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Identification of Exogenous and Endogenous Factors Affecting Competitiveness: An Application to the Spanish Furniture Industry

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**FOCUS ON COMPETITIVENESS: THE SPANISH FURNITURE
INDUSTRY AS A CASE STUDY.**

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Abstract

In this paper we study what type of exogenous (related to the external structure) and endogenous (related to the firm) aspects affect industry' competitiveness. The framework is used to asses competitiveness of organizations in the Spanish furniture industry. In doing so, we deep in the theoretical concepts related: in one hand, the industrial sinergical concentration and, in the other hand, literature concerned to resources and capabilities.

In this way, we apply a conceptual framework developed by the authors in order to identify the critical aspects that can influence competitiveness and, then, describe the results.

The applicability of the model is analyzed in the Spanish furniture industry, specifically in the Valencian Community, where is mainly concentrated.

From the results obtained we are able to conclude that the method is effective in identifying both exogenous and endogenous aspects.

1.- Introduction.

To carry out the research, we have chosen the home furniture industry in a concrete geographical environment, the Valencian Community, to carry out a complete study of its competitiveness, in order to identify the aspects that influence in its

competitiveness and to obtain real conclusions without remaining in a mere theoretical development.

We analyze the complementarity of both focus and if the research can derive in a model of interpretation of the competitiveness of an industry, combining the exogenous aspects of the industry and those resources and capacities that favor the competitive behavior of the firms, applying a methodology of competitiveness analysis. (Segarra, 2003).

The qualitative conclusions of the study appear classified as a) conclusions on the geographical concentration, b) conclusions on the identification of resources and c) conclusions on the identification of competences, performing the model of competitive analysis applied.

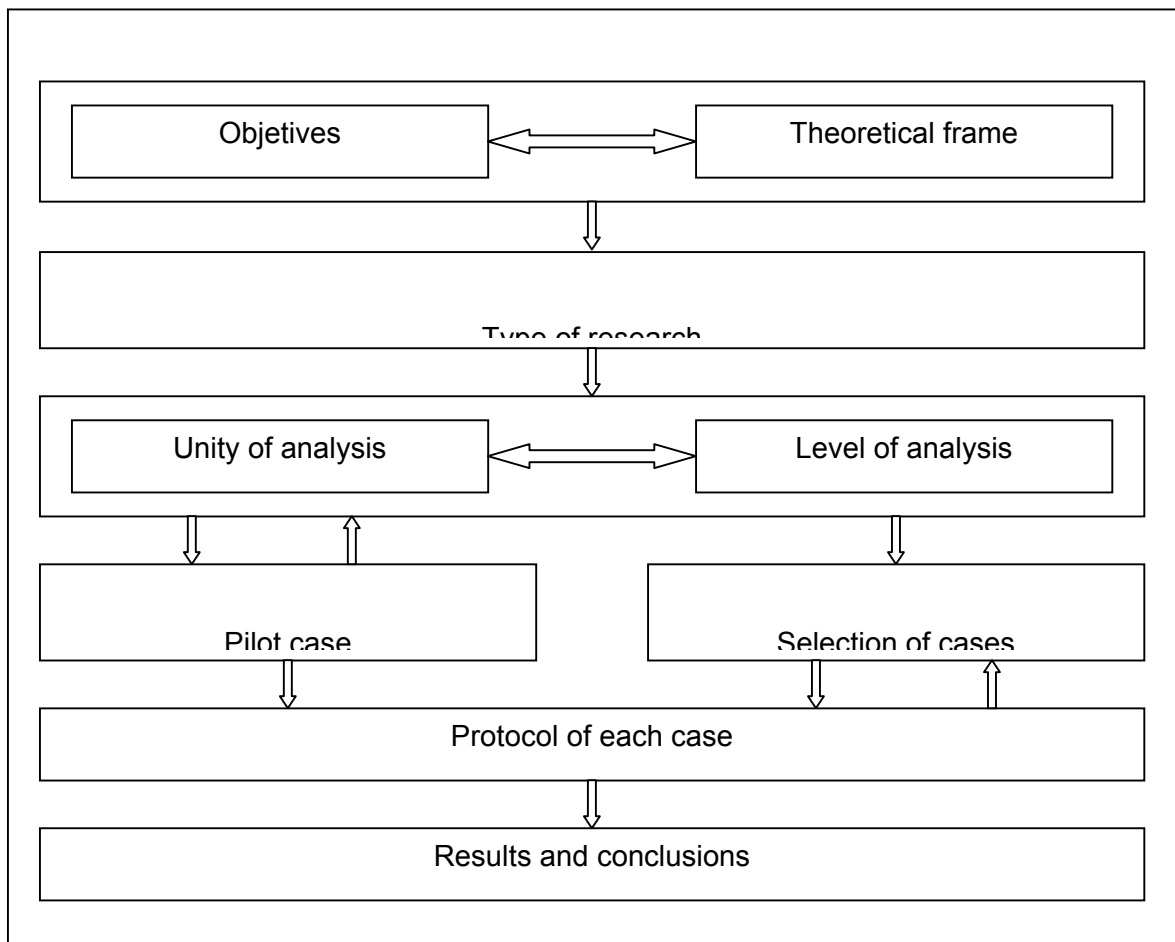
2. Methodology.

Following Kaplan (1986), it is difficult to imagine that firms management theories can be verified, if the proof is not carried out within the organizative context. These proofs are not only useful when describing the existence or not of procedures, but also to deduce and to contrast how and why certain practices should be implemented.

When someone intends to **generate a theory**, starting out from a theoretical frame and the key questions *how* geographical concentration is *created* and *how* it *influences* an industrial sector's competitiveness, it is better to develop a **explicative study of cases**. Several cases will be studied following Rouse and Daellenbach, (1999).

This research will follow the model proposed by Pérez (1998).

Figure 1.- Stages in the study of cases



Source: Pérez, (1998)

The method used in this research, **in-depth interviews**, is classified as the obtaining of direct data. The type of the interview used is called *structured interview with open answers* (King, 1994). This technique combines the advantages of the use of close questionnaires with the advantages of a qualitative research interview.

3. Research development.

The questionnaire was applied to eight not random cases selected among the firms that present a better behavior (Rouse and Daellenbach, 1999).

With respect to number of cases studied, eight, it corresponds with the recommendations carried out by Eisenhardt (1989) that recommended the study of a number of cases neither lower to four neither over ten, as well as the indications of Yin

(1989), that indicates that the number of cases should oscillate between one and eight. The questions were presented in the framework of extensive interviews to CIOs.

3.1.-- Study of the geographical concentration.

The home furniture industry of the Valencian Community conforms a cluster in which the relations established are verified at the vertical level as to the horizontal level. This type of structures (the clusters), that are conformed by producers and their specialized suppliers and complemented with related industries and institutions.

In the study we could conclude that among producers and suppliers narrow relations are established. Even from time to time the relation manufacturer-supplier is maintained for a long time including research actions and productive- improvements.

The industry studied is comprising a definite nucleus (the producing businesses of home furniture), by a network of related sectors (metalwork, varnishes, suppliers of wood, straight sheet-makers.) and by several representative institutions from the sector up to national level (FIM, ANIEME, AIDIMA).

With regard to the aspects that affect competitiveness through the improvement of productivity, the capacity to innovate and through the creation of new businesses, can be affirmed that in the industry studied, the improvement of the productivity has been favored by the experience and knowledge of the existing labor force, what enables the search and contracting and minimizes the cost of formation, as well as by the existence of specialized subcontractors that enable manufacturers to maintain more flexible productive structures, what is reflected in significant improvements of productivity. Besides this, due to the nearby and dynamics presence of the main institutions of the furniture industry in the geographical region studied, the information flows with greater facility. The rivalry and the among the firms is another of the factors that favor the business productivity inside the cluster.

Another reason that contributes to a greater capacity of innovation, is to be in contact with specialized suppliers and firms belonging to related industries, all of them located not far off, contributes to detect more quickly the changes or the new market

tendencies. The International Trade Fair (FIM) stimulates the creativity and encourages to the constant differentiation, as already has been justified.

The creation of new firms at this cluster is produced of several ways, sometimes due to spin-off actions, (originally conforming other businesses that undertake the adventure alone) from suppliers, of clients, that decide entrepreneur their own business (mainly if what the barriers of entrance are reduced), due also to the apparition of new needs (as can be specialized services of environmental management, etc.) and, on the other hand, due to the establishment of foreign subsidiaries in the region (machinery, varnish, etc.).

Another important aspect is that we could observe a clear exporting orientation; the Valencian Community is leader in home furniture production at a national level, followed by Catalonia, with figures close to the 495 million annual euro, what represents more than the 30% of the total exported by the industry at Spain.

The main external aspects that influence in the competitiveness of the home furniture industry of the Valencian Community are reflected in board 1.

Board 1: Exogenous aspects that affect the industry's competitiveness.

- The experience and tradition of the region.
- Specialized labour force.
- Subcontractors industries very developed and specialized.
- Locating in Valencia of all the important institutions to a national level.
- Strong business-relations in vertical and horizontal level.
- High level of integration with the government institutions.
- Quick access to information.

3.2- Resources identification.

Several authors pretend to connect the external and internal analysis, and we completely agree. As Priem and Butler (2001a) affirm, the research in the competitive

environment should lend attention to both parts, the internal one and the external one, the production and the demand, the resources and the products. The ideas of the Resources and Capabilities theory should be integrated in a model of analysis of the environment.

Following the leading research proposal (Priem and Butler, 2001a and 2001b, Dubin, 1976, Whetten, 1989, Brush and Artz, 1999, Miller and Shamsie, 1996, Yeoh and Roth, 1999 or Rouse and Daellenbach, 1999), to carry out the identification of the resources that affect to the competitiveness and to apply in an effective way the theoretical know-how unfolded by the theory of resources and capabilities,(TRC), should be determined in a very accurate way the context in which is going to carry out the study, in our case the home furniture industry of the Valencian Community, and it is recommended to carry out qualitative research.

With this raising, were determined through the study of cases those resources that favored the business behavior and the ones that affected negatively the competitiveness of the pertinent industry studied (See board 2).

Board 2. Resources identification. Conclusions from the case studies.

TYPE.	RESOURCES THAT FAVOUR THE COMPETITIVENESS BEHAVIOR.	RESOURCES THAT AFFECT COMPETITIVENESS BEHAVIOR.
MATERIAL	<ul style="list-style-type: none"> ⇒ High investment in machinery and installations. ⇒ Flexible productive structure. ⇒ Adequate installations. ⇒ High utilization of the productive capacity. ⇒ CIO with upper formation expanded, in some cases, 	<ul style="list-style-type: none"> ⇒ Scarce use of the productive capacity. ⇒ Inadequate installations (internal logistics problems, obsolescence). ⇒ High number of references ⇒ High level of stock. ⇒ Lacks of adequate formation of CIOs.

HUMAN	<p>in management schools.</p> <p>⇒ Human resources planification.</p> <p>⇒ Actions in the environments of the quality, the security at work or the strike up labour of industrial accidents.</p> <p>⇒ Point up to social aspects.</p>	<p>⇒ Formation plans non-existence of plan-formation.</p> <p>⇒ Scarce worry by themes related to quality or security.</p>
TECHNOLOGICAL	<p>⇒ High level of automation.</p> <p>⇒ Middle-high technological level.</p> <p>⇒ Innovation in products and processes.</p> <p>⇒ Existence of a department or responsible for design, innovation and technological aspects.</p> <p>⇒ Human and material resources dedicated to R&D.activities.</p> <p>⇒ Patents registered.</p> <p>⇒ Great importance of the design.</p> <p>⇒ Control of inventories and stores.</p>	<p>⇒ Lack of technical resources.</p> <p>⇒ Scarce automation of processes.</p> <p>⇒ Middle-low technological level.</p> <p>⇒ They do not apply stores/stocks management systems.</p> <p>⇒ Do not have any patents.</p> <p>⇒ Problems of organization of the production.</p>
BUSINESS STATUS	<p>⇒ Business reputation.</p> <p>⇒ Marketing investment.</p> <p>⇒ Design prizes and awards.</p>	

For the analysis of the resources the classification we followed was udescribed by Grant (1991), identifying thus five basic areas of study; the technological, human,

material, financial resources and the associates to the reputation of the business. Through the study of cases we have identify those resources that affect the competitiveness of the industry. They have been classified as resources that possess and they unfold the businesses of better behavior inside the industry studied and the ones that weigh down the business behavior in the environment of study.

3.3.- Capabilities identification.

In this research, the capabilities are defined as knowledge applied. Either the existing knowledge as material capital, or the human capital of the business are basic, but we must add the organitacional aspects, how people and machinery the routines are managed.

The capacities can be classified like essential and distinctive capacities. As essential capacity refers to that characteristic that constitutes the nature of the business and remains invariable, that is to say, the essence. Generally difficult to identify as well as to imitate or to acquire. By distinctive competences is understood those abilities (capacity to do) that distinguishes some firms to another, that characterizes them. In general, they are identified with greater facility and they can be acquired (through the learning or an evolution). While the essential competences are maintained invariable, the distinctive themselves awill adapt to changes of the environment, of the market, etc. and therefore they will not be invariable.

For the identification of these characteristics and own abilities must be carried out interviews and visits to the selected firms since, in the majority of the occasions, the competences that the firm develop are not classified as such.

To structure the analysis has followed itself the classification carried out by Camisón (1999a), that subdivides the identifiable competences in six parts, related to the CIOs, finances and costs, production, the commercial and marketing aspects and, the related to technology and R& D and, finally, the aspects related to the organization and the human resources.

It has turned out very interesting to carry out this study and to obtain the conclusions presented in the board 3 in which the intangible aspects related to the business behavior are identified.

Board 3: Capabilities identification. Conclusions from the case studies.

- Ability for managing (creative management, involved in the innovation, oriented towards the change, participatory).
- Clear definition of strategies, analysis of the environment
- Narrow relations with firms and institutions, participation in the industry's activities.
- Deep knowledge of costs, productivity and references.
- High knowledge of the processes ((know-how, productive efficiency, optimization of the production, processing of materials, quality).
- Technical specialization, technological cooperation.
- Capacity of adaptation to the changes of the environment.
- Brand image generation and/or reputation of products.

- Creative capacity for innovation.
- Orientation towards social aspects

4- Conclusions.

Through the study of cases, the complementarity of the two focus has been verified, the external one and the internal one, concluding that, so much the existence of a cluster active and the profit of the advantages that generates a geographically concentrated industry, like the fit of the resources and the capabilities developed contribute to establish the competitive level of the industry in general and of the firms particularly.

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