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Factors Affecting Innovation Capability of Small and Medium Enterprises in Hanoi

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Abstract
The article analyzes the relationship between the main factors affecting the innovation of small and medium enterprises in Hanoi, including human resources, knowledge, linkages, support facilities, and institutional framework. These factors strongly impact all four types of innovation, especially product, marketing, and management. The fundamental solution aspects proposed focus on developing creative design teams; strengthening the process of acquiring, sharing, and disseminating knowledge in enterprises; developing strong brands for domestic and export markets; Increasing financial investment and physical infrastructure; promoting business-university cooperation; completing the institutional framework to encourage innovation for the footwear industry.

Keywords: Innovation, Innovation Capacity, Hanoi, Small and Medium Enterprises

1. Introduction

Improving innovation capacity is an essential requirement for businesses to enhance their competitiveness. Innovation capacity plays a vital role for businesses because it is the inevitable path to ensure that our country can become a middle-income country by 2020, making a positive contribution to socio-economic development. This is especially important for the capital, Hanoi, to fulfill its role as the country's economic, political, cultural, and social center. In the system of industries in Vietnam, agriculture is identified as one of the priority industries for successfully carrying out the cause of industrialization and modernization of the country. The master plan for the development of Vietnam's agricultural sector to 2020, with a vision to 2025, has identified the vital role and tasks of the leather industry, a critical spearhead agricultural export sector of the national economy, helping to bring Vietnam into the group of countries producing and exporting leading agrarian products in the world, fulfilling social responsibilities, creating many jobs, and increasing income for workers.

As an industry with a long development history in Vietnam and many years of formation and development, the innovation results of small and medium enterprises in Hanoi have not met the development requirements. Although there have been many efforts to improve production levels, diversify designs, build brands, and promote trade promotion activities to boost exports, the innovation results of enterprises are still at an average level. The use of new technology and new materials is minimal. This article will analyze the factors that affect the innovation status of small and medium enterprises in the agricultural sector in Hanoi as a basis for proposing solutions to improve innovation capacity for small and medium enterprises in Hanoi.

2. Literature Review

2.1 Concept of innovation

According to Luecke & Katz (cited in Jim Downey, 2007, 3) [3], innovation in the most general sense is the creation of something new or a new method, the expression, combination, or synthesis of knowledge into a new product, process, or service in a valuable and appropriate way. At the enterprise level, according to Ngo & O'Cass (2009), innovation is a systematic process of applying the company's knowledge, skills, and resources to carry out innovation activities to create technical and non-technical innovations.

The OECD Oslo Manual (2005) classifies innovation as follows: (1) Product innovation is the invention of a new product or a significant improvement of an existing product in terms of its performance or intended use (technical standards, components, materials, software, environmental friendliness); (2) Process innovation includes fundamental changes in production methods, machinery, or software. Process innovation can be carried out to reduce production or distribution costs, improve quality, and

create new or improved products; (3) Marketing innovation is the application of new marketing methods that result in design, distribution, promotion, and pricing changes to identify customer needs better, find new markets, or reposition products to increase sales; (4) Management innovation is the application of new management methods to increase business efficiency by reducing transaction and administrative costs, improving external relations to improve knowledge, increasing labor productivity, and improving work efficiency.

2.2 Concept of innovation capacity

Romijn & Albaladejo (2002) [6] believe that innovation capacity is the knowledge and skills needed to absorb, understand, and improve existing technologies and create new technologies. According to Chen (2009) [1], innovation capacity is the company's capacity originating from processes, systems, and organizational structures that can be mobilized for product or process innovation activities. Thus, innovation capacity refers to factors of resource capabilities that create innovative results. These factors are also called factors affecting innovation.

2.3 Factors affecting the innovation capacity of enterprises

Romijn & Albaladejo (2002) [6] found that the innovation capacity of companies is measured mainly based on the ability to innovate products. Internal influencing factors include the training level and experience of managers, the Skills of staff, and the Level of spending on R&D and training activities. External factors include the tightness of the connection with members in the value chain, geographical proximity between members, and Institutional support.

Nguyen Quoc Duy (2015), when summarizing the theoretical basis of innovation and influencing factors, pointed out groups of factors affecting the innovation capacity of enterprises, including internal influencing factors, general attributes of the company, factors related to corporate-level strategy and control of activities; factors related to organization, culture, and leadership; factors related to resources and functional strategies; and external factors. Studying the factors affecting innovation and its impact on business results of Vietnamese software enterprises, Nguyen Quoc Duy (2015) also discovered that the factors that have a positive and substantial impact on innovation are idea creation, linkage relationships, research and development, and technological progress; relationships with professional associations; and innovation support policies.

Wan *et al*. (2005) used a composite measure that included both input factors (impact factors) and output factors (innovation results) to measure the innovation capacity of companies. The results showed that The level of empowerment in decision-making, resources for innovation activities, the level of risk tolerance, and the willingness to share knowledge and new ideas all have a substantial impact on the innovation capacity of companies.

Darroch (2005) [2] studied the relationship between knowledge management, innovation, and business performance. The results showed that knowledge management positively impacts innovation and business performance. This study concludes that companies with better knowledge management capabilities will use resources more effectively and have higher innovation capabilities and better business results.

Schulze & Hoegl (2008) [7] studied the relationship between knowledge creation methods and product innovation ideas. The results showed that knowledge creation methods, knowledge socialization, and personalization play an essential role in generating new product ideas, while knowledge generalization and knowledge standardization play the opposite role.

From the above theoretical summary, the research model on influencing factors

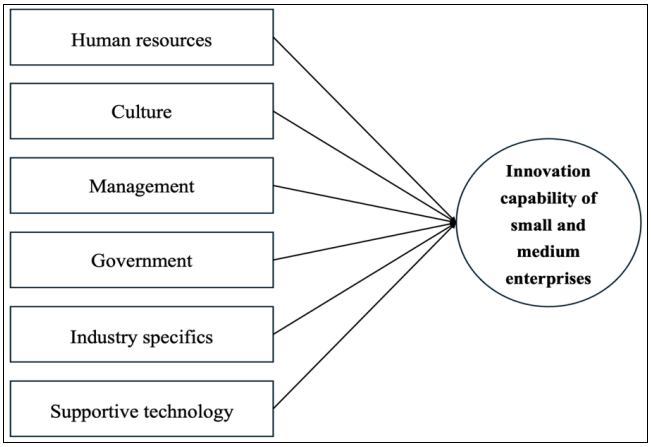

Fig 1: Model Research

3. Methodology

The research method uses 35 observation variables collected through the synthesis of research results of many different authors. The research sample is designed with a minimum of n = 28 x 5 = 140 to ensure that the survey sample is large enough and reliable. However, the authors used 389 observations to increase the reliability of the research results. After the data screening process, we found that 14 observations were unreliable and removed them. The number of observations included in the analysis is 385 observations.

The observation variables will be collected using a 5-level Likert scale that allows participants to evaluate the reliability of factors related to flower supply chain management in Vietnam. We use “Google Forms” to present the questions. Data collected from the survey will be analyzed and evaluated using descriptive statistics, Cronbach’s Alpha reliability testing and exploratory factor analysis (EFA) using SPSS 26.0 software to determine the reliability level and general trends in flower supply chain management in Vietnam.

4. Results

Analyze the scale's reliability by examining Cronbach's Alpha coefficient to eliminate inappropriate variables. According to Nunnally & Burnstein (1994), variables with a total correlation coefficient of less than 0.3 will be eliminated, and the criterion for selecting a scale is when it has an Alpha reliability of 0.6 or higher (Nguyen Dinh Tho and Nguyen Thi Mai Trang, 2008).

Table 1: Results of scale reliability assessment using Cronbach's Alpha and Varimax rotation method matrix

Variable	Cronbach's Alpha		Dependent Factor						Independent Factor
			1	2	3	4	5	6	
H1	0,724	0.624	0.742						
H2		0.613	0.754						
H3		0,712	0.789						
H4		0,789	0.732						
C1	0,753	0,743		0,.768					
C2		0,788		0.624					
C3		0.723		0.784					
M1	0,748	0.695		0.754					
M2		0,812			0.723				
M3		0,792			0.791				
M4		0,754			0.712				
G1	0,762	0,723			0.724				
G2		0,745				0.731			
G3		0,798				0.722			
G4		0,815				0.726			
I1	0,778	0,783					0.745		
I2		0,834					0,723		
I3		0,742					0,742		
I4		0,765					0,711		
S1	0,804	0,832						0,723	
S2		0,815						0,714	
S4		0,812						0,756	
S3		0,783						0,742	
IC1	0,784	0,831							0,723
IC2		0,726							0,745
IC4		0,794							0,714
IC3		0,756							0,757
IC5		0,732							0,714
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.							0,812		0,836
Bartlett's Test of Sphericity			Approx. Chi-Square				2295.712		2321.762
			Sig				0.000		0.000

According to Garson (2003), the standard for factor analysis is that the KMO index is greater than 0.5, and Barlett's Test has a significance level of Sig < 0.05 to ensure that the data used for factor analysis is appropriate and that the variables are correlated. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) value = 0.831. The result of the KMO index analysis is 0.831 > 0.5, which proves that the data used for factor analysis is entirely appropriate. The result of Barlett's test is 2295.609 with a significance level of Sig. = 0.000 < 0.05, at this time, there is enough basis to reject the hypothesis that the observed variables are not correlated with each other in the population. Thus, the variables are associated with each other and satisfy the conditions for factor analysis.

Regression analysis shows the causal relationship between the dependent variable, "Applying blockchain to flower supply chain management," and four independent variables. The regression results show that the model is relatively suitable, with a significance level of 1%. The coefficient of determination of the adjusted R square regression model is 0.735. This explains about 73.5% of the variation in factors affecting the dependent variable, which the linear relationship between the Y and independent variables can explain. The remaining 26.5% are factors that are not considered. In addition, the results tested the assumption of the linear regression model, including the phenomenon of autocorrelation with the Dutch – Watson coefficient = 1.870 and within the acceptable range 1 < D < 3 (Pride and Ferrel, 1997). The multicollinearity measurement coefficient VIF of the variables is small (the largest is 1.521 < 2). Conclusion: There is no autocorrelation between random errors and the phenomenon of multicollinearity occurring between independent variables in the model is small and does not distort the regression results. Testing the hypothesis of the model's overall fit, we see that the value of F = 119.524 with sig. = 0.000 and less than 0.05. Therefore, the overall R square is different from 0. The linear regression model is suitable overall. The coefficient β shows the level of influence of 4 independent variables on the dependent variable and the importance of each independent variable respectively: Human resources has β = 0.216, culture has β = 0.125, management has β of 0.177, government with β = 0.248, industry specifics has β = 0,231, supportive technology has β = 0,123. We have the equation:

Y = 0,248 G+ 0,231 I + 0,216 H + 0,177 M + 0,125 C + 0,123 S

5. Conclusion

The main factors that affect innovation capacity in Hanoi's agricultural sector include human resources, knowledge, linkages, support facilities, and the government's institutional framework. When these factors are improved, they will create innovation for enterprises in all four types of innovation, especially product innovation, marketing innovation, and management innovation.

The above findings show that to improve the innovation capacity of Hanoi's agricultural enterprises, the main factors that need to be focused on improving are human resources, knowledge, facilities, linkages, and institutional framework. In addition, it is necessary to clearly define the goals and missions of innovation and share core cultural values -

innovation culture throughout the enterprise. The main solution aspects that need to be discussed are:

Developing a creative design team, including experts in many fields. Production capacity can be improved by recruiting good experts from outside, sending employees for agricultural training, and linking with supermarkets.

Promote acquiring, sharing, and disseminating knowledge in agricultural enterprises in Hanoi through financial support and the company's mechanism for education and training and encourage the spirit of self-learning to improve the qualifications of employees. Build a mission, vision, goals, and knowledge-based business development strategy, building a corporate culture oriented towards knowledge-based management. Build processes and enhance knowledge-sharing skills in the enterprise.

To develop strong brands to develop the brand, enterprises need to focus on product innovation and marketing innovation. Product innovation focuses on upgrading products and processes, meaning that it is necessary to supply the domestic market and move towards building and developing separate brands for Vietnamese agricultural products in the international market, which is the inevitable direction of Hanoi Footwear. This is the basic path of creative innovation to create products with distinct characteristics that bring value to consumers, expressing style, culture, and personality. Marketing innovation must invest in market research activities to deeply understand hidden desires, invest in sales activities, develop distribution channels, and promote and advertise to highlight the brand's characteristics. -

Increase financial investment and infrastructure for the agricultural sector based on diversifying funding sources from the State budget, business investment, and donor capital; Implement well the support policy for domestic enterprises to produce agricultural products from the capital of the National Science and Technology Development Support Fund; Implement flexible financial support through tax policies by WTO regulations and FTA agreements; completely remove the limit on advertising, marketing, and market development expenses. Focus on in-depth investment to build infrastructure, innovate technology and equipment, and upgrade research facilities.

Promote cooperation between enterprises and universities to promote the application of research results and technology commercialization in the agricultural sector. To do so, it is necessary to form technology transfer centers as intermediaries, including technology managers who are well-trained in intellectual property, technology transfer, science and technology policy, and understand market needs. These technology managers will approach enterprises to grasp their needs, then meet with professors and suggest that they adjust their research direction to suit business requirements.

Completing the legal and institutional framework to encourage innovation in the agricultural sector focuses on key issues: Reforming administrative procedures and intellectual property rights policies, financial support, promoting linkages between universities, research institutes, and enterprises, policies for forming and developing science and technology enterprises, developing science and technology markets...

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