THE FRAGMENTED INDUSTRIAL CERAMIC SECTOR ANALYSIS AND STRATEGIES

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ABSTRACT

A fragmented industrial sector is characterized by the lack of leaders able to shape its evolution and results, and by the presence of many privately owned, small and medium-sized companies.

Drawn from Michael E. Porter's text 'Competitive Strategy' in which he analyses, in Part II, generic environments in the Industrial Sectors, the above defines a fact that has hardly or not at all been used in analysing the industrial ceramic sector in Spain and, especially the industrial ceramic district of Castellón.

As a result of the concurrence of different historical and economic factors, the Spanish ceramic floor and wall (earthenware) tile manufacturing sector has evolved towards <u>concentration</u> in Castellón (95% of production and 80% of companies) and towards <u>fragmentation</u> (over 150 manufacturing companies).

With respect to the ceramic industry's growth in other worldwide geographic areas, this evolution in Spain is a specific fact and it has allowed the Spanish industrial ceramic sector to reach a well-deserved position in the world ranking, both for its volume and for its real and perceived quality.

The current circumstances of the economic environment, the sudden drop in Spanish construction and the commercial stagnation in global markets, associated

with the technological maturity of the product, obliges ceramic sector companies to choose a new strategic profile that overcomes fragmentation or takes measures to resist it.

tile of spain

Figure 1.

1. INTRODUCTION

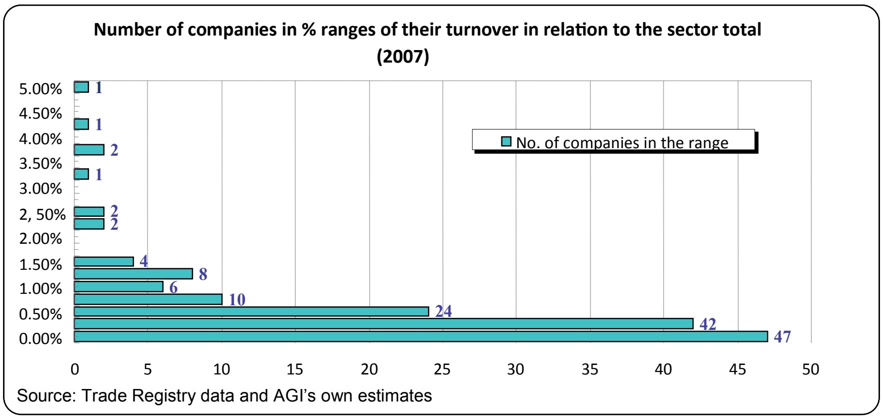
Since the end of the 1970s, the ceramic sector in Castellón has been characterized by its rapid technological progress, in processes and equipment, and for continuously widening the market. It is easy to remember the agony of the tunnel kilns at the hands of the roller kilns and the almost immediate application of single firing to the production process. The sector needed to change when the ink of contracts of new factories with efficient but 'obsolete' technologies was still wet.

The quality of local clays and the necessary incorporation of their spray drying, the progress in pressing and firing, the introduction of electronics and of special machines for selecting, handling, controlling, etc., along with the country's progress, the construction boom and the stable international setting, helped the benefits of what was then a rich agriculture, drawn towards ceramics, to bear fruit in the new basic industrial sector in the technical, economic and social development of Castellón.

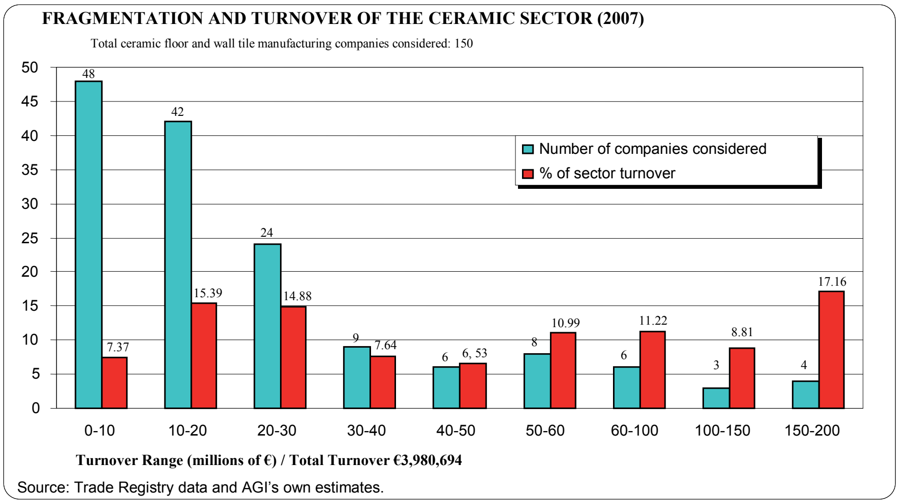
Larger, more modern and more productive companies subsequently appeared. The improvements in costs always had an affect on the sales price, and the PRODUCTION concept prevailed over the MANAGEMENT concept. Factories grew in volume and in number as demand increased.

Many competitors with high margins, who continuously increased the market and the catalogue, doing everything for everyone without it being perceived as an advantage to be leaders or to influence the sector's evolution, determined the sector structure:

CONCLUSION: THE INDUSTRIAL CERAMIC SECTOR IS <u>FRAGMENTED</u> -ICS-



Graph 1a.



Graph 1b.

2. EVOLUTION TOWARDS THE ICS FRAGMENTATION IN SPAIN

By applying management concepts and tools, which are classical in the analysis of industrial sectors and markets, the reasons underlying the previous section can be completed, highlighting those that combined to bring about the fragmentation of the Castellón ICS between the 1980s and 1990s:

2.1. Low revenue barriers.

The production equipment offered by manufacturers with a high technical level and business capacity was affordable and the investment was easily taken on due to the easy financing credit and technical assessment they provided. The positive increase in the ICS drove investment and many businessmen, who would not have considered it if there had been lower expectations of profits or more demanding economic conditions, entered the sector with guarantees.

2.2. Lack of economies of scale or experience curve.

In ceramic manufacturing, larger production volumes did not mean evident economies of scale or better margins due to an experience curve. The variety of bodies, formats and models that were introduced and the demand for a rapid response to the introduction of tendencies would not have provided an advantage to companies with a larger capacity but with less agility than smaller organizations, owing to the frequent changes and adaptations that were required.

2.3. Anti-economies of scale.

The anti-economies of scale or efficiency losses with size did not encourage sector companies and outside capital to unite and to aspire to lead the sector either. The following were notable anti-economies:

- The rapid changes in product or style: The frequent introduction of new models and changes of style, requiring short preparation periods and fast responses to the market, were essential to maintaining the profitability and efficiency of the small companies compared with very large leading organizations, which would necessarily have been slow to respond.
- Being able to maintain low overheads: A large company working in the market of those times would also have needed an extensive organization which, without furnishing any clear advantage in margins, consumed resources in heavy and expensive departmental and hierarchical structures. In a small company, the owner-director's direct action established a minimum functional and hierarchical structure which gave him an obvious advantage in overheads.

2.4. Available energies: natural gas and electricity supply.

The introduction of natural gas at the end of the 1970s and the beginning of the 1980s, within the reach of whoever asked for it, in the vicinity of the gas pipelines, brought about the phenomenon of technological modernisation. The available distribution electric power grid at that time meant that companies that were setting up needed to address fewer technical-administrative requirements and provided fast connection.

2.5. High output barriers.

The equipment in an industrial ceramic facility does not allow conversion to products of other sectors. An industrialist with difficulties, or in contracting situations, or even with hopes of disinvesting, cannot adapt his facilities to other processes. As a result, inefficient or marginal companies tend to remain in the ICS, trapped with marginal or non-existing profits, straining sales prices to crippling levels, maintaining the fragmentation problems and adversely affecting company viability.

The listed reasons were the cause for there being no companies in the structure of the ICS that noticed that size provided advantages with respect to the market. Businessmen did not pursue the association of capitals and brands, for doing so would not improve their position or their margins. The high real profit that remained in place until the beginning of the 21st century blinded the vision to size as a need, in order to overcome or withstand fragmentation.

3. THE ICS ENVIRONMENT IN SPAIN AND BUSINESS STRUCTURE

At present, the situation that characterizes the ICS in Spain is no different from the one that affects most industrial sectors: a falling domestic market and an extremely hard global competitive climate. The drop in the Spanish residential construction has reduced ICS turnover by over 30% and, with the stock of empty houses on the market, recovery is unlikely to begin until the 2015/2016 financial year (Graph 2).

Credit restrictions affect companies as a heavy burden that not only restricts investments in growth, equipment and sales forces, but also the necessary cash-flow for daily operation. The reduction in labour force and the automatic financing resources (reducing stocks and delaying payment to suppliers) are considered so exhausted that the continuity of the ICS companies is at risk.

On the other hand, the size of Spanish ceramic businesses is, on average, smaller than that of Italian competitors and it is even smaller than the size of the large Chinese, Brazilian and Indian conglomerates. The smaller companies, family businesses with few shareholders managed by the majority shareholder, are going through generational handover phases, with the internal tensions that are typical of such corporate processes.

There is no clear differentiation of manufacturers by brand and, with identical facilities, they all reproduce products and new or more successful designs with few variations. They create duplicated stocks and it is impossible to produce long series that reduce costs.

4. CONSEQUENCES OF FRAGMENTATION IN THE ICS

The current fragmentation seizes up the decision-making capacity of most sector companies and keeps them IMMOBILIZED, creating a great competitive intensity and jeopardising their financial statements and, consequently, their future viability. The following should be pointed out as the most damaging consequences of the fragmentation of the ICS:

4.1. Companies have no resources or skills.

The steps for overcoming the consequences of fragmentation may be obvious, but the companies that exist today lack the economic resources or skills to make the necessary investments or strategic changes that enable new economies of scale to be achieved.

4.2. Companies fail to change.

Companies that may be emotionally linked to the traditional industrial practices and that formed part of the fragmented structure are incapable of seeing the opportunities provided by change. As a result, even though they have resources to promote the improvement of the ICS, they fail to take decisions aimed at overcoming or withstanding fragmentation.

4.3. Lack of attention by external companies.

Companies that are outside the sector and that could give resources to the ICS with the objective of being its leader do not see the possibility of high returns either, or they do not believe in the strategic opportunity of entering the industrial ceramic sector, with a low investment or renovation cost.

4.4. No advantage of size when dealing with suppliers.

The fast rise in ICS consumables and the high price it had to pay for them contributed to the birth of powerful new companies that supply and support the ceramic industry: mining, transport, machines, spare parts and technicians. The suppliers of the largest raw material and equipment supplies were also companies with a much larger structure than that of the ceramic companies. Consequently, the fact of being a large company in the ICS would not have provided more negotiating power or purchasing power in comparison with the smaller companies.

4.5. No advantage of size when dealing with buyers.

The demand for ceramics rose at such a fast rate that the selling prices for the ceramics end-customer were high. The entire production was marketed without the larger or smaller size of the ceramic factory having a significant bearing, but the bargain cost that the buyer was ready to accept did.

Therefore, those who bought from the ICS, with high margins, became powerful logistic and distribution groups: they grew in size and capital and, with some exceptions, they reached a more powerful structure than that of the largest ceramic ones. With almost total control of access to the end-customer, they act by lowering the purchase price. They exert a high pressure and, since the consolidated brands are not considered better by the consumers/specifications writers, they decide to adapt their offer to product cost.

5. ALTERNATIVES TO FRAGMENTATION IN THE ICS

Faced with fragmentation, and in the current period of the sector's maturity and of bad economic circumstances, companies in the ceramic sector need to overcome fragmentation, take measures to resist it, or plan disinvestments. Otherwise, their weakness and the strength of other competitors will lead them traumatically to close their businesses.

5.1. Alternative 1: eliminating fragmentation.

This first alternative, eliminating/overcoming fragmentation in the ICS, is difficult to implement for it requires a business revision of culture, structure and strategies for those intending to become leaders, and this means an enormous economic and organizational effort.

5.1.1. Creating economies of scale or an experience curve.

Economies of scale can be created with larger facilities and significant contributions of capital, benefiting from larger company size. Thus, if overcoming fragmentation and growth in size are accepted, for example reaching 30% of the market, only small, relatively weak competitors with few threats of reprisals will be faced.

Economies of scale can also be introduced into sales and marketing, into distribution, into service, etc., as long as the company's financing possibilities and the social, technical and cultural environment of the industrial sector allows it.

5.1.2. Concentrations – acquisitions for reaching a critical mass.

The concentration of companies allows size to be increased to achieve evident economies of scale in manufacturing, distribution and service. More efficiency would be obtained by buying companies on the foreign market, to be run by the purchasing company.

Thus, instead of increasing the size and investments of the company itself, more efficiency can appear when there is a larger share in the national or exporting markets. Market share is not gained by ousting competitors with bloody price or service fights.

It is also difficult to search for agents in specific geographic areas or markets, since there is a penetration by other competitive companies that already have local contacts. To oust these competitors, the strategy must be to acquire them for them to be incorporated into and run by the buying company.

5.1.3. Forward and/or backward integration.

If it can be strategically and economically assumed, the forward integration covering distribution and retailing neutralizes the power of the purchasing groups and differentiates the product through having better control of the conditions and the sales channels. However, this strategic move may risk the continuity of whoever makes it, if the accrual and the volume of the economic resources are not correctly planned.

Backward integration can reduce costs and put pressure on competitors that cannot afford this. It would also increase the selling power if a share percentage in the ICS is reached which allows influence to be achieved in its favour on suppliers' selling prices. This decision requires full analysis of the operation.

5.2. Alternative 2: withstanding fragmentation.

The ICS has matured, the historical causes have disappeared and circumstances that caused the fragmentation have been modified. For most ICS companies that will not be able to assume and overcome this due to the cost and organizational effort it requires, their only alternative to fragmentation is to withstand it, accepting that their position in relation to suppliers and buyers is weak and their profits are marginal.

There are no standard plans of action for resisting fragmentation, so care must be taken when adopting a strategic position. An attempt must be made to be one of the most successful companies, even if it only has a modest part of the market, by adopting special positioning strategies according to each company's circumstances:

- Search for the low cost: LEADER IN COSTS.
- Differentiation: PRODUCT or SERVICES.
- Focus. WARNING. Due to the FOCUSES, restrictions in the total volume manufactured may need to be assumed.

These strategies would materialise, in each case, in some of the following points:

5.2.1. Minimum facilities focused on the cost.

The intensity of the rivalry among competitors and the low profits in the fragmented ICS, with a fierce struggle for orders and with rigid prices also linked to the global competition, allow certain facilities to pursue a LEADERSHIP IN COSTS strategy by having:

- Minimum facilities with no excesses.
- Employees with few special skills.
- Strict control of costs and low overheads.
- No resource sinks.

By resisting fragmentation, the company is placed in a position to compete in price and to achieve an above-average yield.

5.2.2. 'STANDARD' facilities: Leader in costs/relocation.

This is an alternative to the above, it is much more complicated to consider and to carry out and it is summarized by starting up efficient facilities that are standardized to a maximum by being built and made to work at a minimum cost and with centralized control in multiple places and geographic areas.

5.2.3. Increase in added value: differentiation.

It may be effective to increase the added value by producing differentiated products or services: by providing more service in the sale, by doing some final operation on the product (cut-to-measure, drilled holes, finishes, etc.), placing sub-assemblies or special solutions (façades, technical floorings, etc.). This increased differentiation of the product will allow larger margins to be pursued, which cannot be obtained with the basic product or service.

5.2.4. Specialisation per type or product segment.

Since fragmentation is due to or is accompanied by many articles in the product line, an effective strategy for reaching above-average results is to specialise in one limited type or group of products (FOCUS). A certain negotiating power is acquired with regard to suppliers with a larger homogeneous volume in their orders. The buyers also appreciate the product more when they identify it with the manufacturer's better expertise.

5.2.5. Specialisation per types of customer or order or geographic area.

A FOCUS can exist in operations that are adapted to each customer type or category: Customers with a small annual volume, small-sized customers, customers less sensitive to the prices, customers who appreciate the additional added value that can be given with the basic product or service, etc.

Another FOCUS is also possible when specialising in any of the types of order where the customer is less sensitive to price: Small orders with fast delivery, special orders, specialisation in decorating support, etc.

Also, to withstand fragmentation, there can be substantial economies when covering a certain geographic area, concentrating facilities, commercial service and sales activity.

6. POSSIBLE TRAPS FOR THE STRATEGY

The adoption of strategies and stances, even though they are necessary, entails traps that come from the immobility of some companies. They are a result of a lack of strategic discipline, of shortage in resources or management skills and, in general, of the management's little weight in the company structure.

6.1. Unsuccessful search for supremacy or differentiation.

If a company that has wrongly measured the positioning and necessary resources for overcoming the economic causes of fragmentation does not achieve a leading position or successful differentiation in the ICS, it becomes vulnerable to competing forces in the ICS, losing its capacity to act, and possible final deterioration of its possibilities of survival by running out of resources. The negative effects can be:

- Inefficiencies (higher costs): HALFWAY LEADER IN COSTS.
- Loss of differentiation: HALFWAY DIFFERENTIATION.
- Tough stances by buyers and suppliers.

6.2. Lack of strategic discipline.

The competitive structure of the ICS requires the use of a specific strategy, out of those noted, and courage to abandon some strategic business groups and to go against some traditional ideas in the business world. A strategy with a lack of discipline which changes focus and is opportunistic ends up exposing the company to competing forces in the long term, without proper resistance. Choosing a hasty strategy or one that has not been thoroughly analysed will make corrections necessary that will question the result.

6.3. Exaggerated centralizing in decision-making.

A company that accepts being small and resists fragmentation must understand that, in its position, the essence of competition is personal service, local contacts, strict control of operations, skill for reacting to changes in style, etc. All in all, it must be agile and quickly respond to changes and customer demands. This is why a centralized organizational structure is, in most cases, counterproductive, since it increases the response time, harms the interest of distributors and demotivates specialised people who are necessary in the company. Centralized control will only be useful and essential if the company has several units in the ICS but not, however, a centralized structure.

6.4. Assuming competitors have the same costs and objectives

The very nature of the ICS means that many companies are small and medium-sized and privately owned, and the directors-owners may have non-economic reasons for being in the marketplace (tradition, family pride, custom, etc.). It may occur that they are satisfied with low performance levels and they may be more interested in maintaining the volume, in providing work for employees, etc. than in obtaining higher profits. As a result, assumptions in these areas can be dangerous, since some competitors could react differently to price changes or other industrial events.

6.5. Exaggerated reactions to new products

In the ICS, when a new product appears which only one company has initially, it is frequently considered a salvation. Since the large number of competitors provides customers with a great deal of power, which will pit certain companies against others, the final sequence unfortunately tends to be as follows:

1. The demand for a new or innovative product grows rapidly and the competition in prices is not strong due to the zero competition at that stage.
2. When the buyers recognise a prospect for higher margins, they demand more information and service for the new product.
3. Some companies copy the product and, with strong investments, they increase their costs and raise their overheads.
4. The product begins to become known by the buyers and it is offered by many companies: a struggle materialises for orders – sales prices drop.
5. Fragmentation recovers its action parameters, and the margins drop for all the companies when the desired higher prices are not applied.

The companies that have an exaggerated reaction have economic problems that can even force them to close the business.

7. FORMULATING THE STRATEGY

Formulating the best strategy depends on each organization and its financial situation, its objectives, the experience and quality of its management, its position in the sector, its production facilities, its sales force and, in short, its actual position in the ICS. It will also depend on the generic strategy it adopts and its nuances, on the knowledge and estimates of the current market and on the plans for its progress and the objectives that the company has in order to pursue that progress.

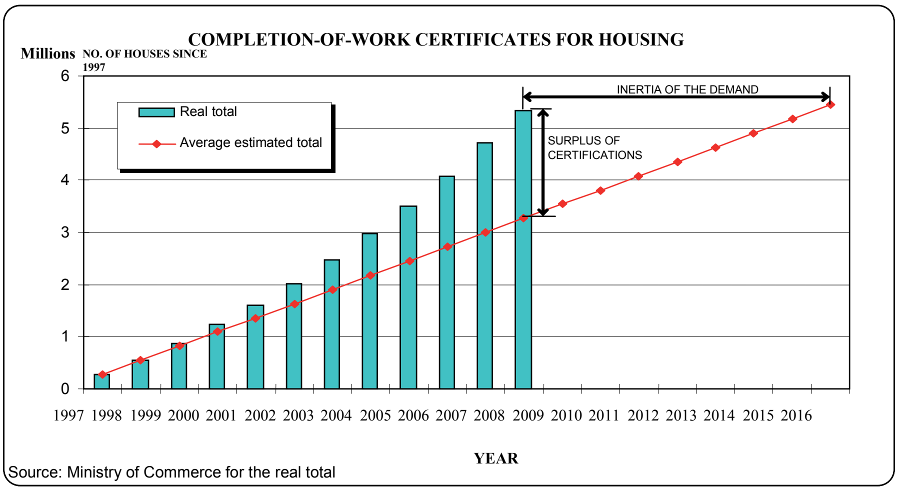
As a summary, by way of an open guideline, the following phases are proposed:

1. ANALYSIS OF THE ICS: Its structure, the origin of the competing forces and the position of significant competitors.
2. STRATEGIC GROUPS IN THE SECTOR: There must be a complete list and the strategic groups must be related to the company being considered.
3. Examination of whether the resources and the organization allow you to overcome fragmentation and how to do so.
4. Determining whether it will be profitable to overcome fragmentation once a leading position in the sector has been achieved.

5. If overcoming fragmentation is not being considered, it is necessary to study strategic alternatives to withstand this.

8. CONCLUSIONS

At present, the production capacity in Spain's ICS is much higher than the demand. From 600 million m^2 tile produced in the 2003/2006 financial years, there were fewer than 500 (own estimates) in the 2008 financial year and 2009 will probably not easily enable 400 to be produced.



Graph 2.

With the existence of an extremely high number of houses on the market with no possible buyers, the weakness of domestic demand will continue to display sluggish recovery for several financial years (graph 2). Foreign demand, which, as a whole, has decreased less, is determined in certain geographic areas by the competition and growth of local manufacturers and the global competition of large producers: entailing reduced penetration of Spanish products.

We cannot be confident of recovering production up to the levels of the first financial years of the 21st century. The low turnover margins that hit the Spanish ICS are not going to improve substantially in the current conditions. The sales force has to aim at the <u>closest</u> opening for Spanish ceramics: Europe-the Near East-the Atlantic Coast of North America.

CONCLUSION: The companies in the Spanish ICS must strategically innovate or those that use up their reserves and their financing capacity will disappear.

1. The companies with a capacity and a management structure that are ready to take the step to leadership and have an influence on the sector, without increasing the market offer, must take over competitors so that they can have economies of scale and sufficient power to be leaders of the ICS and to successfully face suppliers, buyers and weak competing firms that cannot offer resistance.
2. Although they do not seek to overcome fragmentation, another option for the companies that make the decision is the possibility of concentrating facilities to enable creation of economies of scale, having fewer stocks as a whole, with specialising factories, and searching for power through larger purchasing volumes from the suppliers and through a higher influence on buyers' orders.
3. If the margins improve because many competitors disappear, external capital may be seriously tempted to enter the ICS by purchasing companies with low takeover costs, adapting facilities. Mergers and concentrations in distribution and brand, or in both aspects at the same time, will also be evident. Those who choose this option will buy products from several companies which, in turn, are specialised in producing for brands.
4. Selective relocation for qualified organizations may help put a brake on the competition by manufacturing in competing countries with possibilities of growth in their domestic demand or in their geographic area.
5. For small companies to continue operating, they will need to make an effort to withstand fragmentation by adopting the strategic position that provides them with viability, with small percentages of the business, against companies that are larger or have purchased leadership.

It is a matter of life or death, in which the new trends of comprehensive business management should already be laying out the road map, in the context of an ICS with excess production, domestic and global competition that is becoming ever tougher and better, in a dark panorama of the national economy's development.

REFERENCES

[1] FERNÁNDEZ SÁNCHEZ, E., FERNÁNDEZ CASARIEGO, Z. (1998):"Manual de Dirección Estratégica de la Tecnología. La Producción como Ventaja Competitiva". First edition. Ariel economía. Barcelona.

[2] FREIJE URIARTE, A. (1990):·"Estrategia y Políticas de empresa". Ediciones Deusto, S.A. Madrid, Barcelona, Bilbao.

[3] GRANT, R.M. (2004): "Dirección Estratégica. Conceptos, técnicas y aplicaciones". Fourth edition. Thomson Civitas. Madrid.

[4] GRIMA TERRE, J. Y TENA MILLÁN, J. (1987): "Análisis y Formulación de Estrategia empresarial". Second edition. Hispano Europea S.A. Barcelona.

[5] JOHNSON, G., SCHOLES, K. Y WHITTINGTON, R. (2007):"Dirección Estratégica" Seventh edition. Pearson Educación, S.A. Madrid.

[6] MARTÍNEZ PEDRÓS, D., MILLA GUTIÉRREZ, A. (2005):"La Elaboración del Plan Estratégico y su Implantación a través del Cuadro de Mando Integral". First edition. Díaz de Santos.

[7] PORTER, M.E. (1990): "Ventaja competitiva. Creación y Sostenimiento de un Desempeño superior". Fifth edition. CECSA. Mexico.

[8] PORTER, M.E. (1991): "Estrategia competitiva. Técnicas para el Análisis de los Sectores Industriales y de la Competencia". Fourteenth edition. CECSA. Mexico.