

**MINISTRY OF EDUCATION AND TRAINING**  
**DUY TAN UNIVERSITY**

**DUONG THI THANH HIEN**

**STUDYING THE FACTORS INFLUENCING THE  
IMPLEMENTATION OF ENVIRONMENTAL  
ACCOUNTING AND THE IMPACT OF ITS ON THE  
OPERATIONAL PERFORMANCE OF SEAFOOD  
BUSINESSES IN VIETNAM**

Major: Accounting  
Reference number: 9340301

**SUMMARY OF DOCTORAL THESIS IN ACCOUNTING**

**Da Nang, 2024**

THE THESIS WAS COMPLETED AT  
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## INTRODUCTION

### 1. Necessity of the thesis

Green growth is an important element of sustainable development and is a development process with a close, reasonable and harmonious combination of socio-economic development and environmental protection, meeting the needs of contemporary generations, but does not affect future generations. Vietnam has issued policies on green growth, sustainable development, environmental protection and information disclosure of environment issues.

Vietnam is located on the eastern edge of the Indochinese Peninsula, bordered with the East Sea, which seems to be a particularly important geographical, economic and political position. Besides, Vietnam's waters also offer rich resources and great potential for economic development. Vietnam has many natural conditions to develop marine and freshwater aquaculture and build fishery logistics bases. However, this also requires activities to shift from an exploitative and environmentally polluting economy to a green ocean-based economy, reducing sources of marine environmental pollution right from the mainland. In the context of marine economic development, environmental protection must mean limiting environmental risks, fulfilling social responsibilities and ensuring sustainable development for businesses. Environmental accounting (EA) information is important for business management as well as providing information to other related groups. Seafood enterprises (SE) have contributed a huge role in Vietnam's economic development.

EA is a relatively new issue in Vietnam but has appeared in developed countries for decades. EA first publicized in the US in 1972, but focused on accounting at the national level, and did not propose plans for collecting, processing, analyzing and providing information about EA from the perspective of each enterprise. Many studies have shown that the potential benefits of implementing environmental management accounting (EMA) are huge. These benefits include reducing overall costs, adding value to products, attracting human resources, and enhancing the reputation of an organization (IFAC, 2005; De Beer and Friend, 2006). Several other studies show that implementing EMA can lead to improved organizational performance when appropriate information is used for decision making (IFAC, 2005; Jasch, 2006).

There are numerous views on EA, according to which EA can be understood as part of corporate accounting and support for economic decision making. More than ever, business managers understand that the money spent on controlling and reducing environmental pollution is not purely a cost but an investment in the future, to promote enterprises' values and image, and brand. Therefore, in order to make business decisions, apart from conventional information which are revenue, costs, and profits as before, business managers need other updates related to the environment.

In the current Vietnamese accounting system, the relevant content of environmental accounting (EA) and the organization of practices in businesses is still a gap that has not been fully researched and there are no specific guidelines. There have been several researches related

to EA, including those on organizing EA, implementing EMA, applying EMA, etc. into different industries, and in these studies, researchers often look for separate issues of environmental financial accounting (EFA) and/or EMA. However, researches on factors affecting EA and the impact of EA on operational performance (OP) in EMA in Vietnam seems still be limited, thereby they cannot clarify how EA makes its impact on the of businesses.

For the following reasons: (1) Economic growth pressure is associated with green growth and keeping a balance with the ecological environment; (2) The fisheries industry in Vietnam is an important economic sector – which always receives attention and development orientation from the Party and State, makes a huge and long-term impact on the environment; (3) The role and benefits of EA today; (4) Information from EA is highly necessary for managers and contributes to bringing several benefits to businesses; (5) The need for a specific study on EA in seafood enterprises (SEs) in Vietnam is an urgent and necessary issue. Therefore, researching the factors affecting the implementation of EA and the influence of implementing EA on the OP of SEs in Vietnam is essential. This study will explore factors affecting EA, and consider the effect of EA on the OP of SEs in Vietnam.

## **2. Research objectives and research questions**

### **2.1 Research objectives**

General objective:

Study the factors affecting the implementation of EA and the impact of EA implementation on operational management, thereby

proposing implications and policies related to the implementation of EA in SEs in Vietnam.

Specific objectives:

1. Identify factors affecting the implementation of EA in small businesses in Vietnam.

2. Measure the influence of factors on EA implementation and measure the impact of EA implementation on Vietnamese SEs' OP.

3. Propose implications and policies related to the implementation of EA in SEs in Vietnam.

## **2.2 Research questions**

Research questions relevant to each objective are as follows:

Question 1: What are factors affecting the implementation of EA in SEs in Vietnam?

Question 2: What is the level of impact of EA implementation on the OP of SEs in Vietnam?

Question 3: What are the management implications for SEs in Vietnam to be able to fully and smoothly implement EA, thereby improving OP in the coming time?

## **3. Subjects and scope of research**

### **3.1 Subjects of research**

Contributing factors in the implementation of EA and its impact on the OP of SEs in Vietnam

### **3.2 Scope of research**

Content: The thesis researches the factors affecting the implementation of EA of SEs and the impact of implementing EA on the OP of SEs in Vietnam. In which, EA implementation acts as an

intermediary variable affecting the performance of SEs and is measured by financial and non-financial scales. Management implications are proposed from the research so that businesses can implement EA fully and smoothly, thereby contributing to improving the OP of businesses in the coming time.

**Space:** The thesis focuses on SEs in Vietnam, specifically those are members of the Vietnam Association of Seafood Exporters and Producers (VASEP).

**Time:** The thesis has been carried out during the period from February 2021 to February 2023. However, during 2021, the Covid - 19 epidemic was still going on, thus survey data was collected and compiled mainly in 2022. In fact, the official survey was carried out from June 2022 to December 2022 using a questionnaire.

#### **4. Research methods**

Applied research method is a combination of qualitative research method and quantitative research method

**Qualitative research method** is carried out through: direct interviews with knowledgeable experts in the field of accounting and EA using questionnaires with pre-built measurement scales. Expert comments are aimed at finding and discovering new factors and adjusting the scale of variables in the model, thereby completing the survey questionnaire. Details of this part are presented in detail in Chapter 3 of the Thesis.

**Quantitative research method** is carried out through: (1) Preliminary survey with 150 questionnaires to test whether the hypothesis and research model are appropriate or not; (2) official

survey with 554 questionnaires after obtaining quantitative results from the preliminary survey; (3) test the research model with collected official data. The researcher uses SPSS and AMOS software to make data processing using the SEM model. Details of this part are presented in detail in Chapter 3 of the Thesis.

## **5. New contributions of the thesis**

### *Academic contributions:*

Firstly, the thesis contributes to the theoretical basis of factors affecting the implementation of EA, as well as the impact of implementing EA on the OP of SEs in Vietnam.

Second, the thesis uses foundational theories and previous studies to propose a research model for the factors affecting the implementation of EA and the impact of implementing EA on the operational accounting of SEs. In particular, the thesis additionally adjusts the measurement scale of many variables to test the influence of factors on EA implementation and the influence of EA implementation on businesses' OP.

Third, the results from the thesis not only fill in the gap in research, but also provide and complete a theoretical framework contributing to the explanation of EA implementation in SEs, serving as a basis for future researches on EA implementation.

### *Practical contributions:*

Firstly, the thesis has provided empirical evidence on the influence of factors on EA implementation and the impact of EA implementation on OP in SEs in Vietnam. Because the thesis is considered as being timely and contributes to promoting the



implementation of EA in SEs, one of the key economic sectors, playing an important role in Vietnam's economic development which is with an increasingly expanding scale.

Secondly, the research results of the thesis contribute to promoting managers' support in implementing EA when the benefits and positive impacts of EA on OP can be clearly seen. This may contribute to strengthening and improving businesses' internal and external relationships when implementing EA, and at the same time increasing managers' responsibility to the environment while conducting related production and business activities, aiming to increase economic benefits, protect the environment, and promote sustainable development.

Thirdly, the thesis results may serve as reference materials for teaching purposes and for other researches related to EA in enterprises.

## **6. Structure of the thesis**

Apart from its introduction and conclusion, the thesis consists of 5 chapters as follows:

*Chapter 1:* Research overview.

*Chapter 2:* Theoretical basis.

*Chapter 3:* Research design.

*Chapter 4:* Research results and discussion.

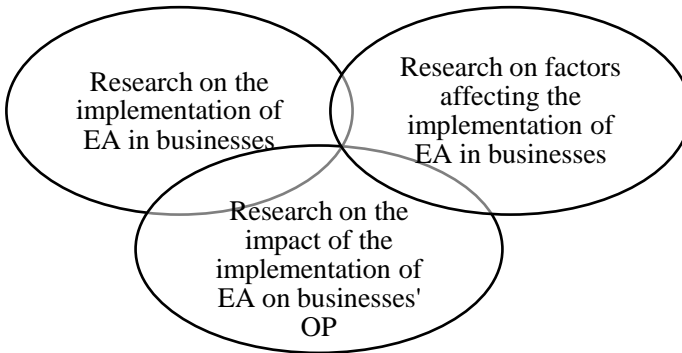
*Chapter 5:* Conclusions and Implications.

## CHAPTER 1

### RESEARCH OVERVIEW

In today's society, awareness of environmental issues has increased significantly in recent years and is a top concern for businesses and people (Deegan, 1996). Today, society demands a higher quality environment which can be sought through policies on sustainable development, eco-efficiency and wider information disclosure, leading to improved accountability of numerous businesses related to the environment.

The growing interest in social and environmental issues has fueled a rise in academic research on EA practices. The literature on EA implementation is vast and many lines of research not only from a theoretical perspective but also from an empirical perspective are increasingly numerous (Mata, 2018). Statistics can be compiled according to the following topics:



**Diagram 1. Research topics related to EA implementation**

*(Source: compiled by researcher)*

## **1.1 OVERVIEW OF STUDIES ON THE ADOPTION OF ENVIRONMENTAL ACCOUNTING.**

### **1.1.1 International studies**

The pressures arising among modern societies require a higher quality environment which can be sought through policies on sustainable development, eco-efficiency, and it seems to be obligatory that businesses take responsibility for a more extensive EA for the sake of the whole society (Schaltegger, 2017). That is where the role of EA was formed from. EA has been discussed both theoretically and practically, especially in developed countries (Vasile & Man, 2012). Research from this period is beginning to develop and is known as the “foundational” period of EA. Since then, the number of studies increased significantly and reports on environment issues, which are accessed by researchers, who began to take into account the adoption of new standards related to EMA (Vasile & Man, 2012 ).

According to IFAC (2005), EA consists of 2 integral categories: EFA and EMA.

More researches on EMA have been conducted recently. Researches in recent years on the implementation of EMA have been carried out in the context of specific industries, such as in the road transport industry (Maijala and Pohjola, 2006), in universities (Chang, 2008), in the coffee factories (Schram, 2003) and even in wildlife parks (Wentzel et al., 2008) as well as the fact that EMA techniques are commonly used in small and medium-sized enterprises (Venturelli and Pilisi, 2005; Wendisch and Heupel, 2005). Accordingly, EMA, through providing information about monetary and physical EA (Burritt et al., 2002), will support the implementation of

environmental strategies.

A large number of empirical researches on EA have been done in an attempt to alleviate some of the problems and shortcomings in customary procedures and conventions of conventional accounting (Bebbington et al., 2021). A research by Cho, Senn and Sobkowiak (2022) emphasizes the connection between the environment and the COVID-19 crisis, between accounting mechanisms and accountability of EA information explanation.

### **1.1.2 Studies in Vietnam**

Since the beginning of 2000s, Vietnam started to see researches on the adoption of EA. Studies have been carried out by following researchers: Nguyen Chi Quang (2003); Trong Duong (2008); Pham Duc Hieu (2010); Hoang Thuy Dieu Linh (2013); Vo Van Nhi và Nguyen Thi Duc Loan (2013); Hoang Thi Bich Ngọc (2014); Ha Xuan Thach (2014); Huynh Duc Long (2016)... These studies have highlighted the necessity of implementing EA; introducing EA in Korea, Japan, America, Germany; specific instructions on implementing EA; lessons learned to implement EA better; criteria for classifying and identifying environmental costs (EC); the concept; methods to classify and record environmental costs and environmental liabilities.

## **1.2 RESEARCH OVERVIEW OF FACTORS AFFECTING EA**

Researches related to factors affecting the implementation of EA have been published more and more around the world; most of them come from developed countries and are highly applicable (Burritt and Christ, 2016). Although Vietnam is behind in research on EA implementation and factors affecting EA implementation, in recent

decades there have been many studies about influencing factors which seem to be relevant to actual accounting practices in Vietnam.

Through researching relevant domestic and foreign researches on factors affecting the implementation of EA, the researcher has selected the seemingly most common factors affecting the implementation of EA, including: business managers' support, financial resources, technology level, qualifications of accountants, pressure from stakeholders, business characteristics, financial resources, legal regulations, and environmental changes.

### **1.3 RESEARCH OVERVIEW OF THE IMPACT OF ENVIRONMENTAL ACCOUNTING ADOPTION ON BUSINESSES' OPERATIONAL PERFORMANCE**

Research results on the relationship between EA implementation and OP have been published widely around the world; most of the studies indicate the positive impact of EA implementation on OP of businesses (Henri & Journeault, 2010; Burritt et al., 2019).

In Vietnam, in addition to theoretical researches related to EA and those on factors affecting EA implementation, other researches related to the impact of EA implementation and operational efficiency and OP of businesses are also of interest to scientists (La Soa Nguyen and Manh Dung Tran, 2019, Le et al., 2019; Nguyen Thanh Tai, 2020).

### **1.4 COMMENT AND RESEARCH GAP**

#### **1.4.1 Comments on researches**

Researches on EA implementation are mainly concentrated in developed countries and are highly applicable, with an advantage of being related to industries that have a direct impact on the environment such as oil and gas, chemicals, and cement and general

production.

### **1.4.2 Research gap and orientation**

An overview of researches in the world and in the country has shown the current state of research on EA implementation. Therefore, the author focuses on the following gaps: (1) Gaps in factors affecting the implementation of EA; (2) Gaps in the impact of EA implementation on businesses' OP; (3) Gaps in implementation context. Consequently, the author orients to carry out a more extensive research through further discovery and closer assessment of factors affecting EA implementation and the impact of EA implementation on OP through financial and non-financial measures among SEs in Vietnam.

## **SUMMARY OF CHAPTER 1**

In Chapter 1, the author made a general assessment of research works in the world and in Vietnam, including studies on EA implementation, factors affecting EA implementation and impacts of EA implementation on OP. Basing on synthesizing typical studies, the author identifies research gaps and research orientation.

## **CHAPTER 2. THEORETICAL BASIS**

### **2.1 IMPLEMENTATION OF ENVIRONMENTAL ACCOUNTING**

#### **2.1.1 Definition**

EA is an integral part of accounting in businesses and involves relevant information about environmental activities with businesses in order to gather, process, and analyze information or data on environment users who are in or not in businesses. EA consists of 2 integral categories: EFA and EMA.

The implementation of EA can be defined as: (1) Receiving and processing information and accounting data related to environmental assets, environmental liabilities, environmental income, environmental costs and material flow accounting. (2) Inspect and supervise the management and use of environmental assets and liabilities, detect and prevent violations of environmental laws. (3) Analyze EA information to advise and propose solutions to serve environmental management requirements and make decisions. (4) Publicize EA information to serve the inspection and control of authorized agencies and convey businesses' messages about environmental issues.

### **2.1.2 Conducting of EA implementation**

The implementation of EA shall be carried out on the basis of conducting EFA and EMA. Basically, the implementation of these two categories seems to mostly be in accordance with specific instructions of: USEPA (1995) , UNDSO (2001), UNCTAD (2002), IFAC (2005), Ministry of the Environment, Government of Japan (2005), SEEA (2021), etc., and other guidelines on accounting in Circular 200/2014/TT-BTC, Circular 133/2016/TT-BTC as well as relevant current legal documents such as State laws, standards, and accounting mechanisms.

### **2.1.3 Measurement of environmental accounting implementation**

In order to measure the implementation of EA, studies have relied on:

(1) Use of environmental financial information. (2) Use of non-financial environmental information (environmental policies, goals, strategies, etc.). (3) Use modern environmental cost allocation methods (ABC, MFCA, LCC methods). (4) Use detailed accounts to monitor EA implementation. (5) Use detailed accounting books to track EA information. (6) Environmental performance analysis. (7) Produce environmental reports.

## **2.2 OVERVIEW OF OPERATIONAL PERFORMANCE**

### **2.2.1 Definition of business operational performance**

OP is the degree to which an enterprise achieves its goals to meet the requirements and expectations of stakeholders..

### **2.2.2 Interpreted concept of operational performance**

In this thesis, the researcher look at OP on both perspectives which are financial OP and non-financial OP.

### **2.2.3 Measurement of operational performance**

OP is measured by combining financial indicators and non-financial indicators.

## **2.4 IMPACT OF ENVIRONMENTAL ACCOUNTING IMPLEMENTATION OF OPERATIONAL PERFORMANCE**

While researching factors affecting management accounting implementation in general or EA, it cannot help putting into consideration the OP of businesses. This argument comes from the perspective of contingency theory, also known as context theory. In addition, the perspective of benefit-cost analysis theory also points out the impact on the implementation of EA through two factors: the investment cost for organizing EA and the benefits that accounting information brings to businesses.

## **SUMMARY OF CHAPTER 2**

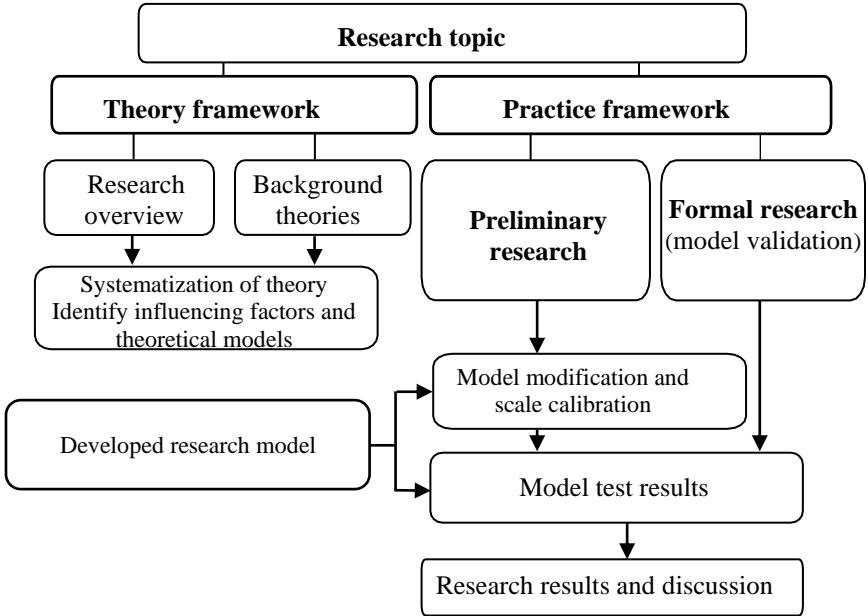
In this chapter, the author presents the concept and contents of EA implementation in enterprises, and the factors affecting EA implementation. The author has clarified its integral aspects of OP, including: concept, content of OP and measurement of OP. At the same time, related background theories are also given by the author.



## CHAPTER 3

### DESIGN OF THE RESEARCH

#### 3.1 Research progress



**Diagram 3. 1 Research progress of the thesis**

*Source: compiled by author*

#### 3.2 RESEARCH HYPOTHESES AND MODELS

##### 3.3.1 Research hypotheses

This section is divided into two parts: (1) Factors affecting the implementation of EA and (2) implementation of EA affecting the OP of enterprises. Given the characteristics of SEs in Vietnam that have a major impact on the environment, it is necessary to research more factors which are suitable to the production features of the industry, along with more appropriate measurement scales. Therefore, the author has selected basic and practical factors in SEs in Vietnam through the following Table 3.1:

**Table 3.1. Summary of the impact of factors**

Hypotheses	Independent variables	Dependent variables	Theory	Expectation	Background researches
H1	Manager support	Implementation of EA	Contingency theory Institutional theory Legitimacy theory	+	Jamil et al. (2015); Thanh Nguyen Phan et al. (2018); Wang et al. (2019).
H2	Financial resources	Implementation of EA	Contingency theory	+	Wachira & Wang'ombe (2019); Jamil và cs (2015); Yekini et al. (2019).
H3	Level of technology	Implementation of EA	Contingency theory Institutional theory	+	Ferreira et al. (2010); Kokubu & Kitada (2015); Burritt et al. (2016).
H4	Qualifications of accountants	Implementation of EA	Contingency theory Institutional theory	+	Rahahleh (2011); Spence et al. (2012); Karimi (2017).
H5	Business characteristics	Implementation of EA	Legitimacy theory	+	Frost và Wilmshurst (2000); Ferreira et al. (2010); Yekini et al. (2019).
H6	Pressure from stakeholders	Implementation of EA	Stakeholder theory	+	Frost và Wilmshurst (2000); Wang et al. (2019); Zandi (2019).
H7	Legal regulations	Implementation of EA	Legitimacy theory	+	Hoffman (2001); Schaltegger et al. (2008); Nguyen Khac Hung (2020).
H8	Environment changes	Implementation of EA	Contingency theory	+	Burritt (2004); Armitage et al. (2016); Le & Nguyen (2019).
H9	Implementation of EA	Operational performance	Benefit-cost analysis Contingency theory	+	UNCTAD (2002), IFAC (2005), Japanese Ministry of Environment (MOE, 2005), USEPA (1995).

(Source: compiled by author)

### 3.2.2 Research model

Proposed research model consists of two components, which are (1): factors affecting the adoption of EA; and (2): the implementation of EA influencing businesses' OP. The model can be seen in Diagram 3.2.

In which:

IMPL: implementation of EA

FINA: financial resource

QUAL: accountant qualification

STAK: stakeholders' pressure

ENUN: environment changes

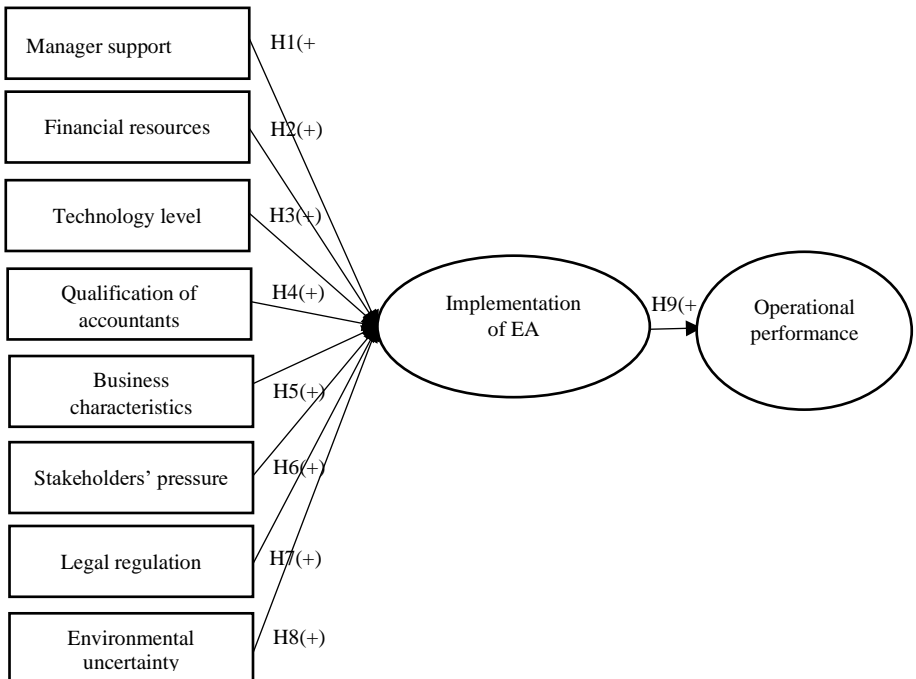
SUPP: manager support

TECH: technology level

CHAR: business characteristics

REGU: legal regulation

OPER: operational performance



**Diagram 3.2. Proposed research model**

*(Source: compiled by author)*

### **3.3 SCALE CALIBRATION AND QUESTIONNAIRE DEVELOPMENT**

The scale of concepts (variables) is reused from research projects around the world, mostly from developed countries. To ensure practicality, the scale is adjusted to match real-life situations (Craig & Douglas, 2000), translated from English into Vietnamese.

The official scale is obtained from qualitative research results (after interviewing and collecting expert opinions). The question is closed and answered on a 5-level Likert scale from 1 to 5 (Level 1 is completely disagree, the level of agreement increases gradually to level 5 which is completely agree with the statement).

### **3.4 PRELIMINARY RESEARCH DESIGN**

Preliminary data analysis results with 150 survey questionnaires, STAK variable 4 was removed, therefore the Stakeholder Pressure scale (STAK) with the 5 original observation variables is reduced to 4 observation variables for the official data survey.

### **3.5. FORMAL RESEARCH DESIGN**

#### **3.5.1 Sampling method**

The overall sample (target sample) is 222 SEs belonging to the VASEP. These SEs samples seem to be of particular professional organizations with favorable conditions for survey in terms of time and space.

Probability sampling method is applied. Group sampling technique is choosing samples from different geographical regions (North, Central, South). Sampling method is random distribution within the selected group.

#### **3.5.2 Official data analysis**

In order to conduct research with the initially set goals, the study carried out formal data analysis with basic steps including: (1)

Descriptive statistical analysis; (2) Testing the scale; (3) Test the model and research hypotheses; (4) Bootstrap test; (5) Variance analysis (multi-group structural analysis).

### **SUMMARY OF CHAPTER 3**

In Chapter 3, the author introduced the research process and research framework for the thesis. The author then presents expert sample selection and scale calibration in detail. Qualitatively, a questionnaire for expert interview has been developed to correct and supplement possible errors. Quantitatively, after having the results of the expert interviews, the survey questions were formed, and the author conducted a preliminary survey. Next step was the official quantitative research, with 600 questionnaires distributed, and 579 questionnaires collected, of which 25 questionnaires had insufficient information, leaving 554 valid questionnaires (accounting for 92%) for analysis. This number of questionnaire ensures the number of samples for the purpose of testing EFA, CFA and SEM.

## **CHAPTER 4**

### **RESEARCH RESULTS AND DISCUSSION**

#### **4.1 OVERVIEW OF SEAFOOD ENTERPRISES IN VIETNAM**

##### **4.1.1 The process of formation and development**

**SEs in Vietnam or the fisheries industry** were originally derived from fishing activities by fishermen on the sea. The fisheries industry has become an important sector of the economy, contributing to the transformation of rural agricultural structure and improving the lives of residents.

##### **4.1.2 The features Vietnamese seafood enterprises' production and business that affect the implementation of environmental accounting**

Fisheries is an environmentally sensitive industry. Environmental impacts arising from its production and business activities have affected the implementation of EA in Vietnamese SEs.

## **4.2 DESCRIPTIVE STATISTICS OF THE STUDY SAMPLE**

To collect data, the author sent 600 survey questionnaires to businesses and received 554 questionnaires (equivalent to 92%). The items used in the analysis were collected from businesses which are VASEP's members – they are reputable Vietnamese SEs that process and export aqua-products. The surveyed businesses are grouped into 3 regions: the North (accounting for 3%), the Centre (accounting for 17%) and the South (accounting for 80%). This section includes (1) General information; (2) Descriptive statistics.

## **4.3 RESULTS OF TESTING THE SCALE**

The scale is tested basing on: Reliability test using Cronbach's Alpha coefficient, EFA exploratory factor analysis, and CFA confirmatory factor analysis.

Results of CFA analysis indicate:  $CMIN/df = 1.859 \leq 5$ ;  $TLI = 0.955$ ;  $CFI = 0.959 \geq 0.9$ ;  $NIF = 0.917$ ;  $RMSEA = 0.039 < 0.05$  meets the requirements, so it can be said that the measurement model fits the actual data. The scale's standardized weights are all  $> 0.5$  and  $P\text{-value} = 0.000 < 0.05$ , it can be concluded that the observed variables to measure the concepts in the model all achieve convergent validity and unidirectionality.

## **4.4 RESULTS OF MODEL TESTING AND HYPOTHESES**

### **4.4.1 Results of model testing**

After CFA analysis was successfully performed, the author carried out the testing of SEM structure model. The results of SEM model analysis show that theoretical model with following indicators:  $\text{Chi-square}/df = 2.008 \leq 3$ ;  $P = 0.000 < 0.05$ ;  $RMSEA = 0.043 < 0.05$ ;  $GFI = 0.883 > 0.8$ ;  $CFI = 0.952 > 0.9$ ;  $TLI = 0.947 > 0.9$  are totally in accordance with actual data.

### **4.4.2 Results of testing the research hypotheses**

**Table 4.1 Regression coefficient (standardized) and impact level of relationships**

Degree of impact on IMPL			Regression coefficient	%	Position
ENUN	--->	IMPL	0.101	8.60	7
FINA	--->	IMPL	0.103	8.77	6
TECH	--->	IMPL	0.197	16.77	2
SUPP	--->	IMPL	0.291	24.77	1
STAK	--->	IMPL	0.124	10.55	4
REGU	--->	IMPL	0.106	9.02	5
QUAL	--->	IMPL	0.162	13.79	3
CHAR	--->	IMPL	0.091	7.74	8
Total level of impact			1.175	100	
The level of impact of IMPL on OPER			Regression coefficient	%	
IMPL	--->	OPER	0.313	100%	

*Source: Results of data processing – AMOS analysis*

In addition, the results also suggested the direct and indirect effects of each factor.

**Table 4.2. Total direct and indirect effects of each factor**

Variable	CHAR	QUAL	REGU	STAK	SUPP	TECH	FINA	ENUN
IMPL	0.094	0.173	0.107	0.119	0.285	0.232	0.094	0.097
OPER	0.022	0.040	0.025	0.028	0.067	0.054	0.022	0.023

*(Source: Results from AMOS)*

#### **4.5 BOOTSTRAP TESTING**

Use the bootstrap method with the number of repeated observations  $N = 1000$  times. The official model and proposed hypotheses of the thesis are no different from the original proposal.

#### **4.6 ANALYSIS OF CONTROL VARIABLE DIFFERENCES**

The results of multi-group structural analysis show that the level of effect of independent variables on the variation of the EA implementation factor (IPML) and the level of impact of variables on the variation of the OP factor (OPER) for groups of different asset sizes; groups of different types of businesses; groups of different educational level; there are no differences between the different listing status groups. This result shows that seafood businesses seem to be aware of the role of implementing EA and this affects the OP of businesses.

## **4.7 DISCUSSION OF RESULTS**

### **4.7.1 Regarding research model**

The results show that the reliability of the scale of factors affecting EA, the scale of EA, and the scale of businesses' OP are reliable.

### **4.7.2 Regarding research hypothesis.**

The test results show that 9 hypotheses of the research model are all accepted.

## **SUMMARY OF CHAPTER 4**

In this chapter, the author presents an overview of seafood enterprises in Vietnam. Next are the research results of the thesis, including descriptive statistics of the research sample, scale testing results, results of model testing and research hypotheses. The achieved results make no difference from the initially proposed model. Finally, the author discusses all the results of the study.



## **CHAPTER 5**

### **CONCLUSION AND IMPLICATIONS**

#### **5.1 CONCLUSION**

The study has identified 08 factors that have a positive and statistically significant influence on the implementation of EA in seafood businesses in Vietnam based on standardized weights as follows: manager support, with the strongest impact (0.291), followed by the level of technology (0.197), qualifications of accountants (0.162), pressure from stakeholders (0.124), legal regulations (0.106), financial resources (0.103), environmental changes (0.101), and finally business characteristics (0.091). At the same time, the research results also show that the implementation of EA has a strong impact on the OP of seafood businesses in Vietnam (standardized weight 0.313).

#### **5.2 IMPLICATIONS**

Developing the fisheries industry brings numerous socio-economic benefits but also other environmental impacts. Therefore, it is necessary to have clear directions to harmonize economic, social and environmental benefits. Therefore, the author proposes some implications including the following:

- Increase manager support

- Improve the qualifications of accountants

- Develop software to support accounting practices and invest in new technology

- Improve relationships with stakeholders

- Production and business orientation comes with environmental protection

- Consolidate and expand financial resources

- Complete legal regulations

- Ensure a secure and safe business environment

- Promote EA in businesses

#### **5.3 SCIENTIFIC CONTRIBUTION OF THE THESIS**

### **5.3.1 Theoretically**

*First*, the study combines theories such as contingency theory, institutional theory, legitimacy theory, stakeholder theory, and benefit-cost relationship theory to explain the implementation of EA as well as its effects on the OP of seafood enterprises in Vietnam.

*Second*, the research contributes to the theoretical basis of factors affecting the implementation of EA; build a model of influencing factors and measure the level of impact of these factors.

*Third*, this result will probably be a useful reference for researches made by authors, scientists, etc. who are related to EA at schools, competent agencies or enterprises that need to perform EA, which can be a basis for future related research.

### **5.3.2 Practically**

EA seems to be a relatively new issue, although in recent years there have been related studies. However, this research is considered as being timely and contributes to promoting the implementation of EA in seafood enterprises.

The research makes contribution to promoting managers' support in implementing EA when the benefits and positive impacts on businesses' OP are clearly seen, while increasing the responsibility of managers for the environment.

The research also contributes to strengthening and satisfying relationships inside and outside businesses when implementing EA; businesses may receive more incentives from state agencies as well as environmental organizations; at the same time, the research may be used as a reference for professional organizations and the government to provide policies and instructions on implementing EA in a more complete and comprehensive way.

## **5.4 LIMITATIONS AND DIRECTIONS FOR FURTHER RESEARCH**

The thesis surveys businesses under VASEP with a sample of 554, however this number cannot represent all businesses in Vietnam.

There are many other factors that have not been mentioned in the topic such as leaders' awareness of the benefits of EA, or corporate culture and religion factors, etc.

The study has not analyzed the specific influencing factors for each specific production sector within the seafood industry groups.

*The research direction proposed by the author is as follows:*

In the future, other studies should increase the sample size to have more general and more representative results.

Further researches can take into account a bigger number of factors that affect EA, thereby affecting OP, and these factors may include: leadership characteristics, leadership awareness of the benefits of EA, business culture, religion, etc.

Another research direction can be done on EA in each specific field such as chemicals, footwear, construction materials production, electronics, etc.

## **SUMMARY OF CHAPTER 5**

In chapter 5, the author summarized the research results and, on this basis, drew management implications to enhance the implementation of EA, thereby enhancing OP in SEs in Vietnam. The author highlights the theoretical and practical contributions of the thesis. However, there are some limitations in the research sample, as well as factors affecting OP in relation to EA implementation. Therefore, the thesis author suggests that future studies can increase the sample size, look into other factors affecting EA more fully and go further into the field of other sectors of production.

## CONCLUSION

EA plays an increasingly important role in modern society, through which businesses not only communicate financial information to investors and other interested parties, but also consider social benefits for community in which the business operates. From an economic perspective, businesses always expect to control their costs in the best manner and gain the highest profits. However, for the sake of the environment and society, businesses must also contribute directly to the community development through green and clean production and business activities to improve quality of life and sustainable development, thereby improving their own reputation. The author's thesis was carried out with the goal of finding important factors affecting the implementation of EA and confirming the impact of EA implementation on the OP of seafood enterprises in Vietnam.

The thesis has achieved the three initially set goals. The thesis carries out preliminary testing of the model's suitability and construction of a measurement scale, and also seeks expert opinions. After receiving expert opinions, the questionnaire was completed and preliminary quantitative research techniques were implemented before going into the official survey on a larger scale. The thesis conducted a survey of seafood enterprises under VASEP using the probability method with 554 survey questionnaires included in the analysis. Techniques such as Cronbach's Alpha test, exploratory factor analysis (EFA), confirmatory factor analysis (CFA) and finally structural equation modeling analysis (SEM). Research results show that all factors reflect the current actual situation when EA is implemented and the positive impact of this implementation on the OP of seafood enterprises in Vietnam. Consequently, the author of the thesis concludes and gives theoretical and practical implications. At the same time, limitations and research directions for future research are also drawn.