

RESEARCH ON FACTORS AFFECTING PROFESSIONAL SKEPTICISM OF INDEPENDENT AUDITORS: EVIDENCE IN VIETNAM

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Abstract

The study investigates the key factors included knowledge and experience, workload, time pressure and incentives that affect the professional skepticism of independent auditors in Vietnam. The authors have utilized quantitative and qualitative analyses in combination with a logistics regression model and other available analytical tools for conducting the research in SPSS software. All statistics processed in the paper were based on 90 independent auditors in 2021. The results reveal that factors like knowledge and experience, incentives positively affect the professional skepticism, while workload and time pressure negatively impacts PS. The findings suggest Vietnamese law-makers should regulate annual training courses for auditors to enhance their professional ability and reasonably encourage the auditor's motivation while it is necessary to minimize workload and time pressure for auditors in order to maintain and improve the audit quality. This implication could be applied for other firms in Vietnam and for enterprises in other countries.

Keywords: *Independent auditors, Professional skepticism, Vietnam*

1. Introduction

Over years, a lot of research has been conducted to define the term “professional skepticism” properly and figure out how to measure factors affecting professional skepticism in auditing. One of the prominent studies is the Nelson study (2009) that provided

comprehensive models on professional skepticism in auditing and emphasized the significance of implementing an appropriate level of professional skepticism when carrying out the auditing process. Based on that study, Hurtt (2010) had developed the scale of professional skepticism of independent auditors. Various studies have provided a significant information source in professional skepticism, such as Robinson et al (2015), Quadackers et al (2014), Hurtt (2010), Nelson (2009) and Hurtt et al (2013).

Most of the research related to professional skepticism is conducted in developed countries such as Australia, The US, Britain where they have a closely established audit system. In Vietnam, Phan Thanh Hai et al (2018), Nguyen Thi Phuoc (2018), Tong Thanh Tien (2018), Nguyen Vinh Khuong (2018), (2020), Tran Khanh Lam, Le Thi Tuyet Nhung (2020) research have mentioned some factors affecting professional skepticism in Vietnam and Ho Chi Minh City. However, previous researches only concentrate on the analysis of different factors influencing the nature of professional skepticism of general auditors and show general theories to improve the PS of auditors, there are no studies which introduced the specific policies to maintain, develop and apply professional skepticism for various objects in the case of Vietnam. Therefore, in this study, the authors will analyze factors influencing three main characteristics of PS.

Based on the topic of the published studies, the author classifies previous studies around the PS topic into three main research directions as follows: Firstly, the publications focus on the purpose of doing research. Clearly, the concept of PS of auditors is based on psychological theories. However, both angles are less volatile, so the publications under this topic focus on analyzing the components of PS and comparing these components under different perspectives to build the scale. Secondly, the publications focus on identifying factors that influence PS. This is the topic of most interest because PS is considered as a factor affecting the quality of Auditors' work (Hurtt et al., 2013; Nelson, 2009). Claims under this topic can consider factors affecting PS according to the grouping patterns of factors. Two models that systematically synthesize the publication on this issue in the leading journal in the auditing field: *A Journal of Practice & Theory* including Hurtt et al (2013); Nelson (2009). Thirdly, the statements focus on considering the influence of PS or other concepts in the audit, such as the behavior of the auditor.

The author inherits two formal synthesis claims on the subject of factors influencing previous auditors' PS since they are both closely related to the subject and no other synthesis research is currently available. Nelson's (2009) model divides variables into three categories: traits, knowledge, and incentives. Hurtt et al (2013) developed a model based on Nelson (2009) that included four classes of factors: auditor characteristics, proof characteristics, consumer characteristics, and external influences. Following that, the author, inheritance, and re-classification of the factors influencing PS according to the subjects that specifically affect the auditor's PS, such as the auditor's characteristics such as expertise and experience,

the assigned workload, and time pressure from businesses or customers, as well as policy incentives.

Professional Skepticism (PS): When the auditor has a doubt about anything during the audit process, particularly when gathering audit evidence to support a mistake or material misstatement, skepticism is required (McMillan & White, 1993). This is due to the fact that audit work necessitates the collection of appropriate, genuine, and relevant evidence to support an audit opinion. The attitude raises concerns, which show the auditors' ongoing distrust and suspicion of any audit findings. Hurtt (2010) identified six skepticism characteristics in the audit community, including questioning mind, suspension of judgment, looking for information, knowing interpersonal relationships, self-determination, and self-confidence.

Knowledge & Experience of independent auditors (KT): Since the majority of auditors have never witnessed fraud in their careers, Griffith et al. (2012) suggested that knowledge is directly related to PS, mainly 21 by assessing knowledge related to gathering additional evidence. The auditor's ability to influence PS: Castro (2013) claim that experience has no effect on PS; Grenier (2014) thinks that technicians with in-depth knowledge of the customer's business will have a high PS; Kim and Trotman (2014) conclude that the auditor responsible for the results will have a high degree of skepticism and the less experienced auditor has a higher PS than the more experienced auditor. Conclusion of Peecher et al (2010) that if auditors are trained to change cognitive thinking processes or biases affect the PS level of auditors. Besides, instead of asking auditors to focus on acting based on their skepticism, other publishers have considered training auditors to form many different ways of thinking to help the auditor build the level of skepticism. Carpenter et al (2013) found that auditors increased their ability to perceive fraud risks after completing a course in investigative accounting.

Workload of independent auditors (CV): Prior study has backed up questions about the potential implications of excessive workloads. Sweeney and Summers (2002) assessed hours employed, position stressors, and career burnout among 142 auditors, tax accountants, and consultants from a national firm before the busy season began and again at the end of the busy season in a public accounting environment. Fogarty et al., (2000) investigated the association between work and task traits, burnout, and job outcomes in a cross-sectional sample of 188 AICPA participants. Almer and Kaplan (2002) build on the work of Fogarty et al. (2000) by looking at how fluid work conditions affect task tension and burnout.

Time Pressure of independent auditors (TP): Many auditors accept that in times of pressure to complete the audit and the number of working hours required during the busy season creates a willingness to accept customer-modified financial information to

accomplish the goal (Hurttt , 2013; Glover, 1997). When stress increases, initial performance increases, as stress continues to increase, performance begins to decline. Currently, very little is known about the relationship between time pressure and PS. Enlightenment Coram et al. (2004) concluded that under time constraints, auditors are more likely to engage in quality-degrading activities, such as accepting suspicious information or performing less audit procedures.

Incentives of independent auditors (DL): Motivation is described as the psychological processes that create the initiation, direction, intensity and persistence of behavior (Klein, 1989). Motivation improves when employees work with clear goals (Locke, 1997). In particular, discussion clearance can enhance motivation to improve performance by providing more specific information about audit tasks, reducing task uncertainty, increasing task performance. duties (Earley, 1988; Sullivan, 1988). The company's performance evaluation and incentive system is an important component of the internal quality control that rewards actions based on the auditor's skepticism towards the firm's interests.

The topic's overall research objectives are to investigate the factors influencing professional skepticism of independent auditors in Vietnam. Therefore, the thesis is divided the general objectives into specific research objectives as follows: clarifying factors including knowledge & experience, workload, time pressure, incentives; which affect PS of independent auditors; and determining the level of influence of each factor including: knowledge & experience, workload, time pressure, incentives to PS of independent auditors.

2. Method

2.1. Data collection

The author collected data from the auditors currently working directly in the auditing firms in Vietnam via online questionnaires through Google Forms and video call-in interviews or by removing duplicate and inhomogeneous elements. Finally, SPSS Statistics 20 software is exploited for regression analysis and descriptive statistics.

2.2. Sampling method

In this research, the sample is chosen according to the convenient sampling method by selecting non- probability samples. Independent auditors selected to survey are individuals who are working in Vietnam and directly participating in the audit. The formula for determining the minimum sample size for research to achieve reliability. The size of the sample applied in the study is based on the requirements of Exploratory Factor Analysis (EFA) and multivariate regression: Technique 1: For exploratory factor analysis EFA: According to Hair, Anderson, Tatham and Black (1998), the minimum sample size is 155 samples. The sample size (157) should be larger than the standard to avoid losses during the

survey. Technique 2: the minimum sample size is 82 samples for 4 independent variables (Tabachnick and Fidell, 1996). Therefore, 157 respondents satisfy both above formulas and 90 official respondents used in regression analysis are sufficient.

2.3. Regression model

The author used regression with the dependent variable as professional skepticism (PS) to assess the effect of variables on independent auditors' professional skepticism. The factors described in the exploratory analysis (EFA) above are the independent variables affecting. The following is regression model:

$$PS = \beta_0 + \beta_1KT + \beta_2CV + \beta_3TP + \beta_4DL$$

Where as, **PS** refers to Professional skepticism; **KT** presents Knowledge & Experience of independent auditors; **CV** indicates Workload on independent auditors; **TP** shows Time Pressure on independent auditors; **DL** shows Incentives of independent auditors. The values β_i ($i = 1:4$) are regression coefficients, which represent the impact of each independent factor on the dependent variable's fluctuation. When the regression coefficients are significant (as determined by measuring the significance of the regression coefficient) and the m is large, the regression model is considered suitable. Professional skepticism includes 3 characteristics: Questioning mind (G1), Suspension of judgment (G2), Search for knowledge (G3). Therefore, in this study, we use 3 sub-regression models to reflect the influence of the independent variables on each characteristic of professional skepticism.

$$G1 = \beta_{0a} + \beta_{1a}KT + \beta_{2a}CV + \beta_{3a}TP + \beta_{4a}DL$$

$$G2 = \beta_{0b} + \beta_{1b}KT + \beta_{2b}CV + \beta_{3b}TP + \beta_{4b}DL$$

$$G3 = \beta_{0c} + \beta_{1c}KT + \beta_{2c}CV + \beta_{3c}TP + \beta_{4c}DL$$

2.4. Scale of variables

Researchers designed a questionnaire with 31 observations including 1 dependent variable and 4 independent variables, using the 5-level Likert scale (Score 1: Absolutely disagree, Score 5: Absolutely agree). Dependent variable is Professional Skepticism. Model HEP measured professional skepticism by six characteristics. In this study, the research team decided to measure the professional skepticism with 12 items according to three main characteristics of PS (a questioning mind, suspension of judgment, search for knowledge).

Independent variables are variables that affect the dependent variable, in other words, the dependent variable is determined by the independent variable. In this research, there are four (4) variables considered four factors that are knowledge & experience (H1) with 5 observations, workload (H2) with 5 observations, time pressure (H3) with 5 observations and incentives (H4) with 4 observations. The scales of variable are inherited from previous

studies by Nelson (2009); Hurtt et al (2010, 2013), Arumega Zarefar et al (2016), Brazel (2018), HEP Model (Hurtt, Eining, and Plumlee, 2003), Durtschi & Fullerton, (2004), Noviyanti (2008) and Supriyono (2014), Nguyen Vinh Khuong (2018).

3. Results

3.1. Descriptive Statistical Analysis

The table below illustrates the general information related to the demographic information of independent auditors such as gender, working experience, working position, level of education and professional qualification.

Table 1: Demographic information of respondents

Working position					Education degree		Professional Certificate	
Junior / Assistant	Senior	Manager	Director	Partner	Bachelor	Master	Yes (ACCA, CPA, ICAEW,...)	No
11	37	25	9	8	74	16	70	20
12.22	41.11	27.78	10.0	8.89	82.22	17.78	77.78	22.22

	Gender		Working experience			
	Female	Male	Less than 5 years	from 5 years - 7 years	from 7 years - 10 years	Over 10 years
Observation	42	46.67	45	27	10	8
Percentage (%)	48	53.33	50	30	11.11	8.89

3.2. Reliability Analysis - Cronbach's Alpha

The Cronbach's Alpha coefficient for all items is higher than 0.6. The Corrected Item-Total Correlation of each observed independent and dependent variable is greater than 0.3 except for KT1. As a result, the study's scale only remained 30 observations for subsequent EFA review.

Table 2: Cronbach's Alpha

Variables	Symbol	Number of observed variables	Cronbach's Alpha	Cronbach's Alpha if Item Deleted
Dependent variables				
Professional skepticism	PS	12	0,881	
Independent variables				
Knowledge & experience	KT	5	0,635	0,704 (KT1)
Workload	CV	5	0,793	
Time Pressure	TP	5	0,747	
Incentives	DL	4	0,715	

3.3. Exploratory factors analysis

The KMO coefficient computed from the sample is 0.798 greater than 0.5, according to the Table of KMO and Barlett's test results (Table 3). The Bartlett test has a p-value of $0.000 < 0.05$, % of variance $> 50\%$, the factor loading is greater than 0.5 and the coefficient Eigenvalue > 1 . Thus the criteria for using the EFA discovery analysis show that the factors are consistent with the data set of the study. As a result, the survey sample size is sufficient for factor analysis. The correlation between observed factors is zero in the overall statistically significant since the P-value (Sig.) determined from the sample is 0.00 less than a significance level of 0.05, according to Barlett's test with the hypothesis H_0 (or 5 percent).

Table 3: Rotated Component Matrix

	Component		
	1	2	3
PS7	0.812		
PS4	0.774		
PS8	0.729		
PS5	0.701		

PS6	0.665		
PS9		0.788	
PS12		0.754	
PS11		0.735	
PS10		0.734	
PS2			0.860
PS1			0.718
PS3			0.572

The analysis results show that with 12 items to evaluate professional skepticism of independent auditors and three main factors can be extracted. According to the calculation results from the sample, these 12 factors explain 64.346% of the variation of the data set.

3.4. Pearson Correlations

The results of correlation analysis revealed that all independent variables influencing the dependent variable PS were statistically significant at the 5%. Many of the Sig values have a high correlation with the independent variables (KT, DP, CV, DL).

Table 4: Pearson Correlations

	PS	KT	TP	CV	DL
PS	1				
KT	.482**	1			
TP	-.432**	-.218*	1		
CV	-.499**	-.123	.426**	1	
DL	.365**	.097	.213*	.003	1

The author team used the Pearson coefficient of correlation to analyze the correlation between quantitative variables. In the table above, the coefficients of correlation indicate the relationship between the variables, which is rational in both sign and level. Specifically, the values of coefficient of correlation (KT, DL) are greater than 0; The coefficients of correlation are positive which show the positive relationship. The coefficients of correlation (CV, TP), on the other hand, are less than 0; the coefficients of correlation are negative, suggesting a negative relationship.

3.5. Regression Analysis

The value of determination coefficient Adjusted R Square is 0.585, which shows the regression model of the relationship between the four main factors to the PS which can explain 58.5% of the variation of the PS. In the F-test in the ANOVA table, an observed F value of 32.305 with a P-value (Sig.) of 0.000 is less than the significance level of 0.05. The regression model is suitable to describe the relationship between factors to the PS of independent auditors.

Table 5: Coefficient

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	3.101	.345		8.982	.000		
KT	.261	.055	.337	4.758	.000	.931	1.075
CV	-.212	.049	-.329	-4.340	.000	.810	1.234
TP	-.196	.051	-.303	-3.815	.000	.738	1.354
DL	.255	.046	.398	5.602	.000	.925	1.081

Based on the P-value values corresponding to each independent variable in Table 5 it can be seen that all the independent factors have P-value values less than the significance level of 0.05. It can be said that, with the sample, there is enough evidence to reject the H0 hypothesis. The sign of the regression coefficients reflects the impact of independent factors on dependent factors. The values of β_i of these two factors (KT, DL) have positive signs, indicating that these factors have a positive impact on the PS, according to the survey results. Otherwise, these two variables (CV, TP) have negative β_i values, meaning that they have a negative effect on the PS. The standardized regression coefficient (Beta) is used to evaluate the impact of each independent factor on PS. The DL factor has a standardized regression coefficient of 0.398, which is higher than the KT factor's standard regression coefficient, indicating that the DL factor has a greater effect on the independent auditors' PS. The VIF of variables affecting less than ten shows that there is no multi-collinear phenomenon. The regression equation of the PS: $PS = 0.337KT - 0.329CV - 0.303TP + 0.398DL$

About sub - regression model: The values of β_i of these knowledge and experience variables (KT) and the incentives (DL) have positive signs, indicating that they have a

positive effect on the PS. However, the other independent variables (CV, TP) indicate that they influence negatively on the PS. $B_2 = -0.153 < 0$ indicates that when CV increases by 1 unit, the professional skepticism - PS decreases by 0.153 units; standardized β of the CV variable affects 15.3% on the level of PS. $B_3 = -0.271 < 0$ indicates that when TP increases by 1 unit, the professional skepticism - PS decreases by 0.271 units; standardized β of the TP variable affects 27.1% on the level of PS. The effect of each independent factor on Questioning mind is measured using the standardized regression coefficient (Beta). VIF of factors affecting less than 10 proves no multi-collinear phenomenon. The regression equation of three characteristic of the PS:

$$G1 = 0.34KT - 0.153CV - 0.271TP + 0.286DL$$

$$G2 = 0.196KT - 0.229CV - 0.303TP + 0.378DL$$

$$G3 = 0.301KT - 0.313CV - 0.283TP + 0.312DL$$

All independent variables both have an impact on the three features of the PS. The sign of the regression coefficients reflects the impact of independent factors on dependent factors. According to the survey results, the β_i values of these two factors (KT, DL) have positive signs, suggesting that these factors have a positive effect on the PS. The standardized regression coefficient (Beta) is used to evaluate the impact of each independent factor on three characteristics. VIF of factors affecting less than 10 proves no multi-collinear phenomenon.

Research hypothesis testing results: All of the hypotheses that include knowledge and experience, workload, time pressures and incentives are initially accepted. It turns out that H1 and H4 have a positive impact on professional skepticism while H2 and H3 have a negative influence on professional skepticism.

Independent sample T-Test: Independent Samples T-Test is used to compare mean values of male and female groups with professional skepticism. Because of the sig value = $0.816 > 0.05$, so we conclude that there is no significant difference in the mean of the two populations. In other words, between the two gender groups of auditors, there is no evidence to show a difference in professional skepticism. Specifically, in the mean column in the Group statistic table below, the average value of professional skepticism for men is 3.5749 and for women is 3.5545. Moreover, the authors use independent Samples T-Test to compare the mean of two groups of certified and non-certified auditors affecting professional skepticism. The table indicates that there is no substantial difference in the mean of the two populations because the Sig value = 0.379 and $F = 0.782$ in Levene's Test for Equality of Variances > 0.05 . In other words, there is little distinction between the two groups of independent auditors who have gained and have not gained the qualification certificate in terms of professional skepticism

Table 6: Independent Samples Test

Group Statistics - PS				
		Mean	Std. Deviation	Std. Error Mean
Gender	Male	3.5749	.41932	.06052
	Female	3.5545	.39787	.06139
Professional Certifications	Yes	3.5619	.42179	.05041
	No	3.5775	.36159	.08085

Table 7: Independent Samples Test

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means		t-test for Equality of Means				
PS		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Gender	Equal variances assumed	.055	.816	.236	88	.814	.02039	.08652	-.15154	.19232
	Equal variances not assumed			.236	87.403	.814	.02039	.08621	-.15095	.19173
Qualification certificate	Equal variances assumed	.782	.379	-.150	88	.881	-.01560	.10384	-.22195	.19076
	Equal variances not assumed			-.164	35.181	.871	-.01560	.09528	-.20899	.10

4. Discussion and Conclusion

4.1. Conclusion

Through linear regression results, two factors, Knowledge & experience and Incentives have positive impacts while workload and time pressure have been negative influences on the professional skepticism of independent auditors.

Previous researches indicated that PS is affected by knowledge in both positive and negative ways in audit practice, specialization in fundamental Nelson (2009), Griffith et al. (2012), Peecher et al (2010) and Carpenter et al (2013) found that auditors increased their ability to perceive fraud risks after completing a course in investigative accounting. Otherwise, a lot of previous research results showed opposite sides of opinion, such as Castro (2013), Kim and Trotman (2014) conclude that the less experienced auditor has a higher PS than the more experienced auditor, Phan Thanh Hai et al (2018), also indicated that knowledge and experience despite their influence, have not yet reached the level of confidence in the significance level. Applying to the Vietnam situation, many audits are usually being carried out in particular months of the year, in a peak season, auditors have to work for more than one job at the same time, therefore, experienced trained auditors have higher probability to discover misstatements and tend to have advantages when communicating with clients about their doubtful issues. On top of that, auditors may not only raise their abilities to acknowledge every detailed problem, detect misstatements and combined evidence, but also they are not easily being disturbed by inappropriate information in order to find out misstatement as soon as possible.

Related to incentives, the result pointed out that this factor has a positive influence on professional skepticism of independent auditors which is agreed with previous studies such as motivation is described as psychological processes creating initiation, direction, intensity and persistence of behavior (Klein, 1989), (Locke, 1997), (Sullivan, 1988), and most of the PS related statements in the audit examined in Nelson would inspire auditors to select a higher degree of suspicion due to personal motivation. On the other hand, Phan Thanh Hai et al (2018) which have the same research subject in Vietnam which showed incentive of auditing firms, have not yet reached the level of confidence in the significance level, despite their influence. The findings of this research are in line with the majority of previous studies around the world. The company's performance evaluation and incentive system is an important component of the internal quality control that rewards actions based on the auditor's skepticism towards the firm's interests, namely contribute to effective audit (Baiman, 1990; IAASB, 2009).

However, workload and time pressure have been negative influences on the professional skepticism of independent auditors. In previous research, there are many controversial results on the impact of time pressure on professional skepticism, whether it is

positive and negative. Typically, Nelson indicates time has a positive effect on PS as well as Phan Thanh Hai's research, they indicate that time and both workloads have a positive impact on professional skepticism. In the study, the results confirm that time pressure has a negative impact on PS. Time pressure is a common problem in the working environment (Glover, 1997) and arises from the conflict between completing an effective but timely audit. Audits and the number of working hours required in the busy season creates a willingness to accept financial information modified by customers' target achievement (Hurt, 2013; Glover, 1997). Time pressures cause performance degradation and cause joint stress practice for the auditor (McDaniel, 1990), also Kelley and Margheim (1990) found that when faced with high time pressure, 31% of auditors would reduce audit steps than usual. Low and Tan (2011) argue that the difference between time restriction be informed and random time pressure. When confronted with a sudden increase in time pressure, the auditor is more likely to rely on previous year's audit procedures, which means the auditor is less likely to show PS as Disclosure Coram et al (2004). Similarly, workload factor, according to Nasution and Fitriany (2012); Murtisari and Ghozali (2006), the pressure of employment that results in excess jobs will decrease job satisfaction and performance auditor.

4.2. Recommendation

Firstly, for practicing partnerships: Recruitment policies may affect professional skepticism by evaluating knowledge and personal traits. Auditing firms need to emphasize the significance of assessing professional skepticism in the employment process in order to select the auditors whose professional skepticism is suitable with the policy of the corporate. The auditing firm must create a working environment as well as a sense of solidarity among auditors and leaders to foster professional skepticism. Consequently, the training policies play a key role in determining PS in knowledge, skills, and personal incentives of auditors. There should be a reduction in the amount of time it takes to complete tasks and reduce the amount of time it takes to record progress. Until conducting the end-of-fiscal-year audit, auditing companies should conduct interim audits during the year.

Secondly, for governmental agencies, especially the Ministry of Finance and association of chartered auditors: Propagating and strictly enforcing the administrative penalties clauses of the Government's Decree No. 41/2018 / ND-CP dated March 12, 2018 on the sanctioning of administrative irregularities in accounting and independent audit, thus raising awareness about auditing laws; at the same time, deterring auditors from breaking the rule; Arranging daily workshops, instruction, or knowledge sharing sessions relating to professional skepticism so that auditors can exchange and gain realistic experiences.

Finally, for universities and training institutions: Universities should expand their training courses of professional skepticism in combination with professional Independent Audit certification to facilitate the improvement of professional qualifications and skills for

independent audit professions. Using advanced management practices to be able to deeply participate in the international market in the integration process. The Government agencies, entities and universities should coordinate based on the roadmap, plan and apply international practices in accordance with the conditions of Vietnam for the development of Vietnam's Independent Audit.

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