the results of the study showed that 5 out of 8 initial research hypotheses were accepted and three theories were rejected because of insufficient statistical significance.

## Conclusions and Recommendations

Based on the results of quantitative research on the factors affecting the professional scepticism and the quality of output audit through auditor survey, it is possible to draw some conclusions as follows:

CFA shows that critical models are suitable for market data, and the scales ensure convergence, uni-directionality, reliability, covariance and discriminant values. From the CFA results, SEM linear analytical processing was performed, showing that the formal research model was consistent with market data.

Research has identified that the key features of auditor, time and workload assigned directly affect the Scepticism. Time and workload are the factors that influence the same direction and impact most strongly on this scepticism. Meanwhile, through the research results, the factors of auditing evidence characteristics, incentives of auditing firms, knowledge and experience, despite their influence, have not yet reached the level of confidence in the significance level. Millet

The study also pointed out that, through the experimental survey, auditors in Vietnam said that professional scepticism and time and audit workloads affect the audit quality. At the same time, the process of working to the final output has a repercussion effect on auditor's knowledge and experience.

Through research findings, it can be seen that auditor's professional scepticism is one of the factors that affects the quality of output audits. Therefore, in order to continuously improve the audit quality, managers in the auditing firms should pay attention to issues related to professional scepticism, especially the allocation of audit workloads, timing audit, human selection. As follows:

Managers at audit firms need to pay close attention to the selection of appropriate auditors for each audit, especially those who influence the audit risk. The technicians are cautious, careful, thorough, and vigilant when handling information; collecting and evaluating audit evidence is essential to ensure professional scepticism to get the best attention. Normally, auditing firms send qualified and experienced long-term auditors to be team leaders; team leaders and auditors by seniority and long-term work experience will be more cautious, career sceptics than the young auditors. More importantly, the professional scepticism is higher than in the young auditor.

Managers at audit firms should consider setting up auditing plans for specific contracts, in particular the allocation of workload to each member, so that the job assigned to them has a



realistic time frame. Auditing time and reasonable workload will help auditors to reduce the stress and pressure of accomplishing tasks, focusing the scepticism on the work, collecting and evaluating the audit evidence, being more accurate, thereby contributing to improving the quality of output audit.

As mentioned above, the quality of output audits affects the knowledge and experience of auditors so after the conclusion of auditing contracts, the leader of the auditing firm should hold a public meeting to discuss the result, commenting on shortcomings in the work process, assigning tasks and arranging time to help auditors, especially the young staff members, learn more useful experiences and knowledge.

This research is carried out following a convenient sampling method. Therefore, the result is based on the viewpoint of the researcher which is still subjective and general. For further research, the use of probabilistic sampling needs to be considered to ensure higher representation as well as increase the size of the sample that leads to more accurate analytical results. Additionally, the scope of this study is only implemented in the Vietnamese market. Consequently, the result as shown just generates several general conclusions as well as empirical solutions but does not provide practical solutions relevant to specific accounting businesses. Further research needs to be expanded in both scope and time for achieving a more comprehensive assessment

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