RESEARCH ON FACTORS AFFECTING ACCESSION DECISION AND MEMBERSHIP LEVEL CHOICE IN INTERNATIONAL AUDIT FIRMS: EXPERIMENTAL EVIDENCE IN VIETNAM

PHAN THANH HAI* AND CHUC ANH TU**

ABSTRACT: This research aims to determine factors affecting and the level of their impact on accession decision and membership level choice in international audit firms of Vietnamese firms. Combination of the qualitative research method and the quantitative research method on the basis of meta-analysis and synthesis of existing information from various sources and results of interviews using a questionnaire for 265 managers who now work at 65 audit firms in Vietnam. The results of the research showed that factors affecting the accession decision and membership level choice in international audit firms include: the legal system, development strategy and resources of the audit firm, reputation and prestige of the international audit firm. Of which the legal system has the greatest impact on the accession decision and membership level choice.

Keywords: membership, international audit firm, Vietnam, SEM

1. Introduction

So far, there have been researches assuming that the member small audit firms have better audit quality than nonmember small audit firms. At the same time, audit fees of these firms are higher than those of nonmember small audit firms, but are lower than audit firms in the Big-Four group (Bills & Cunningham, 2015). Subsequent research by Bills, Cunningham, & Myers (2016) also stated that the benefits of membership in associations of accounting firms, networks, or alliances (collectively referred to as "associations") is the fact that associations provide member accounting firms with many benefits, including access to expertise from other independent member firms, joint conference and technical training, and support in dealing with human resources and geographic restrictions and the usability of name of association in marketing materials. This benefit will result in higher audit quality and higher audit fees. The higher audit fees for clients of member firms compared to clients of nonmember firms indicate that clients are willing to pay audit fees to join member audit firms.

The research by Bills, Hayne, & Stein (2016) also stated that: small firms often join forces through accounting associations and networks that can help them overcome the significant challenges that small firms face.

For the Vietnamese market, with the characteristics of the majority of audit firms being small scale firms and in the process of strong integration with the

*Duy Tan University, Da Nang City, Vietnam
**Academy of Finance, Ha Noi City, Vietnam
Correspondence: Phan Thanh Hai, Ph.D, Dean, Faculty of Accounting, Duy Tan University, Da Nang City, Vietnam; *E-mail: phanthanhhai@duytan.edu.vn; phanthanhhai@duytan.edu.vn*

regional economy, researches on membership in international audit firms and the impact of accession to audit quality, audit fees have not been announced by many authors. However, in the researches by Ha (2012) and Long (2014), these authors have also come to the conclusion that the accession to international audit firms of Vietnamese audit firms is the trend to be chose by firms.

However, up to now, no publication of any author has offered a research perspective on the factors affecting the accession decision in international audit firms as well as appropriate membership level choice of audit firms in the Vietnamese market. An experimental research is therefore required based on data collection from joined audit firms and audit firms that have not yet been fully eligible for accession in recent time. This is also the view of the authors presented in this article.

The present article consists of the following contents:

(1) Giving an overview of researches on factors affecting the accession decision to international audit firms and membership level choice of audit firms.

(2) Presenting the research model, research hypotheses and the following contents: research design, research results analysis on factors affecting the accession decision to international audit firms and membership level choice of audit firms in the Vietnamese market.

(3) Giving conclusions and giving recommendations, pointing out shortcomings and orienting future research.

The article is divided into the following sections. Section 2 introduces basic characteristics of the accession to international audit firms and membership level of Vietnamese audit firms in the period 2010-2017. Section 3 deals with grounded theories to determine factors affecting the accession decision to international audit firms and the choice of membership level of audit firms . Then this section presents the theoretical research model and research hypotheses. Section 4 mentions data collection methods and research design. Section 5 is concerned with the results and analyzes the results of research on factors affecting the accession decision to international audit firms and the choice of membership level of audit firms in Vietnam through an experimental survey carried out in early 2018. Section 6 mentions conclusions and recommendations, and points out shortcomings of the research as a foundation for carrying out new researches in the future.

2. Background of Study

The audit market in Vietnam was initially established in 1991 when the Government allowed the establishment and operation of the first independent audit firms. Over the past 30 years, Vietnamese audit firms have step by step overcome difficulties to gradually stabilize and develop.

In the context of integration with the international economy, in order to improve the competitiveness and provide better services, expand market share, retain and attract clients, Vietnamese audit firms have begun to seriously pay attention to the accession to as members of international audit firms in own business development strategy.

By April 2018, the number of audit firms in Vietnam increased considerably: about 175 audit firms of various types: 02 firms with 100% foreign capital (PwC, KPMG), 09 firms with foreign capital including 6 firms whose capital contribution members are organizations, and 164 firms with 100% domestic capital (VACPA, 2010-2017). An overview of the Vietnamese audit market is given in table 1 below:

Table 1
Statistical situation of audit firms in Vietnam in the period 2010-2017

	2010	*2011*	*2012*	*2013*	*2014*	*2015*	*2016*	*2017*
Total	152	152	155	156	140	142	157	175
- Member firm	10	11	11	14	12	15	19	23
- Associate firm	10	11	12	12	13	12	12	13
- Correspondent firm	3	1	1	1	1	1	1	1
- None member	129	129	131	127	114	114	125	138

Source: Reports by VACPA (2010-2017)

As a result of Table 1, in the period 2010-2017 in Vietnam, the number of audit firms that are members of international audit firms accounts for about 20% of total audit firms eligible for operations. This percentage shows that there are still many Vietnamese audit firms who are not interested or are not qualified to become members of international audit firms.

For the number of audit firms that have been members of international audit firms, one of the three membership levels shall be chosen in accordance with the provisions of the international audit firms as Member firm, Associate firm, and Correspondent firm. The audit firms that Vietnamese audit firms choose to join are typically one of the firms operating under the network firm model, association model, and Alliance, Organisation model.

Network firms: This is a large organization geared towards shared profit or cost, or jointly owned, controlled or managed, joint policies and procedures for quality control, business strategy, joint brand use, or the joint substantial part of specialist resources. The Big 4 firms, including PWC, Deloitte, E&Y, and KPMG, are typical models for network firms. In addition, some organizations in Vietnam such as Grant Thornton, BDO International, RSM, Crowe Horwath, Nexia International, UHY International, PKF International, etc., also operate as network firms.

The characteristic of the network firms model is that the name of the members often associated with the brand of the International Audit Organization, for example, Deloitte Vietnam, E&Y Vietnam, Nexia ACPA, etc. The members of the same network use the logo and image of the firm in their marketing activities. At the same time, members also receive strong support from the International Audit Organization of which they are part of the network. Due to its close association, this model also poses a risk to the International Audit Organization for any scandal or violation by members of the same network. However, compared to the "one-organization" model, the network firms model mitigates risk of global collapse due to relative independence of members in the same network.

Associations: This model is very popular in international audit organizations. Reputable accounting firms and audit firms in different countries gather together and operate under one common name. This model is represented by BKR International of which Vietnam Auditing and Evaluation Co., Ltd. (VAE) is a member, Integra International of which Vietnam National Auditing Co., Ltd is a member, IAPA, MGI, IGAF Worldwide, etc.

In the form of an association, members are responsible for ensuring that the quality of the service meets the standards of the international audit organization, developing and maintaining the prestige of the association. Members are also closely connected and have considerable support from international association through annual joint training programs, global conferences or regional conferences, as well as through the exchange of employees between firms. Normally, the members retain their former names and promote the image as a member of the Association. In Vietnam, many participating audit firms as members of international audit organizations operate under the association model.

The advantage of this model is that members remain independent and are less likely to be affected by the risk or collapse of other members, even if reputation is more or less affected. Members are still used the logo and image of the international audit organization as an association when promoting their image as an official member, and providing global service through other members of the association.

Alliances, Organizations: The alliance model is less common in international audit organizations because the model is a combination of many types of firms operating in different areas such as auditing, accounting consultancy, legal advice, intellectual property consultancy, business consultancy, etc. This model is represented by Alliot Group of which BHP Audit Co., Ltd is a member, or the Alliance of Intercontinental accountants of which Hanoi Company Profession of Auditing & Accounting LTD is a member, Geneva Group International (GGI) has a similar model including the alliance between audit firms and law firms. At present, GGI is approaching to be able to admit members of law firms and audit firms in Vietnam through the recommendation of VACPA. In this model, the relationship between members is weaker than network model and association model because members operate in a variety of areas, not just in accounting and auditing. Full members of the Organization operating under the alliance model are also allowed to use the logo and image of the Organization in their promotional activities. Members are not allowed to bear the name of the International Organization.

In summary, in recent years, the number of Vietnamese audit firms as official members under many different levels of international audit firms has been increasing. Besides a number of firms are completing procedures, some other firms are also learning about partners to continue to become members of international audit organizations to appropriate for the model and level in each model of international audit organizations. This shows that becoming a member of international audit organizations is a trend that many Vietnamese audit firms choose.

The greatest benefit of becoming a member of international audit organizations is to be used the international brand, invested and equipped with technical equipment, transferred the audit program, trained professionally, obtained consultation and

provided international information, introduced customers, got service quality control . Being a member of an international audit organization is the right direction to the globalization of the economy, facilitating the development of internal audit techniques in a way that harmonizes internal resources and international assistance. Many Vietnamese audit firms after becoming members of international audit firms have been highly effective in contributing to the development of independent auditing profession in the country. However, when becoming members of an international audit organizations, Vietnamese audit firms face many difficulties on finance, quality control, training and improvement of their qualifications and capabilities, etc.

3. Literature Review and Theoretical Research Model

3.1. Literature Review

In the competitive audit market, audit firms of the Big-Four group always have a great advantage in gaining market share and attracting clients. Therefore, a report by GAO (2008) said that: One recommendation to enhance small firms' capabilities when auditing larger companies -as well as existing clientele - is to join an affiliation of other firms to share knowledge, combine resources, and obtain access to other markets. This proves that, for small-scale audit firms, making the decision to join an international audit firm is the right choice to enhance the position of the firm, improve the quality of audit service provided by the audit firm on par with those of the Big Four and higher than the non-member audit firms of international audit firms (Bills, Cunningham, et al., 2016, 2018).

The Research by Mao, Qi, & Xu (2017) in the Chinese market also showed that audit firms which are not in the Big Four group (ie, except audit firms such as Deloitte, EY, KPMG, PwC, or Arthur Andersen) are important audit subjects. It is these firms that provided services to about 45% of all US public companies (Bills, Cunningham, et al., 2016, 2018), taken audit for nearly 90% of Chinese public companies (Chen, Chen, Lobo, & Wang, 2011), 60% in Thailand and 49% in Brazil (Francis, Michas, & Seavey, 2013). However, non-Big 4 audit firms are restricted in their ability to audit multinationals, leading to regulatory concerns about the sufficiency of domestic audit competition and their ability to serve clients expanding overseas (Ministry of Finance, P.R.C (1996, 2009); ACAP (2008).) One of the recommendations of this organization is to encourage small-scale audit firms to join and become members of international audit firms. (Ministry of Finance, P.R.C, 1996, 2009).

In Vietnam, the research by Ha (2012) and Long (2014) also pointed out that the accession to international audit firms and the choice of membership levels depends on a number of factors including the impact of a system of policies and regulations among countries, system of policies and membership standards that are regulated and published by international audit firms (collectively referred to as the legal system) . The reputation and prestige of the international audit firm is an important factor affecting the use of trademarks, logos, names, technical support and human resources of the audit firm upon accession . However, the reality is that not all Vietnamese audit firms fully meet the conditions for membership because

this depends on the business development strategy that the manager pursues, the different elements of the business resources, and the membership fee for the first accession, annual fee to maintain in subsequent years.

In conclusion, from a number of research reviews presented above, it can be concluded that accession to international audit firms is the way to improve the competitiveness and quality of audit firms that are small and outside the Big Four. But becoming members of international audit firms has never been easy. The accession decision and membership level choice are influenced by many different factors and researches on affecting factors are limited to qualitative perspective without any experimental research on the basis of surveying opinions from audit firms in the Vietnamese market. Therefore, this is also a theoretical basis for the authors to propose their theoretical research model.

3.2. Theoretical research model

As mentioned in the previous section, synthesizing from many previous published researches, the author presented the model used for the researches as follows:
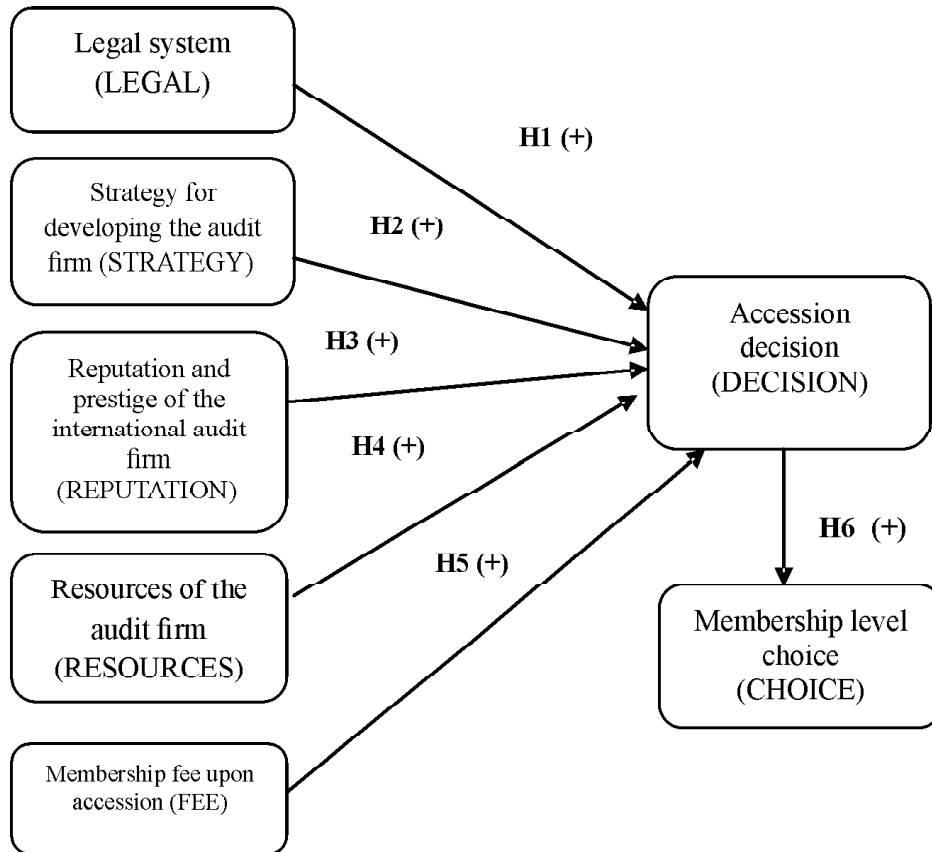

Figure 1: Model and research hypotheses

H$_1$: Legal system has impact on accession decision (positive impact +) expected sign +

H$_2$: Strategy for developing the audit firm has impact on accession decision (positive impact +)

H$_3$: Reputation and prestige of the international audit firm has impact on accession decision (positive impact +)

H$_4$: Resources of the audit firm has impact on accession decision (positive impact +)

H$_5$: Membership fee has impact on accession decision (positive impact +)

H$_6$: Accession decision has impact on membership level choice (positive impact +)

4. Data and Research Methodology

4.1. Data collection

To test research hypotheses, the author has collected data from interviews with 300 managers at level of head, vice head of division who are currently working in Vietnamese audit firms. The data collection was done by directly handing out the questionnaires and responding by filling in the independent questionnaire. The results were analyzed by SPSS software, the scales were tested to determine the reliability. model was then established to test the research hypotheses.

4.2. Scale

The research designed the questionnaires with 33 observations including 2 dependent variables, using a 5-level Likert scale (Score 1 : Absolutely disagree; Score 5 : Totally agree). Questionnaires and scales were tested and calibrated based on 4 bases: (1) Qualitative research, (2) Professional interviews with 10 people, (3) In-depth interviews with 10 managers, (4) Trial results of 30 samples.

The scale of *Legal system among countries, audit firms* (Symbol: LEGAL) includes 5 observations, The scale of *Reputation and prestige of the international audit firm* (Symbol: REPUTATION) includes 4 observations, The scale of *Membership fee* (Symbol: FEE) includes 4 observations, The scale of *Resources of the audit firm* (Symbol: RESOURCES) includes 4 observations, The scale of *Strategy for developing the audit firm* (Symbol: STRATEGY) includes 4 observations.

For 2 dependent variables: *Accession decision* (Symbol: DECISION) was measured with 4 observations . The scale of *Membership level choice* (Symbol: CHOICE) was measured with 5 observations.

Table 2
Dimensions of and scales

No	Scales and dimensions	Symbol
	I. LEGAL SYSTEM	LEGAL
1	The legal framework for auditing activities in the country is complete and specific	LEGAL1
2	Regulations on the use of trademarks are guided in detail and in accordance with international practice	LEGAL2
3	Regulations on transfer of technology, experts are guided in detail and in accordance with international practice	LEGAL3
4	Regulations on membership conditions and policies on admission of members are specified by the audit firm, publicly and transparently	LEGAL4
5	Written agreements and contracts signed by the firm and the audit firm comply with international law	LEGAL5
	II. STRATEGY FOR DEVELOPING THE AUDIT FIRM	STRATEGY
1	The firm has a desire to provide cross-border services	STRATEGY1
2	The firm has a desire to diversify the products and services provided to the market	STRATEGY2
3	The firm has a desire to develop growing brand and reputation	STRATEGY3
4	The firm has a desire to improve own competitiveness	STRATEGY4
5	The firm has a desire to improve service quality	STRATEGY5
	III. REPUTATION AND PRESTIGE OF THE INTERNATIONAL AUDIT FIRM	REPUTATION
1	A large number of loyal customers use the service	REPUTATION1
2	Quality of service has been experienced over time and in good reviews	REPUTATION2
3	The service quality control process is closely implemented	REPUTATION3
4	Technical expertise and management team, auditors are professional	REPUTATION4
	IV. RESOURCES OF THE AUDIT FIRM	RESOURCES
1	The financial capacity of the firm is guaranteed and stable	RESOURCES1
2	The auditors of the firm meet the requirements of the capacity and proficiency of foreign language	RESOURCES2
3	Leaders in the firm have the vision and leadership to run and develop the firm	RESOURCES3
4	The system of head office, branches and representative offices of the firm is operating effectively	RESOURCES4
	V. MEMBERSHIP FEE	FEE
1	Membership fee is the obligation bounding the liability of the firm with the international audit firm	FEE1
2	The fee is proportional to the size, reputation and prestige on the quality of the international audit firm	FEE2
3	The fee should be subject to change depending on the result and performance of the audit firm after accession	FEE3
4	The fee is a worthy management expense to generate revenue in the future	FEE4
	VI. ACCESSION DECISION	DECISION
1	Joining the international audit firm is necessary to enhance the competitiveness of the firm	DECISION1
2	Joining the international audit firm aims to improve the quality of services provided	DECISION2

No	Scales and dimensions	Symbol
3	Joining the international audit firm is to improve the capacity of the management team, auditors	DECISION3
4	Joining the international audit firm is an indispensable trend in the context of integration of the firm	DECISION4
VII. MEMBERSHIP LEVEL CHOICE		CHOICE
1	The firm should be used the name, logo of the international audit firm	CHOICE1
2	The firm should be introduced to customers	CHOICE2
3	The firm should be invested in technical matters and auditing, consulting procedures	CHOICE3
4	The firm should be supported in control of quality of services provided	CHOICE4
5	The firm should be in professional training and provided with international information	CHOICE5

4.3. Sample size

As presented in section 2 of the operation of the independent audit in Vietnam by the early 2018, there were 2,083 auditors. The author sent the survey questionnaire to 300 auditors in this list and collected 270 responses from January 2018 to April 2018. As a result, after eliminating invalid answers, 265 questionnaires were processed. Compared to the initial calculation, the questionnaire with 37 observations needed at least 37 x 5 = 185 samples, thus the number of processed questionnaires were acceptable. 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.

4.4. Analytical methods

The authors performed and tested the model by using SPSS 20 software in combination with AMOS 20 with the following steps:

- *To test the scale:* The scales were tested in turn by three techniques: Cronbach's Alpha Reliability Coefficient, EFA Exploratory Factor Analysis, CFA Confirmatory Factor Analysis.

- *To test the model:* The proposed theoretical research model and research hypotheses were tested by linear structural equation modeling (SEM) with AMOS 20 software.

5. Result and Discussion

Based on the results surveyed from 265 managers, auditors in audit firms as described above, the author analyzed the impact of each factor based on the original theoretical model. This result is presented as follows:

5.1. Descriptive statistics about the samples

SPSS 16.0 software was used to conduct the analysis in the research. Out of 265 auditors, the information of samples (265 people) was shown in details in Table 3.

Table 3
Descriptive statistics about the samples

Characteristics	Frequency	Percentage %
Gender	N = 265	100%
Male	228	86%
Female	37	14%
Working experience	N = 265	100%
Under 5 years	25	9.4%
From 5 to 10 years	88	33.2%
From 10 to under 15 years	52	19.6%
From 15 to under 20 years	80	30.2%
Over 20 years	20	7.5%
Age of auditors, managers	N = 265	100%
From 23 to under 30 years	16	6.0%
From 31 to under 40 years	91	34.3%
From 41 to under 50 years	75	28.3%
From 51 to under 60 years	68	25.7%
Over 60 years	15	5.7%

Source: Authors' survey, 2018.

5.2. Testing of Cronbach's alpha coefficient

Table 4
Results of testing of Cronbach's Alpha coefficient of scales

Concept	Symbol	Number of obs. Variable	Cronbach's Alpha
Independent variables			
1. Legal system	LEGAL	5	0.906
2. Strategy for developing the audit firm	STRATEGY	5	0.898
3. Reputation and prestige of the international audit firm	REPUTATION	5	0.895
4. Resources of the audit firm	RESOUCES	4	0.901
5. Membership fee	FEE	4	0.856
Dependent variables			
1. Accession decision	DECISION	4	0.834
2. Membership level choice	CHOICE	5	0.942

Source: Authors' survey, 2018.

Results of testing of Cronbach's Alpha for the scales described in Table 4 above showed that these scales had the Cronbach's Alpha coefficient of > 0.6 and the Corrected Item – Total Correlation of > 0.3. Thus no observed variables were excluded and the model included 32 variables used in the subsequent EFA analysis.

5.3. Exploratory factor analysis (EFA) and confirmatory factor analysis (CFA)

5.3.1. Exploratory factor analysis (EFA) of scales

From the results of the survey, the data was analyzed using exploratory factor analysis with the support of SPSS software, after eliminating variables with a

factor loading of less than 0.5, the final results of exploratory factor analysis were presented in Table 5.

Table 5
Results of EFA of factors

Observed variables	Factors						
	1	*2*	*3*	*4*	*5*	*6*	*7*
CHOICE1	.841						
CHOICE4	.841						
CHOICE3	.800						
CHOICE5	.793						
CHOICE2	.785						
LEGAL5		.844					
LEGAL2		.823					
LEGAL3		.822					
LEGAL4		.821					
LEGAL1		.801					
STRATEGY2			.878				
STRATEGY5			.838				
STRATEGY1			.826				
STRATEGY3			.822				
STRATEGY4			.767				
REPUTATION4				.893			
REPUTATION2				.865			
REPUTATION1				.826			
REPUTATION3				.819			
REPUTATION5				.693			
RESOURCES1					.920		
RESOURCES 4					.852		
RESOURCES 2					.830		
RESOURCES 3					.811		
FEE1						.844	
FEE 3						.797	
FEE 4						.786	
FEE 2						.728	
DECISION4							.806
DECISION 3							.741
DECISION 1							.705
DECISION 2							.684
Eigenvalue	8.485	4.073	3.896	2.592	1.902	1.416	1.367
% of Variance	26.516	12.727	12.177	8.101	5.943	4.426	4.272
Cumulative %	26.516	39.243	51.419	59.520	65.463	69.889	74.161
KMO					.871		
Bartlett's Test	Chi-Square				6112.826		
	df				496		
	Sig.				.000		

Source: Author's survey, 2018.

The analysis results above showed that the coefficient of KMO was > 0.5, the Batlett testing had a p-value of 0,000 < 0,05, a cumulative of variance was > 50%, the factor loadings were greater than 0.5 and the Eigen Value was > 1. Thus the criteria for using the EFA showed that the factors were consistent with the data set of the research.

5.3.2. Results of confirmatory factor analysis (CFA)

Table 6
Results of test for composite reliability and variance extracted of research concepts

Concept	Symbol	Number of obs. Variable	Composite reliability	Variance extracted
Legal system	LEGAL	5	0.907	0.660
Strategy for developing the audit firm	STRATEGY	5	0.883	0.605
Reputation and prestige of the international audit firm	REPUTATION	5	0.880	0.598
Resources of the audit firm	RESOUCES	4	0.905	0.705
Membership fee	FEE	4	0.864	0.619
Accession decision	DECISION	4	0.837	0.563
Membership level choice	CHOICE	5	0.943	0.768

According to Table 6, it can be seen that the CRs were greater than 0.7, the average variance extracted (AVE) was greater than 50% so it could be concluded that the components of the scale were reliable and convergent.

Table 7
Results of test for discriminant validity of research concepts

Variables			Estimate	S.E.	C.R.	P	Label
CHOICE	<—>	LEGAL	,171	,031	5,419	***	
CHOICE	<—>	STRATEGY	,172	,032	5,368	***	
CHOICE	<—>	REPUTATION	,110	,028	3,979	***	
CHOICE	<—>	RESOURCES	,139	,032	4,272	***	
CHOICE	<—>	FEE	,178	,035	5,148	***	
CHOICE	<—>	DECISION	,162	,022	7,396	***	
LEGAL	<—>	STRATEGY	,036	,036	1,002	,316	
LEGAL	<—>	REPUTATION	-,031	,032	-,965	,335	
LEGAL	<—>	RESOURCES	,130	,039	3,327	***	
LEGAL	<—>	FEE	,227	,043	5,310	***	
LEGAL	<—>	DECISION	,118	,023	5,092	***	
STRATEGY	<—>	REPUTATION	-,006	,033	-,177	,859	
STRATEGY	<—>	RESOURCES	-,041	,039	-1,047	,295	
STRATEGY	<—>	FEE	-,006	,040	-,152	,879	
STRATEGY	<—>	DECISION	,105	,023	4,539	***	
REPUTATION	<—>	RESOURCES	,000	,035	,001	,999	
REPUTATION	<—>	FEE	,174	,039	4,480	***	
REPUTATION	<—>	DECISION	,065	,020	3,232	,001	
RESOURCES	<—>	FEE	,218	,045	4,798	***	
RESOURCES	<—>	DECISION	,087	,024	3,627	***	
FEE	<—>	DECISION	,111	,025	4,392	***	

Source: Authors' survey, 2018

Thus, based on Table 7, there were some observations that did not achieve the discriminant validity (p-value> 0.05) so that the authors removed the relationships between these variables and performed the CFA analysis with the results as shown below:
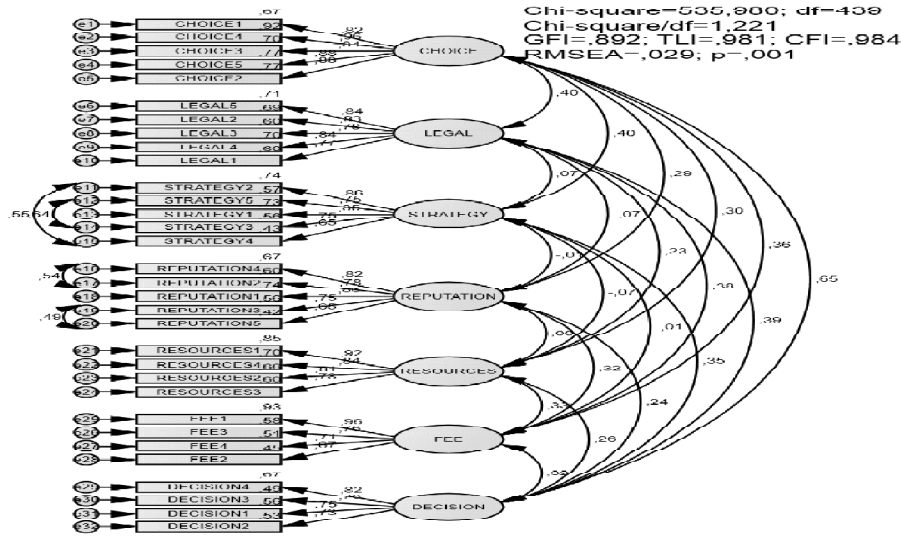

Figure 2. Results of standardized CFA

Source: Authors' survey, 2018

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).

The CFA analysis results showed that: The model had 439 degrees of freedom, CFA demonstrated p = .001; GFI = 0.892 RMSEA = 0.029; Chi-Square/df =1.221; TFI = 0.981 , CFI = 0,984 which was greater than 0.9. Thus it could be concluded that this model was appropriate with the actual data.

5.4. Testing of model and research hypotheses

5.4.1. Testing of model

The author used SEM to test existing models and research hypotheses. The results of the research model estimation showed that the test model had: 454 degrees of freedom (p=0.00) and the indicators indicated that the model was appropriate for market data (chi-square/df = 1,499; GFI = 0,867; CFI = 0,962, TLI = 0,958 and RMSEA = 0,043).

The results of the primary parameter estimation showed that both relationships were statistically significant (p < 5%). Thus, the relation of concepts has reached the theoretical expectation.

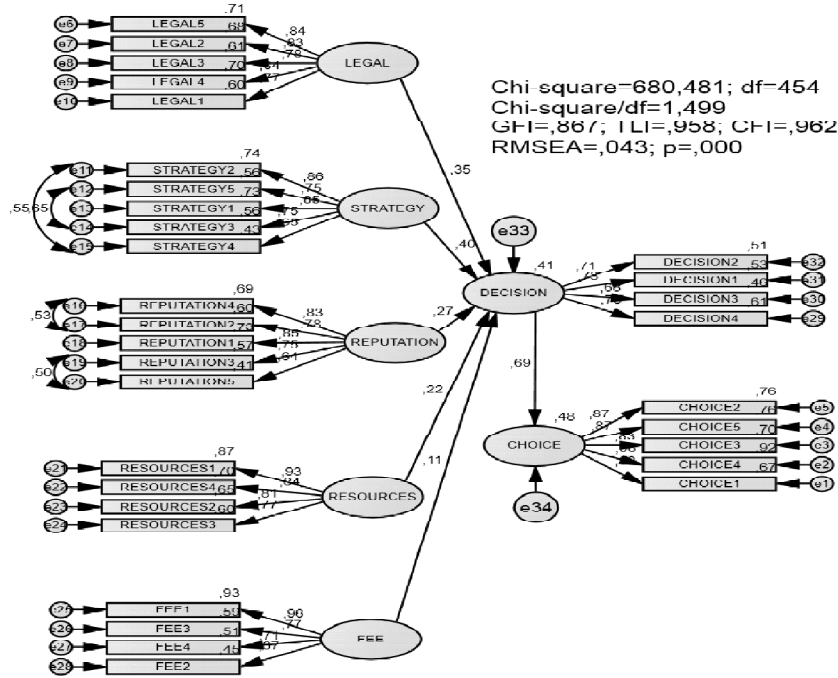**Figure 3: Results of SEM of the formal research model (standardized)**

Source: Authors' survey, 2018

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).

5.4.2. Testing of research hypotheses

Testing of hypotheses of the research model is as follows:

Table 8
Results of hypotheses testing

Variables			Estimate	S.E.	C.R.	P	Label
DECISION	<—-	LEGAL	,191	,034	5,637	***	H1 Accepted
DECISION	<—-	STRATEGY	,218	,035	6,226	***	H2 Accepted
DECISION	<—-	REPUTATION	,163	,037	4,371	***	H3 Accepted
DECISION	<—-	RESOURCES	,107	,029	3,693	***	H4 Accepted
DECISION	<—-	FEE	,052	,027	1,906	,057	H5 Rejected
CHOICE	<—-	DECISION	1,033	,106	9,731	***	H6 Accepted

Source: Authors' survey, 2018

6. Conclusion

Based on the results of quantitative research on the factors affecting the accession decision and the membership level choice upon accession of audit firms in Vietnam market in early 2018, some conclusions can be drawn as follows:

CFA showed that critical models were appropriate for market data, and the scales ensured convergent validity, unidirectionality, reliability, cumulative of variance and discriminant validity. From the CFA results, analysis of Structural equation modeling (SEM) was performed, showing that the formal research model was consistent with market data.

Therefore, the research results showed that the factors affecting the accession decision of audit firms including 4 main factors were: Strategy for developing the audit firm; relevant legal system; Reputation and prestige of the international audit firm; Resources of the audit firm. Of which the Strategy for developing the audit firm has greatest impact.

This research also indicated that the Accession decision to international audit firms had a strong impact on the membership level choice of Vietnamese audit firms. This were the research results in accordance with the qualitative research given by Ha (2012), Long (2014) in their qualitative researches.

This research also showed that the Membership fee upon accession to the international audit firms were not a barrier that had the decisive influence on the joining and becoming members of international audit firms.

At Vietnamese audit market in the years 2010-2017, only 20% of audit firms have joined and become members of international audit firms (VACPA, 2010-2017). The results of ranking the audit firms based on some basic indicators such as turnover, number of customers, number of auditors, number of professional staff showed that: "firms as members of the international audit firms have 4 mentioned indicators greater than those of non-members of international audit firms". Especially, there are firms under Big Four group (EY, Deloitte, PWC, KPMG) which has always been the market leader in Vietnam for nearly 30 years. In order to join and become a member of international audit firms, the group of authors propose the following recommendations through the results of this research:

Specific as follows : Strategy for developing the audit firm; relevant legal system; Reputation and prestige of the international audit firm; Resources of the audit firm

- Managers at Vietnamese audit firms need to build their own long-term development strategy. Business development strategies, both in breadth and depth, need to be carefully calculated and analyzed and in details, especially emphasized on the following: In the process of integration with the international economy, the market share of Vietnamese audit firms is in an open market, not limited to the territory of Vietnam, must provide cross-border services. Joining and becoming a member of international audit firms will help the development strategy of Vietnamese audit firms to be shortened and likely to be more successful.

- State management agencies, professional associations and audit firms should continue reviewing and improving the legal system for auditing in general, the issues of joining and becoming member of international audit firms in particular on the basis of compliance with international law and regulations of Vietnam. Very important issues need to be carefully considered in relation to the use of trademarks, images, names, technical assistance and experts from international audit firms to Vietnamese audit firms.

- In order to join and become a member of international audit firms, it is required that Vietnamese audit firms must have adequate resources to meet the criteria and standards required by international audit firms. It is therefore necessary to carry out a review and continually improve the elements on resources, especially the issues related to human resources, finance, quality control, customers, etc.

- The membership depends mainly on the reputation and prestige of the international audit firms so the Vietnamese audit firms need to have in-depth analysis and evaluation of the criteria, standards and requirements for joining of international audit firms. This careful analysis and understanding has a decisive influence on the long-term negotiation, agreement and connection between the international audit firm and the auditing firm.

This research was carried out using a convenience sampling method, leading that the results were mainly subjective by the research author, which reduced the objectivity and generalization. Therefore, the further researches should consider the use of probability sampling method to ensure higher representation and increase the size of the research sample for more accurate and more general analysis results.

The research scope has only been conducted in the Vietnamese market recently and the research results have only been implemented directly for 265 managers, auditors in audit firms so the results of the empirical research only provided some short term conclusions and recommendations. The further researches can expand the scope of the survey in both space and time for a more complete and comprehensive assessments.

References

1. Advisory Committee on the Auditing Profession to the U.S. Department of Treasury (ACAP). (2008). *Final Report of the Advisory Committee on the Auditing Profession to the U.S. Department of Treasury* (October 6). Retrieved from *https://www.treasury.gov/about/organizational-structure/ offices/Documents/final-report.pdf* (accessed August 25, 2018)

2. Bollen, K. A. (1989). A New Incremental Fit Index for General Structural Equation Models, *Sociological Methods & Research,17*(3), pp. 303-316. *https://doi.org/10.1177/0049124189017003004*

3. Bills, K. L., & Cunningham, L. M. (2015). How small audit firm membership in associations, networks, and alliances can impact audit quality and audit fees. *Current Issues in Auditing.* http://doi.org/10.2308/ciia-51278

4. Bills, K. L., Cunningham, L. M., & Myers, L. A. (2016). Small audit firm membership in associations, networks, and alliances: Implications for audit quality and audit fees. In *Accounting Review, 91*(3), 767-792. http://doi.org/10.2308/accr-51228

5. Bills, K. L., Hayne, C., & Stein, S. E. (2018). *A Field Study on Small Accounting Firm Membership in Associations and Networks: Implications for Audit Quality. SSRN.* http://doi.org/10.2139/ ssrn.2884301

6. Chen, H. W., Chen, J. Z., Lobo, G. J., & Wang, Y. Y. (2011). Effects of Audit Quality on Earnings Management and Cost of Equity Capital: Evidence from China. *Contemporary Accounting Research, 28*(3), 892–925. http://doi.org/10.1111/j.1911-3846.2011.01088.x

7. Francis, J. R., Michas, P. N., & Seavey, S. E. (2013). Does audit market concentration harm the quality of audited earnings? Evidence from audit markets in 42 countries. *Contemporary Accounting Research. 30*(1), 325–355.http://doi.org/10.1111/j.1911-3846.2012.01156.x

8. GAO. (2008). Audits of public Continued Concentration in Audit Market for Large Public Companies Does Not Call for Immediate Action. *General Accounting Office.* Retrieved from https://www.gao.gov/new.items/d08163.pdf (accessed August 25, 2018)

9. Ha, H. T. N. (2012). Membership, benefits and responsibilities when becoming a member of the International Audit Organization and lessons learned for Vietnam (In Vietnamese: Tham gia thành viên, lãi ích và trách nhiÇm khi trß thành thành viên cça TÕ chéc kiÃm toán quÑc t¿ và bài hÍc kinh nghiÇm cho ViÇt Nam. *Vietnamese Auditing Journal*, *1*, 45–48. Retrieved from https://www.sav.gov.vn/Pages/chi-tiet-tin.aspx?ItemID=106&l=Traodoikinhnghiem (accessed August 25, 2018)

10. Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2006). Multivariate Data Analysis (6th ed.). *Analysis*, Englewood Cliffs, NJ: Prentice Hall

11. Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, *6*(1),1-55. *https://doi.org/10.1080/10705519909540118*

12. Long, P. L. T. (2014). *Learn about the models of international audit firms and the benefits of member firms (In Vietnamese: TìÌm hiêÒu vêÌ mô hiÌnh cuÒa caìc haÞng kiêÒm toaìn quôìc têì).* Retrieved from http://www.vacpa.org.vn/Page/Detail.aspx?newid=4741 (accessed August 25, 2018)

13. Mao, J., Qi, B., & Xu, Q. (2017). Does International Accounting Network Membership Affect Audit Fees and Audit Quality? Evidence From China. *The International Journal of Accounting*,*52*(3), 262-278. http://doi.org/10.1016/J.INTACC.2017.07.004

14. Schumacker, R. E., & Lomax, R. G. (2004), *A beginner´s guide to structural equation modeling.* Second edition, Lawrence Erlbaum Associates, Publishers, Mahwah, New Jersey, London.

15. The Ministry of Finance of China (1996). Announcement on international accounting networks' appointment of member audit firms in China. Retrieved from http://www.people.com.cn/item/flfgk/gwyfg/1996/215517199602.html (accessed August 25, 2018)

16. The Ministry of Finance of China (2009). Several suggestions on developing Chinese accounting industry. Retrieved from htttp://www.gov.cn/gongbao/content/2009/content_1439279.htm (accessed August 25, 2018)

17. VACPA (2010-2017). *Review report of 2010-2017 activities and direction of operation in 2018 by independent auditors.*