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Original Article

Internal Factors Affecting Green Procurement of Food and Beverage Firms in Vietnam

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Abstract: The main purpose of this study is to explore the internal factors affecting the green procurement of Food and Beverage (F&B) enterprises in Vietnam. The official study was conducted with 235 F&B enterprises operating in Vietnam through direct and online survey methods. The research results have identified five internal factors that directly affect green procurement activities, including: (i) Corporate social responsibility, (ii) Business strategy, (iii) Quality human resources, (iv) Information technology and (v) Management awareness and commitment. In particular, the quality of human resources is the factor that has the most positive and strongest influence on the green procurement activities of enterprises in the F&B industry in Vietnam.

Keywords: Green procurement, social responsibility, business strategy, quality of human resources, information technology, awareness and commitment of management, F&B enterprises, Vietnam.

1. Introduction

Environmental pollution is the biggest threat to the existence and development of human society, especially developing countries, including Vietnam. One of the main causes of this phenomenon pointed out by the United Nations is the excessive increase in human activities, including production and consumption activities that create wastes that pollute the environment. Along with the increase in population and the increase in social consumption, Vietnam is facing a trade-off between economic growth and an increase in the possibility of environmental pollution as well as a sharp decrease in natural resources.

Procurement and product consumption involves many stakeholders, but businesses play an important role in managing business activities and providing products and services to help the

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country develop sustainably. Green procurement is considered by countries around the world as an inevitable trend along with sustainable and environmentally friendly development. Therefore, green consumption and green procurement policies to encourage sustainable production and consumption have begun to be implemented and applied. In Vietnam, in 2016, the Prime Minister approved the National Action Program on sustainable consumption production to 2020 with a vision to 2030 with the goal of gradually changing production and consumption patterns towards improving the efficiency of using resources and energy and increasing the use of environmentally friendly materials and products [1]. However, the purchasing behavior of individuals or businesses has not been synchronized; there are still many barriers and difficulties in implementation.

One of the industries that emits the most carbon emissions is the food and beverage (F&B) industry. The food and beverage industry is facing an increase in environmental pollution [2]. Customer expectations about product safety or social needs for ingredient traceability and food safety promote green shopping in the supply chain management of enterprises. Faced with continued growing demand for food and beverage goods, the F&B industry must start adopting green procurement throughout the production chain to mitigate the impact of high demand.

There have been many studies on the factors affecting green procurement in many different fields around the world. However, in Vietnam, research on green procurement is still limited. These studies are mainly from the perspective of shoppers about products, but few works mention green procurement from the perspective of businesses and business managers. Moreover, green procurement activities of enterprises in Vietnam have only been studied in a general way, and there has not been any research on enterprises in a specific industry. Both internal and external factors affect green procurement, but in this study, the authors focus on research "internal factors affecting green procurement of F&B enterprises in Vietnam". The purpose of this study is to determine the impact of internal factors on green procurement activities of F&B enterprises in Vietnam and propose some solutions to help businesses proactively change to promote this activity in the future

2. Literature review and research model

2.1. Concepts of green procurement

2.1.1. Concepts of green procurement

The concept of green procurement first appeared in the world in studies on green supply chain management activities of enterprises in the last years of the twentieth century. Carter et al. [3], Min and Galle [4] define green procurement as environmentally conscious procurement that strives to ensure that purchased products or materials meet objective environmental issues set by the company, such as reducing waste, promoting recycling and reuse, minimizing the exploitation of natural resources and using alternative materials.

Besides, Zsidisin and Siferd [5] also give an overall definition as follows: "Green procurement in an enterprise is a series of activities including: making purchasing policies, implementing activities and establishing relationships in response to concerns related to the natural environment. These concerns relate to the receipt of raw materials; supplier selection, evaluation and development and activities such as distribution, packaging, recycling, reuse, reduction of resource use and the final disposal of enterprises' products".

Green procurement ensures that purchasing managers or supply chain managers consider sustainability in their procurement of inputs, in addition to traditional procurement factors such as price, quality and delivery time [6], [7], [8]. When doing green procurement, purchasing managers or supply chain managers should ask that the selected product be recyclable and safe or environmentally friendly. In addition,

attention should be paid to the supplier's environmental practices, environmental management system and environmental management certification.

2.1.2. Concepts of F&B enterprises

F&B is an abbreviation for the phrase "Food and Beverage" used to refer to the food and beverage industry. This is a type of business that specializes in serving and providing food and drinks to customers. The main business objects of the industry are restaurants, hotels, fast food stores, and bars [9]. According to Statistics Canada, the food and beverage service sector includes activities that are engaged in the preparation of meals, snacks and beverages, at the request of the customer, for immediate consumption during and off-site.

According to research by Phu Hung Securities Joint Stock Company, the total revenue from F&B sales reached more than 975 thousand billion VND in 2020. And the contribution of the F&B industry to GDP is about 15.8% [10].

In Vietnam, the two segments that account for the largest proportion (nearly 72%) in terms of both number of visitors and revenue are full-service restaurants, which are usually restaurants, cafeterias and catering shops, fast (quick-service) with the main business model being pastry shops, coffee shops or fast food outlets; The remaining 28% are convenience stores, canteens, alcoholic beverages and sidewalk eateries (accounting for 11% of total industry consumption) [11].

2.2. Internal factors affecting green procurement of firms

According to Carter and Carter [3], Hsu et al. [12], Huang and Wu [13], Khidir et al. [14] and Carter and Jennings [15], there are a number of internal factors that can affect green procurement as follows:

2.2.1. Corporate Social Responsibility

The interest in green initiatives not only comes from pressures and incentives outside the enterprise, but also from the awareness and responsibility of that enterprise to the society in which the enterprise operates. Hsu et al. [12] argue that enterprises apply green practices to establish a socially acceptable image and ensure compliance with social obligations and values. An enterprise can voluntarily fulfill its social obligations to meet the expectations of society and accept the rules of business conduct. Preuss [16] points out that social responsibility has an important influence on green supply chain initiatives. The degradation of the environment in recent decades has increased society's awareness of environmental problems. When making product purchase decisions, the public is increasingly influenced by the company's reputation and practices with respect to environmental protection [17]. Furthermore, many companies in Malaysia, especially multinational companies, adopt social responsibility objectives, stimulated them to do no harm to the environment and to produce high quality products and more environmentally friendly products [14]. The pressure of social responsibility is the driving force for businesses to launch products that consume less raw materials and less energy. Therefore, the authors propose the following hypothesis:

H1: Corporate social responsibility has a positive influence on green procurement activities of F&B firms in Vietnam.

2.2.2. Company strategy

Strategy plays an important role in a company's business as it helps to determine the direction in which a company intends to grow and how it intends to achieve its goals. Therefore, the performance of a company also depends on its business strategy and how effectively the strategy is implemented by the company [18]. Objectives and strategies in each period will affect the purchasing activities of enterprises. Currently, "A Green Business Strategy" is a business strategy of many companies around the world and is often integrated in all company decisions and activities. Basically, a green strategy helps businesses make decisions that have a positive

impact on the environment. The principles that form the basis of a green strategy should guide a business to make decisions based on both business logic and good business intentions [18].

The green business strategy demonstrates how to bring green values to customers, how green values benefit the company and investors, and how green values benefit the environment and society, or in other words, how the company becomes a green enterprise. A company with a green business strategy will apply maximum greening of products or greening services or greening processes, thereby promoting green procurement. In Vietnam, there is focus on a green growth strategy towards sustainable development. The green growth strategy also contributes to promoting businesses to focus on green procurement activities. At the same time, with a green business strategy, businesses will also introduce policies, regulations and staff training processes towards green procurement. Therefore, the authors propose the following hypothesis:

H2: The company strategy of an enterprise has a positive influence on the green procurement of F&B firms in Vietnam.

2.2.3. Quality of human resources

Human resources can be considered as one of the important intrinsic factors affecting green procurement activities of enterprises. In which, human resource training and development is a series of activities focusing on developing employees' skills, knowledge and attitudes, preventing the deterioration of related knowledge, skills and attitudes related to the company's main green procurement [19]. Green training and development is to educate employees on the value of green activities, train them in energy-saving working methods, reduce waste, raise environmental awareness in the organization and create opportunities for employees to participate in solving environmental problems [19].

Currently, the trend of focusing on greening businesses is increasing and modern human resource managers have been given the additional responsibility of incorporating the concept of green personnel in the company's mission statement along with its human resource policy. Changes in the company's attitude regarding environmental initiatives can be seen through their own personnel [20]. Therefore, the authors propose the following hypothesis:

H3: The quality of human resources has a positive influence on green procurement activities of F&B firms.

2.2.4. Information technology

Information technology drives innovation in business. The technological revolution has improved businesses by providing them with tools to solve complex problems, allowing them to make better decisions. Information technology has improved marketing. Internet marketing using online advertising methods (SEO, PPC, Facebook Ads) are much more precise ways than traditional marketing in finding the target audience, discovering their needs and building a marketing campaign to convince them to buy. Cloud computing allows company employees to use any device anywhere in the world to access enterprise-class software. Therefore, it can be seen that information technology has a great impact on business activities.

With the support from information technology, green procurement activities will become easier and more convenient for businesses. They will have fewer difficulties in green procurement when they have access to many quality supplies. Lack of information on regulations and best practices of green supply chains will leave organizations with a limited view of what to do [21]. Therefore, the authors propose the following hypothesis:

H4: Information technology has a positive influence on green procurement activities of F&B firms in Vietnam.

2.2.5. Managers' awareness and commitment

The commitment of senior managers also plays an important role in the successful implementation of green supply chain management [17, 22-24]. The support, guidance

and commitment of senior management is considered as the main driving force, having a positive influence on the environmentally friendly procurement activities of enterprises [15], promoting enterprises to innovate and apply technological initiatives [25, 26]. Senior managers have the role of setting the mission, vision and nurturing core values in the enterprise, in running the business and creating its own identity [27]. Epstein and Roy [28] believe that thanks to the support and commitment of the top management, environmental management activities will be successful. Some studies show that without commitment from the beginning, most green initiatives are doomed to failure and even impossible to launch. Therefore, leadership commitment plays a decisive role in the adoption of green initiatives [24].

To solve the problem of environmental management, it is necessary to have synchronous activities and close coordination between departments, in which leadership has the most important role. To successfully implement green procurement, management needs to be at the forefront of every environmental effort. The leadership needs to have absolute confidence in the philosophy of green initiatives and must be committed to implementing that philosophy. This commitment will create a close relationship between the business strategy and the greening strategies in the business. Therefore, the authors propose the research hypothesis:

H5: Managers' awareness and commitment positively affect green procurement activities of F&B firms in Vietnam.

In addition, according to Barney et al. [29], the resource-based view theory explains the process of achieving superior and sustainable business results of enterprises based on the resources of that enterprise. The resources mentioned here may include physical capital (technology, plant, equipment, location, raw materials...), human capital (training, experience, relationships, knowledge of individuals as managers and employees) and organizational capital (reporting processes, planning, systems of coordination, control, and interactions between departments in the enterprise and between the enterprise and the external environment). Or in another way, the resources of an enterprise can include tangible resources (technology for production and products) or intangible resources (knowledge, art of leadership...).

Therefore, from the above research hypotheses and theory, the authors propose the research model shown in Figure 1.

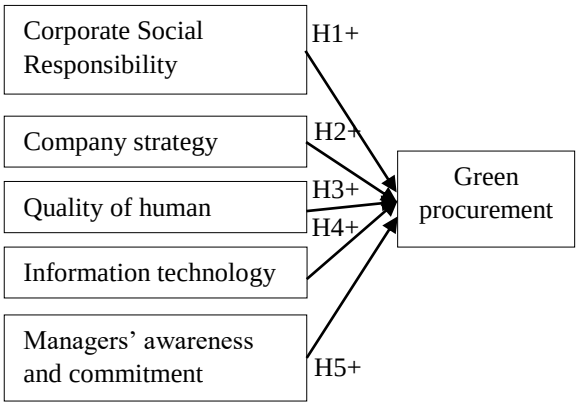

Figure 1: Research model
Source: Suggested by the author's team.

3. Methodology

3.1. Research methods

The research team collected data on green procurement and reports on policy implementation through books, journals and previous studies in the world and in Vietnam. This allowed the study to have an overall view of green procurement, the status of green procurement and factors, especially intrinsic factors affecting green procurement. After that, the authors distributed survey questionnaires and collected data from research subjects to identify and test the influence of factors through the appropriateness of the scale of reliability, accuracy, and reliability by using SPSS 22.0 software. The official quantitative research was

conducted with 300 enterprises operating in the F&B industry in Hanoi, Ho Chi Minh City, Da Lat and some neighboring provinces through direct survey and online survey from March 2021 to June 2021.

3.2. The method of data collection

To accomplish the research objectives of the topic, the authors used the convenient random sampling method. With the direct survey method, 150 survey questionnaires were sent out and 132 valid responses were collected; with an online survey method via Google Forms application, 150 survey questionnaires were distributed, 103 valid responses were collected. The total of the two forms is n = 235 responses. The questionnaire was developed based on the studies [4, 12-14, 24], which focused on understanding the assessment of green procurement activities and the extent of the influence of internal factors on green procurement activities of F&B firms in Vietnam.

Specifically, the survey is designed with 3 parts. Part one includes questions about the status of green procurement activities and internal factors affecting green procurement activities of enterprises, built based on input information after in-depth interviews with enterprises and from study overview. The second part includes questions about the firm's information. The third part is the personal information of the interviewee. That is the CEO/director of the enterprise, the head/deputy head of the purchasing department, the head/deputy head of the supply/logistics department in the enterprise or the employees in charge of the purchasing department in the company. To assess the importance and influence of the independent and dependent variable scales in the model, the authors use the 5-level Likert scale.

3.3. Data analysis method

Research data after being cleaned was analyzed by multivariate analysis methods. Firstly, the authors evaluate the reliability of research concepts by Cronbach Alpha and Corrected Item - Total Correlation. The standard is: Cronbach Alpha is greater than 0.6 [30] and Corrected Item - Total Correlation is greater than 0.3 [31]. Then, Exploratory Factor Analysis (EFA) is used to evaluate the unidirectionality, convergent and discriminant validity of each factor. The selected suitable standard for EFA analysis is KMO value > 0.5; Bartlett's test of sphericity with a p-value of < 0.05; factor loadings > 0.5; Average Variance Extracted > 50% [30]. The Factor Extraction method is principal components analysis with varimax rotation as a method for obtaining the smallest number of factors [30]. After removing unaccepted measurements, the authors test Multivariate Regression Analysis.

Table 1: Sample characteristics description

Characteristics	**Frequency**	**Percentage (%)**	**Valid percentage (%)**
Business structure			
Private businesses	99	42.3%	42.3%
Limited liability companies	118	50%	50%
Business households	18	7.7%	7.7%
Total	235	100%	100%
Business size			

< 100 employees	217	92.3%	92.3%
100-300 employees	18	7.7%	7.7%
Total	235	100%	100%
Founded time			
< 3 years	81	34.6%	34.6%
3-5 years	127	53.8%	53.8%
5-10 years	9	3.9%	3.9%
> 10 years	18	7.7%	7.7%
Total	235	100%	100%
Revenue in the last 3 years			
< 1 billion VND	154	65.4%	65.4%
1-10 billions VND	72	30.7%	30.7%
> 10 billions VND	9	3.9%	3.9%
Total	235	100%	100%

Source: Authors' synthetics (2021).

4. Results

4.1. Sample description

The sample consists of 235 respondents. Out of the respondents, private businesses account for 42.4%; limited liability companies account for 50%; and business households are 7.7%. In terms of scale: enterprises with less than 100 employees account for 92.3%; and enterprises with from 100-300 employees account for 7.7%. This result shows that a major proportion of respondents are small-scale enterprises. Regarding revenue in the last 3 years of surveyed enterprises: enterprises with average revenue of less than 1 billion VND account for 65.4%; those with revenue from 1 billion VND to 10 billions VND account for 30.7%; and others with revenue of over 10 billions VND account for 3.9%. According to this result, the survey participants are mostly small-scale enterprises with a turnover of less than 1 billion VND (Table 1).

Table 2: results of variables' reliability

Factors	**Cronbach's Alpha**
Green procurement (GP)	0.865 (7)
Corporate Social Responsibility (SR)	0.858 (5)
Company Strategy (CS)	0.819 (3)
Quality of human resources (HR)	0.822 (4)
Information technology (IT)	0.842 (4)
Managers' awareness and commitment (AC)	0.874 (5)

Source: Authors' calculation (2021).

4.2. Reliability and validation of variables

After analyzing data from valid respondents and removing and correcting unreliable observed variables, the remaining concepts have internal consistency (Cronbach's Alpha is over 0.6). The result of Exploratory Factor Analysis indicates that KMO value > 0.5; Bartlett's test of sphericity significant with a p-value of 0.000 < 0.05; explained variance values greater than 50%; factor loadings are more than 0.5 (Table 2).

4.3. The result of EFA analysis for green procurement factor (GP)

Because 0.5 < KMO value = 0.900 < 1, factor analysis is consistent with the collected data. Bartlett's test of sphericity indicates that variables in the model are related or unrelated. Sig. value = 0.000 < 0.05 refers to a result that variables in the model are related and statistically significant. The result of EFA analysis is accepted if total variance explained is more than 50% and the Eigenvalue is greater than 1. The result of Eigenvalues = 3.889 > 1. Total variance explained = 55.562% > 50%, indicating that the GP factor will be kept in the model.

4.4. The result of EFA analysis for internal factors affecting green procurement of F&B firms in Vietnam

Because 0.5 < KMO value = 0.828 < 1, factor analysis is consistent with the collected data. Sig. value = 0.000 < 0.05 refers to a result that variables in the model are related and statistically significant. Total variance explained = 65.261% > 50%, indicates that the extracted factor explains 65.241% of the variation of the observed variables. Thus, this group of factors will be kept in the model (Table 3).

According to the results of Exploratory Factor Analysis EFA, the observed variables all satisfy the conditions with the given criteria; the scales selected in the model are satisfactory, suitable for use in the following analysis.

Table 3: The result of EFA analysis for internal factors affecting green procurement of F&B firms in Vietnam

KMO and Bartlett's Test				
KMO (Kaiser-Meyer-Olkin of Sampling Adequacy)				0.828
Bartlett's Test of Sphericity			Approx. Chi-Square	3063.801
			Df	378
			Sig.	0.000
Factor loadings				
AC2	0.831			
AC1	0.821			
AC3	0.797			
AC5	0.794			
AC4	0.786			
SR4		0.867		
SR5		0.825		
SR3		0.771		
SR1		0.756		
SR2		0.698		
IT3			0.840	
IT1			0.824	
IT2			0.800	
IT4			0.790	
HR1				0.822

HR2	0.800	
HR4	0.778	
HR3	0.748	
CS1		0.881
CS3		0.813
CS2		0.808
Total variance explained: 65.261%		

Source: Authors' calculation (2021).

4.5. Multiple regression analysis

Five independent variables AC, SR, IT, HR, CS and dependent variable GP have been included in multiple regression analysis so as to determine the relationship between dependent variable (GP) and independent variables (AC, SR, IT, HR, CS) and then showing the importance of each factor for green procurement of F&B firms in Vietnam.

Adjusted R Square is 0.313. This indicates that 31.3% of the variation in the dependent variable is explained by independent variables in the model. Therefore, the fit for the model is average.

The F Statistic is 22.345 and significance value Sig. is 0.000 (< 0.05), which shows that the model is suitable and the variables all meet the criteria for acceptability. The result of Multiple regression analysis shows that 5 independent variables: SR (Corporate Social Responsibility), CS (Company Strategy), HR (Quality of human resources), IT (Information technology), AC (Managers' awareness and commitment) with Significance level of 0.004; 0.000; 0.000; 0.001; 0.000 respectively (< 0.05) are statistically significant. Hence these 5 factors have a linear relationship with green procurement of F&B firms in Vietnam (Table 4). Therefore, hypotheses H1, H2, H3, H4, H5 are accepted.

Table 4: Parameters of each variable in the regression equation

	Model	**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**	**Collinearity Statistics**	
		B	**Std. Error**	**Beta**			**Tolerance**	**VIF**
1	(Constant)	0.517	0.295		10.757	0.080		
	SR	0.129	0.044	0.167	20.944	0.004	0.913	1.095
	CS	0.218	0.046	0.259	40.707	0.000	0.967	1.035
	HR	0.247	0.047	0.291	50.238	0.000	0.954	1.049
	IT	0.140	0.042	0.185	30.369	0.001	0.971	1.030
	AC	0.171	0.042	0.223	40.075	0.000	0.977	1.024

Note: Dependent Variable: GP.
Source: Authors' calculation (2021).

The Standardized Beta Coefficients in Multiple Regression Analysis indicates the degree of influence of each factor: Corporate social responsibility, company strategy, quality of human resources, information technology, managers' awareness and commitment on green procurement of F&B firms in Vietnam are as in the following formula:

GP = 0.517 + 0.167*SR + 0.259*CS + 0.291*HR + 0.185*IT + 0.223*AC + ε

In the Regression model, green procurement (GP) has a linear relationship with: SR (Corporate Social Responsibility), CS (Company Strategy), HR (Quality of human resources), IT (Information technology) and AC (Managers' awareness and commitment). All the 5 independent variables' beta coefficients are greater than 0, which means independent variables have positive impacts on green procurement of F&B firms in Vietnam. The Quality of human resourcesn (HR) factor exerts the greatest influence on green procurement, with the beta coefficient being 0.291. The following is the Company Strategy factor (Beta = 0.259), Managers' awareness and commitment (Beta = 0.223) and Information technology (Beta = 0.185).

5. Theoretical and practical contributions

5.1. Theoretical contributions

The research results contribute to the research system on green procurement activities of enterprises. Specifically, the research results have determined that there are 5 internal factors that directly affect the green procurement activities of F&B enterprises in Vietnam including: corporate social responsibility, company strategy, quality of human resources, information technology and managers' awareness and commitment, in which the most influential factor is the quality of human resources.

5.2. Practical contributions

The research results of the thesis help researchers, business managers in Vietnam identify the internal factors affecting green procurement activities of F&B enterprises. From the research results, the authors propose some solutions to promote green procurement of F&B firms in Vietnam as below:

5.2.1. Recommendations for improving the quality of human resources

The results of this study have shown that the quality of human resources has a positive influence on green procurement activities of F&B firms with a standardized coefficient of 0.291 (the highest coefficient). On account of the importance of the quality of human resources for green procurement, businesses need to implement the following solutions:

- Ensure to assign specific responsibilities to each employee, not just general propaganda or encouragement. It is also recommended to create a new job position specifically in charge of green procurement or assign this responsibility to certain existing positions.
- Develop training programs based on green procurement behavior theories as well as practical training for employees.
- Have close supervision throughout the working process of employees and set reasonable criteria for evaluating process results.
- Propose closely related policies and regulations on rewards and punishments in order to promote, motivate and raise the self-consciousness of employees when implementing green procurement activities.

5.2.2. Recommendations for strategic planning to focus and prioritize green procurement activities

The results of the study have shown that with a standardized coefficient of 0.259, the strategic factor has a positive influence on green procurement activities of F&B enterprises. A "Green business strategy" is now the business strategy of many companies around the world and is often integrated in all company decisions and activities. Basically, a green strategy helps businesses make decisions that have a positive impact on the environment. The principles that form the basis of a green strategy should lead a business to make decisions based on solid business logic and make good business sense [18].

Green supply management is becoming a key component of corporate environmental management strategies. When the motivation for

green supply management is based on leadership commitment to sustainable development or the desire to promote sustainable development generally, then the question of impact on supplier behavior becomes very important. The more directly the buyer is involved with the supplier and especially with the top management of suppliers, the more likely it is that buyer commitment to sustainability will have an effect on the supplier's behavior. Some solutions for business strategy planning to promote green procurement activities of firms that the authors propose are as follows:

- Integrate green procurement in business strategies and plans. Build environmental regulations and criteria into the business procurement process.

- Plan and implement strategies for each individual and department. Require departments and employees in the firm to implement green procurement. Activities will be measured periodically, with targets assigned to each individual in addition to other performance indicators.

- Continuously monitor and evaluate the effectiveness of the strategy to enhance and improve the effectiveness of green procurement.

- Constantly create and innovate ideas to improve the efficiency of green procurement activities.

5.2.3. Recommendations for raising managers' awareness and commitment to green procurement

Preuss [16] argues that corporate social responsibility, which is directly the social responsibility of senior managers, has an important influence on green procurement. Therefore, switching to using environmentally friendly materials and finished products to minimize environmental impacts or effectively using raw materials is considered an important task of firms.

Consistent with that point of view, the research results show that the awareness and commitment of F&B firms' managers positively affects green procurement activities of enterprises with a standardized coefficient of 0.223. The results of this study are also consistent with the results of previous studies on managers' commitment. Specifically, Zhu et al. [23] and Zhu et al. [24] showed that the commitment of senior managers such as founders or business owners is positively related to green supply chain management. Furthermore, social responsibility and an environmentally friendly image are two important drivers of enterprises' participation in green supply chain management. The key to successful implementation of green supply chain management is the commitment of the senior management team and a culture that promotes environmentally friendly practices [23, 24]. Experts in the field of sustainable development in Vietnam indicate that the commitment and will of the senior manager plays a very important role, contributing 50% to the success in orienting and implementing the development strategy and business development towards sustainable development. The commitment of senior managers determines more than 50% of the ability to successfully implement sustainable development. Senior managers should always put sustainable development as an objective in the general development direction of the business. Usually, a sustainable development strategy has a vision of about 8-10 years, set out with specific commitments and goals in accordance with the principle of being very demanding, but also very realistic [2].

Since the manager's commitment plays a decisive role in the implementation of environmental activities, firms need to consider the following solutions:

- Integrate green procurement in business strategies and plans. Build environmental regulations and criteria into the business procurement process. Clearly define the role and benefits that green procurement brings to businesses, the community and society.

- Plan and implement strategies for each individual and department. Require departments and employees in the firm to implement green procurement. Activities will be measured periodically, with targets assigned to each

individual, in addition to other performance indicators, accompanied by dynamics of change related to customers, supply chains and communities within the sphere of influence of the firm. Align civic responsibility with ethical commitments, culture and corporate values.

- The managers themselves need to be proactive in raising awareness levels and updating new knowledge. They need to be self-motivated and creative, and always search for new environmentally friendly business production and methods.

- Invest in and attract high-quality human resources with specialized knowledge and skills for better implementation of green procurement.

- Launch and promote programs to encourage, support and train 3R practices (reduce, recycling and reuse), green procurement practices for all officers and employees in the firm.

- Ensure the appliance of measures to minimize negative impacts on the environment, promptly handle incidents affecting environmental quality when implementing production and business projects.

6. Limitations and future studies

Because of limited resources, this theoretical model was only tested with 235 F&B firms, mainly in Hanoi, Da Lat, Ho Chi Minh City and some neighboring provinces. The model needs to be tested in other provinces and firms in other fields to increase the generalizability of the research results.

The study does not cover the manufacturing/service industries, but only focuses on researching and surveying F&B firms. This leads to research that does not have a comprehensive view of businesses and industries, not widely and immediately applicable to other product/service industries except F&B. The study also does not provide solutions and recommendations for businesses in other industry groups.

The new research only considers internal factors affecting green procurement activities of firms. Further studies can study the external factors affecting green procurement activities, the impact of green procurement activities on the efficiency of production and business activities of firms such as environmental efficiency, economic and social factors.

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