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Factors Affecting the Decision to Choose Green Accounting Approach of Small and Medium Enterprises in Hanoi

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Abstract

The objective of the study is to identify and measure the factors affecting the decision to choose green accounting approach of SMEs in Hanoi. The study used quantitative research methods with a sample of 300 observations, collected from small and medium-sized manufacturing enterprises in Hanoi. Research shows that there are 4 factors

affecting the decision to choose the approach of the business is the characteristics of the business; the capacity of employees; government policy; corporate culture. The study also offers a number of solutions to develop and apply green accounting for small and medium-sized manufacturing enterprises in Hanoi in the current context.

Keywords: Green Accounting, Environmental Accounting, Sustainable Development, Manufacturing Enterprises

1. Introduction

Greening activities are one of the trends that businesses around the world are aiming for. Green accounting is considered an important tool related to the aspects of the natural environment's influence on the economy and is considered to be a transition towards sustainable development, towards developing a green economy. Green accounting can be understood as a modern and comprehensive accounting system that fully reflects the contents of assets, liabilities, investment capital, revenues and expenditures for the country's green environment. The application of green accounting, especially environmental accounting, contributes to providing accurate, transparent, complete and responsible information, thereby helping to improve the image of the business in the eyes of management agencies, shareholders, investors and business partners. Green accounting helps businesses anticipate environmental impacts or some factors that can cause adverse impacts on the environment, thereby helping policymakers and corporate administrators have a way to prevent and deal with those impacts. In other words, green accounting helps businesses demonstrate their social responsibility and business ethics. As a result, it will also help businesses reduce environmental risks as well as health risks to the community, while improving management accounting and environmental financial accounting at the enterprise level. A lot of costs related to the environment such as waste treatment costs, expenses for equipment to reduce noise, dust... are being reflected in the management cost accounts of enterprises (Hung & Que, 2024) ^[8].

In fact, business managers cannot see the scale and nature of environmental costs. If the enterprise performs well in green accounting, it will reduce the consumption of raw materials, fuel and energy inputs of the production and business process. In addition, reducing the consumption of these inputs also helps businesses limit environmental pollutants, increase resource use efficiency, increase competitive advantage by reducing production costs. The application of green accounting in Vietnam today still faces many difficulties and challenges, such as: (1) Many businesses tend to avoid the application of green accounting; (2) Accounting accounts have not recorded significant costs related to the environment such as repair costs, compensation, troubleshooting costs and costs of cleaning and handling in accidents, destroying the ecological and living environment; (3) Financial regulations, standards, accounting regimes and the reality of the contract have not provided and met the necessary information on the costs related to the environment according to the requirements for making decisions on contracts and preparing financial statements. Therefore, in this context, the decision to choose the green accounting approach of enterprises is a means to help promote the sustainable development of the country.

2. Research Overview

The term “green accounting” was coined by economist Robert Dorfman in the 1970s. Mr. Dorfman used the term to refer to the integration of environmental factors and related issues into the traditional accounting system, in order to measure and report business activities related to the environment. The term later became popular in the field of environmental accounting and management. After many years of development, up to now, there have been many studies on green accounting with different perspectives, such as: "Green accounting can be understood as a modern and comprehensive accounting system, in order to record, synthesize and make reports for an organization, to fully reflect the contents of assets, liabilities, investment capital, revenues and expenditures for the green environment of the country" (Dierkes M. & L.E.Preston 1977). Rubenstein, (1992) raises “ethical issues that can be addressed when environmental management is put in the perspective of the financial aspect, then more importance will be gained from business”. According to Sjak Smulders, (2008) green accounting is a type of accounting that tries to factor environmental costs into financial results in the operation of enterprises... Rout, Himanshu Sekhar, (2010) points out the main purpose of green accounting is to help businesses understand and manage the potential between traditional economic goals and environmental goals and then achieve the ultimate goal of sustainable growth. Thus, green accounting is a modern and comprehensive accounting system to record, synthesize and make reports on aspects related to an organization including liabilities, investment capital, revenue sources and expenditures for the national green environment. Vandna (2018) [16] argues that green accounting includes estimating environmental costs, identifying liabilities and costs related to dealing with environmental issues. Andreas Lako (2018) [2] said that environmental accounting is increasingly important due to the serious problems of global environmental pollution and severe environmental disasters in recent years.

In Vietnam, there are also many studies addressing the issue of green accounting. Mai Thi Hoang Minh & Le Viet (2016) [10] believe that the financial regulations, standards, accounting regimes and actualities of the contract have not provided and met the necessary information on the costs related to the environment according to the requirements for the decision making of contracts and the preparation of financial statements. Dao Thi Thuy Hang (2019) [6] said that the application of green accounting contributes to providing accurate, transparent, complete and responsible information, thereby helping to improve the image of the business in the eyes of management agencies, shareholders, investors and business partners. The author also argues that the perception of corporate social responsibility has an influence on the adoption of green accounting. In addition, professional associations also need to be involved in promoting the application of green accounting through proposing recommendations to the Ministry of Finance and relevant agencies based on the experience from other countries. Nguyen Thi Hai Van (2018) [11] said that green accounting is considered an important tool related to the aspects of the natural environment's influence on the economy and is considered a transition towards sustainable development, towards developing the green economy that Vietnam is aiming for. The author also said that propaganda activities and training courses on green accounting of the Professional

Association also contribute to promoting the application of green accounting in Vietnam. According to Duong Thi Thanh Hien (2016) [5], applying green accounting is a long-term process, requiring investment research to create sustainable growth. Green accounting is a part of green growth, by people, for people, contributing to the stability of environmental and social resources.

It can be seen that the topic of green accounting is of interest to many domestic and foreign researchers. However, studies have been conducted on different perspectives on the role of green accounting in the development of the economy in general and of enterprises in particular. In Vietnam, studies on green accounting stop at articles with their own views and comments of the authors, there is no comprehensive study on the groups of factors affecting the decision to approach green accounting at enterprises. Inheriting the views of previous studies, the author will conduct a survey and analyze the survey results to identify the factors that can affect the decision to choose green economic access to small and medium production enterprises in Hanoi.

3. Research Method

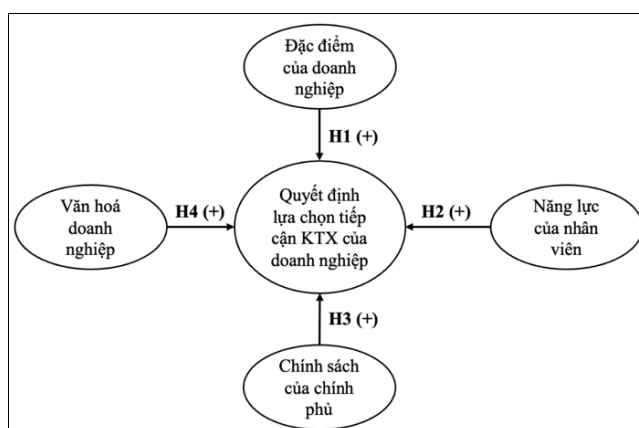
Based on the research overview, the factors selected by the author to conduct the survey include 4 groups of factors: Characteristics of the enterprise; capacity of employees; government policies; corporate culture. In which, each factor is analyzed and evaluated through the observed variables to better clarify the impact on the decision of the enterprise. The research hypotheses are given as follows:

Hypothesis 1 (H1): Characteristics of enterprises affect the decision to choose green accounting approach of SMEs in Hanoi.

Hypothesis 2 (H2): The capacity of employees influences the decision to choose green accounting approach of SMEs in Hanoi.

Hypothesis 3 (H3): Government policy influences the decision to choose green accounting approach of SMEs in Hanoi

Hypothesis 4 (H4): Corporate culture influences the decision to choose green accounting approach of SMEs in Hanoi.



Source: Proposed Author

Fig 1: Conceptual Framework

The research method used is a quantitative method, including a survey by random interview method for small and medium-sized manufacturing enterprises in Hanoi between June 2024 and September 2024. The survey table is structured with variables on a 5-level Likert scale, from 1 =

strongly disagree to 5 = strongly agree. The data after being collected was encoded by Excel software and processed by Smart PLS 4.0 software. According to Hair (2006) [7], the survey sample size for the exploratory factor analysis model in the study was determined based on the minimum level and the number of variables included in the model. The study collected 300 survey samples that were considered appropriate.

4. Research results

4.1 Descriptive Statistical Analysis

Specific information about the survey subjects and types of survey enterprises is described in Table 1. The study collected 300 survey questionnaires from 189 small and medium enterprises in Hanoi. In which, small enterprises (with a total annual revenue of VND 3 billion to VND 50 billion) accounted for 41.3%; medium enterprises (with a total annual revenue of VND 50 billion to VND 200 billion) accounted for 34.5%; and micro enterprises (with a total revenue of no more than VND 3 billion) accounted for 24.2%.

Table 1: Statistics of information on subjects and types of surveyed enterprises

Survey information		Quantity	Rate (%)
Respondents	Board of Management	38	12.7
	Accountant	187	62.3
	Section in charge	75	25.0
Type of business	Company of limited liability	69	23.0
	Joint stock company	76	25.3
	Sole Trader	51	17.0
	State-owned enterprises	56	18.7
	Foreign invested enterprises	48	16.0
Business fields	Agriculture, Forestry & Fishery	146	48.7
	Manufacturing Industry	154	51.3

Source: Author synthesized from survey results

4.2 Scale evaluation

The test results of the scale show that Cronbach's Alpha values are all greater than 0.6, which shows that the scales of enterprise characteristics, employee capacity, government policy, corporate culture are statistically significant and explainable for the dependent variable. (Table 2)

Table 2: Cronbach's Alpha

Factor	Cronbach's alpha	rho_a	rho_c	AVE
Characteristics of the enterprises	0.788	0.796	0.853	0.539
Employee productivity	0.811	0.815	0.888	0.726
Show government policies.	0.867	0.867	0.904	0.653
Corporate culture	0.741	0.741	0.853	0.659
Decision on choosing green accounting approach (Decision)	0.876	0.879	0.915	0.728

Source: Author synthesized from survey results

To evaluate the convergence of the scale, the author will rely on the average variance index (AVE) to evaluate. According to Hair et al. (2021) to assess the scale with good convergence, AVE value >= 0.5, this means that the base variable will explain more than half of the variance of its observed variables. Based on the results of the table above, the AVE values of the variables all satisfy the condition (> 0.5) and the scale meets the requirements for convergence.

Table 3: Control results

Hypothesis	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ((O/STDEV))	P values
H1 DD → QĐ	0.195	0.195	0.045	4.298	0.000
H2 NL → QĐ	0.120	0.120	0.051	2.379	0.017
H3 CS → QĐ	0.446	0.447	0.049	9.177	0.000
H4 VH → QĐ	0.135	0.134	0.053	2.536	0.011

Source: Author synthesized from survey results

To check if the path coefficient is significantly different from zero, the t-value is calculated through bootstrapping. In this study, non-technical non-parametric bootstrapping was tested against 300 observations and 5,000 iterations to ensure model validation of the linear structure. Results from 5,000 observations from Table 3 show that initial weights are significant for bootstrapping mean weights because all weights are within the 95% confidence range. Therefore, it can be concluded that the estimates in the model are reliable. (Table 3). Based on the evaluation of the influence of the relationship of factors in the model, the analysis study is based on p-values. It can be seen that the research hypotheses have a p-value of less than 0.05, so the hypotheses are accepted. Besides, based on the value of O, the study gives the regression equation as follows:

$$QĐ = 0,446 * CS + 0,195 * DD + 0,135 * VH + 0,120 NL$$

5. Some solutions to attract businesses to choose green accounting

Applying green accounting in enterprises is a long-term process, requiring enterprises to strictly implement and closely coordinate between departments, management agencies and enterprises. Currently, many business administrators have not realized that the cost of enterprises to calculate environmental costs is much smaller than the total cost incurred when they have to pay taxes, fees or fines from environmentally harmful acts. Therefore, in the coming time, it is necessary to focus on implementing some solutions as follows:

For enterprises: (1) It is necessary to change the perception in the application of green accounting in production and business activities. In fact, at present, businesses are not aware of the meaning and benefits of environmental protection activities in general and the application of green accounting in particular. Most businesses have not calculated environmental costs. In addition, many corporate administrators are not aware that the cost of calculating environmental costs is much smaller than the total cost incurred when they have to pay taxes, fees or fines from environmentally harmful acts; (2) Corporate administrators need to have more information about the cost related to the environment arising in the contracts of enterprises, in order to make appropriate business investment decisions. Thereby, it is possible to both seek profits from projects and avoid sanctions related to the environment.

For management agencies: (1) In fact, financial and accounting standards, regimes and regulations have not guided enterprises in recording, separating and monitoring environmental costs in production and business costs, there are no necessary accounts to account for environmental costs... Therefore, the Ministry of Finance needs to promulgate accounting regimes that apply green accounting in enterprises, in combination with building bases and

measuring costs related to the environment so that enterprises can easily implement. This also helps to minimize the violations that businesses suffer in taking responsibility for environmental activities. (2) It is necessary to be properly aware of the development and application of green accounting in practice. In particular, with the policy of sustainable development, "greening the economy" of the Party and the State, it is necessary to realize that the application of green accounting in general and environmental accounting in particular is mandatory, but needs a reasonable long-term roadmap. (3) Strengthen sanctions, well implement tax policies and environmental fees for businesses, thereby helping businesses raise awareness, as well as fulfill their responsibilities for the environment and environmental protection.

For higher education institutions: (1) It is necessary to study the theoretical basis of green accounting to put into teaching. Currently, many schools have also taught contents related to environmental accounting. (2) It is necessary to develop high-quality and experienced accounting lecturers, who not only have qualifications in traditional accounting but also must be knowledgeable about new accounting models, associated with the practical activities of enterprises and the Industrial Revolution 4.0.

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