

## RESEARCH MODEL OF COMPETITIVENESS OF VIETNAM'S FURNITURE ENTERPRISES

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### SUMMARY

When establishing research model, in addition to the theoretical basis, the model must also rely on actual production. Because there is no common model for all manufacturing sectors, each sector, depending on its own characteristics, adds or eliminates some factors to the overall model and creates the appropriate model of research. Thus, the new research model is likely to be suitable for practice. Based on theories and research on competitiveness in general, as well as the competitiveness of furniture enterprises in particular, such as: Common materials, stable markets, diversified machinery and equipment, low investment capital, etc., to develop a research model on competitiveness of Vietnamese furniture enterprises (VFEs). These results will help researchers identify the type of data to be collected, avoid unnecessary data collection, and time and trouble processing information. At the same time, is the basis for data analysis, explaining the meaning of each type of data.

**Keywords:** Competitiveness, furniture enterprises, research model.

### I. INTRODUCTION

Vietnam's growing wood furniture industry is producing considerable volumes of wood residues which are also potentially available for furniture exports. Up to now, Vietnam wood furniture industry is on the top in Southeast Asia. Although achieving great results in both quantitative and qualitative development, the success of the wood furniture industry in Vietnam is not commensurate with the advantages they have, due to many internal and external causes. However, for the wood furniture industry to develop sustainably, increase the added value of the products, need to synchronize many solutions. One of the important solutions is to improve the competitiveness of furniture enterprises so that they can compete with furniture companies in the region and in the world. Currently, in Vietnam, there is not much research on the competitiveness of furniture manufacturers, so it is not possible to propose appropriate solutions to improve them. But, in order to conduct the research in good way, need to study about establishing research model of competitiveness of Vietnam furniture

enterprises (VFEs) first.

The specific objectives of the study are: (i) to theoretically review the factors influence the competitiveness of enterprises and research models applied in competitiveness assessment; (ii) to propose the research model for assessing competitiveness of furniture enterprise in Vietnam.

### II. RESEARCH METHODOLOGY

#### 2.1. Data collection

- For collecting the theoretical basis for factors influencing competitiveness and competitiveness of enterprises research models: Referring to existing studies on the competency model to identify potential factors that affect the competitiveness of furniture manufacturers

- For the primary data collection: Conducting interviews with experts on the basis of guided questions to collect ideas on potential factors affecting the competitiveness of Vietnamese wood furniture enterprises

+ Number of interviewees: 15 experts were selected for the interview, including 5 experts from the Vietnam Forestry University, 5 experts from the Vietnam Academy of Forest

Science, and 5 experts from management agencies (Ministry of Agriculture and Rural Development). The experts are selected for interviewing have knowledgeable, understand the theory of competitiveness, about the furniture industry and have practical experience

+ The content of interviews: Collecting the opinion of the experts about degree of groups of potential factors influencing to competitiveness of Vietnam furniture enterprises

+ How to proceed: face-to-face, documents and questions are sent to the interviewee via email and mail. The average interview time for each expert is about 30 minutes, in the order of the questions prepared. The discussing between interviewer and interviewee about related items the competitiveness, then the interviewee completed the questionnaire form

**2.2. Data analysis**

Use descriptive statistics to process the interview results. The results of degree of groups of potential factors influencing to competitiveness of Vietnam furniture enterprises are divided into 4 levels based on the average score achieved by this group. The levels are:

- Low: 1-2 points;
- Medium: 2.1-3 points;
- High: 3.1-4 points;
- Very high: 4.1-5 points

**III. RESULTS AND DISCUSSION**

**3.1. The theoretical basis for factors influencing competitiveness and competitiveness of enterprises research models.**

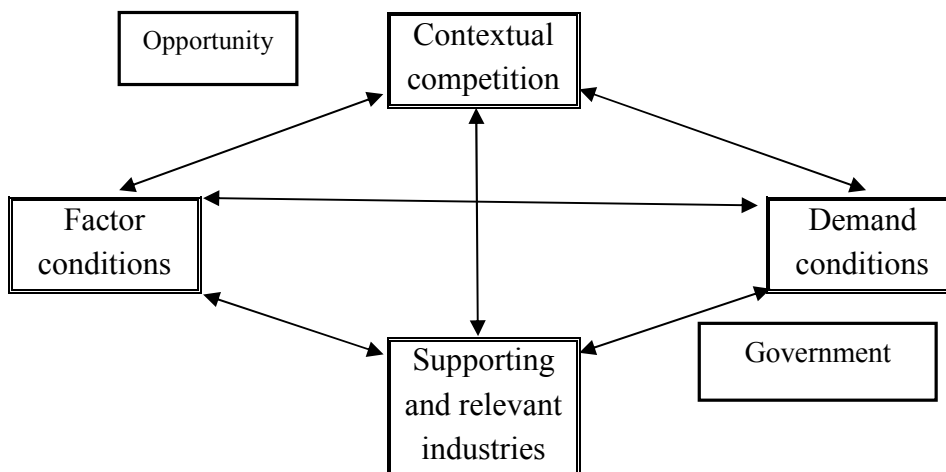
The model is comprised of the elements, systems or issues studied. Models must be able to explain and predict relevant relationships among causal factors and effects, as well as allow the development of empirical proposals to test the nature of cause-and-effect relationships.

A model of factors affecting to the competitiveness of enterprises has been carried out by many researchers. These models include:

**3.1.1. Diamond Model**

This model was proposed by M. Porter (1990) and used in the study of competitiveness. Porter has sorted the determinants of a nation's competition into a shape that is named Diamond. In the above model, the determinants of competition include:

- + Factor conditions: Factors related to human resources, material and knowledge.
- + Demand conditions: the size, structure and complexity of the domestic market demand for a particular industry's products and services.



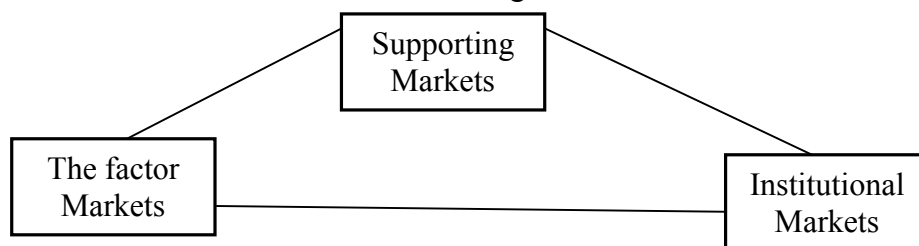
**Figure 3.1. Diamond Model of M. Porter**

*Source: M. Porter (1990)*

+ Relevant and supporting industries: Reflect the current status of the relevant and supporting industries related global competitiveness of a particular industry in a country.

+ Competitive Context: Contains the strategy, structure and competitiveness of the company as well as the competitive nature inside the country.

### 3.1.2. Competitiveness Triangle



**Figure 3.2. Competitiveness Triangle**

(Source: Flanagan and et al., 2005)

This model consists of three decisive factors interconnected: Supporting Markets (macroeconomic management of Government, national trade policies, sectoral characteristics and domestic demand); The factor markets (skills, especially technical skills, finance, information, technology); and institutional markets (institutions that support technical and development activities).

### 3.1.3. Competitiveness research models applied in some countries

- *The model of research on competitiveness of small and medium enterprises of Vietnam.*

According Pham Thu Huong (2017), a model of the factors affecting to the competitiveness of small and medium enterprises in Vietnam with six factors:

- (1) Enterprise organizational and management capacity;
- (2) Marketing capabilities;
- (3) Financial capacity;
- (4) Capacity of approach and innovate technology;
- (5) Capacity of service organization;
- (6) Ability of relationships creation.

This model is proposed by Lall (Flanagan et al., 2005) and it is similar to Porter's Diamond model. However, while Porter's model identifies the factors that contribute to national productivity, Lall points to research into the role of markets.

Lall mentions government support as a key factor, while Porter relegates the role of government as an outsider.

This model is quite suitable for small and medium enterprises in Vietnam. However, for furniture manufacturers, due to their different characteristics from other types of small and medium enterprises, for example, the quality of labor, quality of machinery and equipment, infrastructure, etc., are important factors in the wood furniture business that this model has not mentioned. So, it is necessary to introduce a more compatible model

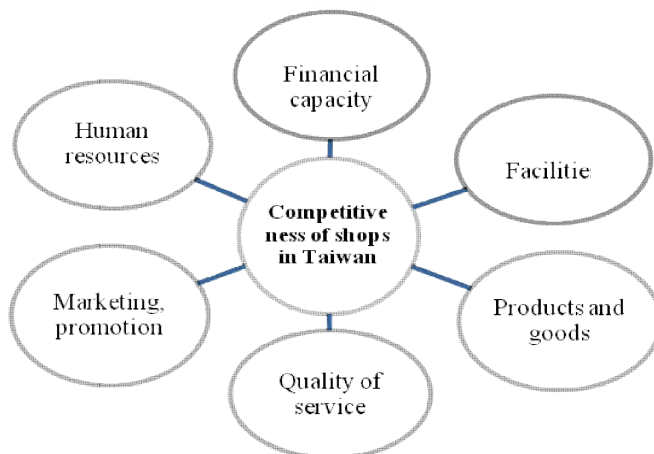
- Research on "Competitiveness of shops in Taiwan" by Chang et al. (2007) presents a model of seven factors affecting to competitiveness of Taiwanese stores based on the study of Chi (1999) as follows:

The results of the regression analysis show that the competitiveness of Taiwanese stores is influenced by seven factors: (1) business strategy; (2) financial capacity; (3) Facilities, facilities; (4) Products and goods; (5) quality of service; (6) Marketing, promotion; (7) Human resources.

However, the study did not clarify the relationship of these factors and placed under the influence of the environment. The study,

also referred to factors affecting the competitiveness of shops in Taiwan in general,

do not clearly distinguish the difference of the shop supply material products or services.



**Figure 3.3. Competitiveness of shops in Taiwan**

*(Source: Chang and et al., 2007)*

- In "Competitiveness of Firms: Review of theory, frameworks and models", Ambastha and Momaya (2004) point out that the competitiveness of firms is influenced by: (1) Resources (human resources, structure, technological level, assets of the enterprise); (2) Process (strategy, management process, technological process, marketing process); (3) Efficiency (cost, price, market share, new product development). However, research is only in the competitiveness of enterprises in general but not in terms of size, geography, field of operation. Therefore, research is still limited when applying research to businesses of different sizes and areas.

- The research "Measuring Competitiveness of Firms in Latvia" by Sauka (2015) made a real contribution by discovering the factors affecting to the competitiveness of companies in Latvia. The results of the study identified seven factors affecting to the Company's competitiveness, including: (1) capacity of access resources; (2) the capacity of employees; (3) financial resources; (4) business strategy; (5) the impact of the environment; (6) Business capacity compared to competitors; (7) Use of communication networks.

The main disadvantage of this study is that

it uses only statistical methods and makes comments based on mean values.

In addition to the common features of other industries, the Vietnam furniture industry has its own characteristics, such as: Most are small and medium enterprises; reuse raw materials common resources; products are not high complex, not many types; product market less fluctuate in demand; various machinery and equipment with low complexity; The investment is not so high. These the groups of factors may have changing

So, based on the theory from the above research, approach from the capacity theory of the enterprise capability and characteristics, the Vietnam furniture industry, the research focus internal groups. Thus, the thesis proposes 7 groups of the factors affecting to the competitiveness of VFEs: 1) Ability of Organization and Enterprise management; 2) Employment qualification; 3) Machine and technology; 4) Quality of product and package; 5) R & D capacity; 6) Finance position; 7) Infrastructure

### **3.2. The preliminary test of factors influencing competitiveness of Vietnamese furniture enterprises**

In order to establish a theoretical model of competitiveness of VFEs, it is necessary to

conduct preliminary tests to evaluate groups of potential factors that impact on the competitiveness of VFEs. The preliminary assessment was conducted by interviewing experts who work at research, teaching

institutions and in management offices). Results of interviews on factors influencing competitiveness of VFEs are presented in the table 3.1.

**Table 3.1. The results of Preliminary test of the groups of potential factors**

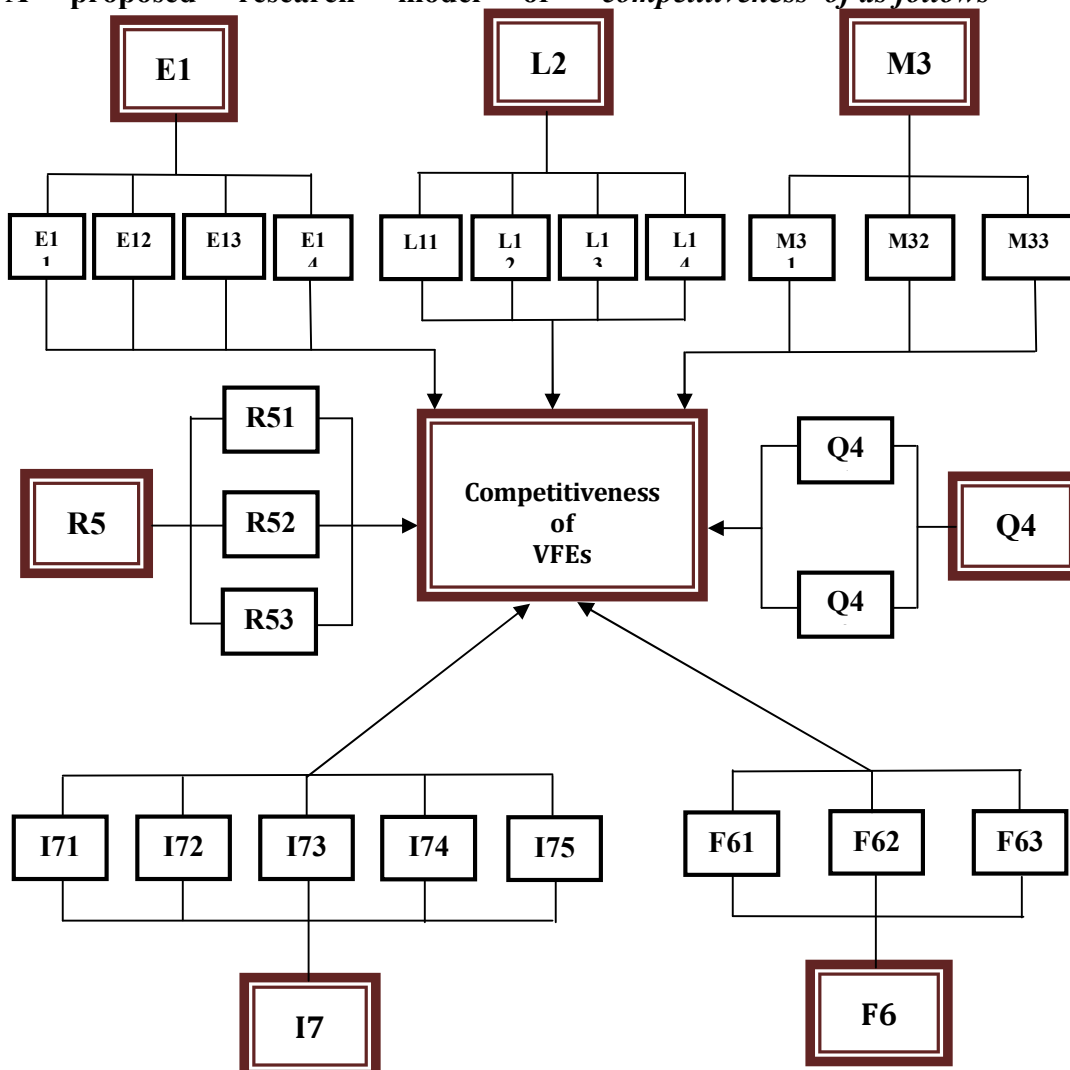
No	The Groups of proposal factors influencing to competitiveness of VFEs	Avarage score	Degree of the influence
1	Performance effectiveness of the management system	4.63	Very high
2	Employment qualification	4.47	Very high
3	Machine and technology	4.00	High
4	Quality of product and package	4.83	Very high
5	R & D capacity	2.98	Medium
6	Finance position	4.53	Very high
7	Infrastructure	3.39	High

The table 3.1 confirms that there are 7 groups of the factor affecting to competitiveness of VFEs.

**competitiveness of Vietnam furniture enterprises**

*3.2.1. The Proposal model of the competitiveness of as follows*

**3.2. A proposed research model of competitiveness of as follows**



**Figure 3.4. Proposal Model of the competitiveness of VFEs**

Where:

**E1 Ability of Organization and management of Enterprise**

*E11 Performance Effectiveness of the management system: Level of efficient and flexible Performance of Organizational System*

*E12. Degree of Planning strategies and plans of business*

*E13 Structure capacity of personnel: Have Personnel placement and replacement been guaranteed for business activities of enterprise*

*E 14 Leadership capacity of business owner: Organization and management capacity of CEO of enterprise*

**L2 Employment qualification**

*L21 Rate of trained employees*

*L22 Skills of employees*

*L23 Harmonization of the proportion of employee types*

*L24 Consciousness of Employees in enterprise developing and the law*

**M3 Machine and technology**

*M31 Type, amount of machine*

*M32 Quality of machine and technology – Be assessed via origin*

*M33 Layout of the machines*

**Q4 Quality of product and package**

*Q41 Quality of the products: Products meet customer's requirements or specified specifications*

*Q42 Quality of the packages: Packages meet customer's requirements or specified specifications*

**R5 R & D capacity**

*R51 Level of updating and application of new technologies to production and business activities*

*R52 Level of investment in research and development (R & D) of technology*

*R53 Budget for technological innovation*

**F6 Finance position**

*F61 Size of capital of enterprise: Level of meeting the capital demand for production and business*

*F62 Ability to find a source of capital for production and business activities*

*F63 Ability to give payments fully and, timely*

**I7 Infrastructure**

*I71 Advantage level of the location for production and business*

*I72 Level of meeting of requirement of Total area of the enterprise's land for present activities and expansion in the future*

*I73 Level of meeting requirement of Total area of production workshops*

*I74 Level of meeting requirement of The system of administration houses and canteens, dwellings for workers*

*I75 Level of meeting requirement of Auxiliary systems (roads, electricity ware, supply and drainage of water) in the layout*

### 3.2.2. Variables used in the study

- Potential factors affecting to the competitiveness of Vietnam furniture enterprises can be divided into seven groups and 24 factors: E1 (E11, E12, E13, E14); L2 (L21, L22, L33, L24); M3 (M312, M32, M33); Q4 (Q41, Q42); R5 (R51, R52, R53); F6 (F61, F62, F63) and I7 (I71, I72, I73, I74, I75).

Hypothesis about research model:

E1: There is a positive impact of ability of Organization and management of enterprise to VFEs' competitiveness.

L2: There is a positive impact of employment qualification to VFEs' competitiveness.

M3: There is a positive impact of machine and technology to VFEs' competitiveness.

Q4: There is a positive impact of quality of product and package to VFEs' competitiveness.

R5: There is a positive impact of R & D capacity to VFEs' competitiveness.

F6: There is a positive impact of finance position to VFEs' competitiveness.

I7: There is a positive impact of infrastructure to VFEs' competitiveness.

- Type of General Function:

$$Y = f(X1, X2, X3, X4, X5, X6, X7)$$

## IV. CONCLUSION

Based on the theory of competitiveness, researches results on competitiveness of the enterprises and characteristics of Vietnam furniture enterprises, the study "Research Model of Competitiveness of Vietnam Furniture Enterprises" has gained two main

results:

- Identified seven groups of factors with 24 potential factors affecting to the competitiveness of VFEs;

- Established a research Model of Competitiveness of Vietnam Furniture Enterprises.

Limitations of the study are:

1) The proposed model only considers the internal groups of factors on the competitiveness of Vietnam furniture enterprises without showing the external groups of the factors (eg. general policy as well as policies for the furniture industry), market information, input materials supply, etc.);

2) When studying the impact of a group of internal factors on the competitiveness of Vietnamese furniture enterprises, some internal factors such as marketing capacity, cost, product distribution, sales, after-sales service... because of considering that these factors are less volatile.

## REFERENCES

1. Ambastha and Momaya (2004) Ambastha, A. & Momaya, K. (2004). Competitiveness of Firms: Review of theory, frameworks and models. Singapore Management Review.
2. Sauka Arnis(2015). Measuring Competitiveness of Firms in Latvia.
3. Chang et al. (2007). Competitiveness of shops in Taiwan.
4. Pham Thu Huong (2017), PhD. Thesis "Competitiveness of small and medium scale enterprises (SMEs), study on Area of Hanoi".
5. Porter E. Michael (1990). Lợi thế cạnh tranh quốc gia. NXB Trẻ và DT Book 2008.

## MÔ HÌNH NGHIÊN CỨU NĂNG LỰC CẠNH TRANH CỦA CÁC DOANH NGHIỆP SẢN XUẤT ĐỒ GỖ VIỆT NAM

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### TÓM TẮT

Để quá trình nghiên cứu được thuận lợi, công việc đầu tiên phải xác lập được mô hình nghiên cứu. Trong nghiên cứu năng lực cạnh tranh đã có nhiều loại mô hình nghiên cứu được xác lập, tuy nhiên, chưa có mô hình nghiên cứu nào về năng lực cạnh tranh của các doanh nghiệp sản xuất đồ gỗ, đặc biệt là các doanh nghiệp sản xuất đồ gỗ Việt Nam được xác lập cả. Do vậy, việc nghiên cứu để xác lập mô hình lý thuyết về năng lực cạnh tranh của các doanh nghiệp sản xuất đồ gỗ Việt Nam là cần thiết. Mục tiêu của nghiên cứu là đưa ra mô hình nghiên cứu về năng lực cạnh tranh của các doanh nghiệp sản xuất đồ gỗ Việt Nam để trên cơ sở đó, các nhà nghiên cứu lập được kế hoạch nghiên cứu, định hướng thu thập số liệu đầu vào và cách thức xử lý số liệu, cũng như hướng phân tích kết quả đạt được. Thông qua lý thuyết về năng lực cạnh tranh, các mô hình năng lực cạnh tranh của các tác giả trong và ngoài nước, kết hợp với đặc điểm của các doanh nghiệp sản xuất đồ gỗ Việt Nam, nghiên cứu đã: (i) Xác định được các nhân tố tiềm năng ảnh hưởng đến năng lực cạnh tranh của các doanh nghiệp sản xuất đồ gỗ, gồm 7 nhóm nhân tố với 24 nhân tố (chủ yếu tập trung vào các nhân tố có thể điều khiển được); (ii) Xây dựng được mô hình nghiên cứu về năng lực của các doanh nghiệp sản xuất đồ gỗ Việt Nam.

**Từ khóa:** Doanh nghiệp đồ gỗ, mô hình nghiên cứu, năng lực cạnh tranh.

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