THE CERAMIC INDUSTRIAL SECTOR: FORMULATING A COMPETITIVE STRATEGY. STRATEGIC GROUPS

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1. ABSTRACT

In the CERAMIC INDUSTRIAL SECTOR (abbreviated herein to CIS), growing competition in all geographical areas from both local manufacturers and large manufacturing corporations conditions customer demand for CIS company products and services in volume and price.

Moreover, as for all industrial sectors, the climate of competition multiplies through the dynamics of change and ever shorter business cycles. Therefore, it is imperative that the General Management of CIS companies develops the business by adhering to a pre-conceived system and does not allow itself ever to test products, models and marketing systems by simple trial and error.

In the Castellon CIS, no such rigorous and constant system is seen to exist in its methods of analysing industrial sectors. In companies that do develop a strategic plan (SP), it tends to be simply a sum of recipes picked up at technical conferences or from trade journals.

Strategy is not a question of bandied phrases such as: "*We have to be the best company in the industry*", "*quality is our raison d'être",* or even "*we seek to keep our customers satisfied*". They do not define the specific line of business in which the company intends to stand out above the rest to achieve a competitive edge over its competition.

For that reason, this paper seeks to press upon Senior Managers of CIS companies the serious need – for they will undoubtedly reap many benefits from doing so – of assuming and implementing a competitive strategy, with help from inside the sector, IN THE FORM OF A SERIOUS AND WELL-REASONED STRATEGIC FORMULATION and SP.

2. BUSINESS STRATEGY CONCEPT

In order to achieve positive financial results and continue to be a part of the CIS, one has to have an absolute knowledge of the sector and its competitors, and identify those business areas where one can get better results by being more efficient than competitors.

COMPETITIVE BUSINESS STRATEGY is precisely a question of determining those areas where the company can acquire a competitive edge, where it considers itself to be better than the competition and can thus assure its survival, and then **maintain and improve** that lead.

The strategy in itself is not the goal; the goal is its actual implementation in one's business performance: The development of a strategy must take into account the details of running the company on a daily basis, so that, in practice, formulation and implementation go together, and the strategy is continually reviewed and adjusted according to experience.

3. STRATEGIC GROUPS

There exist numerous companies in the SIC with varying interests and who compete on different grounds and ideas. Strategic groups are **the various sets of companies within the CIS that have a similar focus and approach in terms of their strategy**.

Companies will be greatly helped to identify their position vis-à-vis the competition and to develop and implement a strategic plan if they can accurately determine the features that define the strategic groups in the CIS, their trends on the market and the percentage of that market each one will have.

They are, therefore, an essential and useful tool for the company management to increase its chances of success when choosing its competitive position and so a large part of this paper is dedicated to strategic groups.

4. FORMULATING A COMPETITIVE STRATEGY

Obviously the best strategy depends on each organisation and its financial situation, its geographical region and country, its objectives and the expertise and quality of its management, its position in the sector, its production facilities and its sales force: i.e. on its actual position in the CIS.

Let us bring in a fictitious company, on which we apply the process leading to a competitive strategy and Strategic Plan (SP). It shall be sufficiently detailed to demonstrate the needs and benefits that may result from the Plan and shall entail the following stages:

1) Developing techniques for analysing the structure of the CIS and its competitors and, with its knowledge of the general and sector-specific environment, for assessing the role played by competitive forces (alternative products, competitors, customers, suppliers and newcomers) in the evolution of the CIS.
2) Deciding on the strategic groups for the sector, using all available information and consulting relevant yearbooks and trade journals to reach as well-reasoned

and complete a list as possible and to relate the company to those strategic groups.

3) Working out where the company's competitive edge (cost, differentiation, financing, management, ...) lies and how to maintain it. Then use SWOT analysis (Strengths, Weaknesses, Opportunities and Threats) as the tool with which General Management can make its strategic choices.

4) Drawing up an explicitly documented Strategic Plan (SP) which, with united criteria in all areas of the company, summarises its current positioning and structure and develops the chosen competitive strategy by setting out future positioning, objectives, allocation of resources and organisational structure.

5) Formulating a strategy for the company culminates in the effective implementation of the SP, i.e., introducing the organisational structure, defining action plans, fulfilling strategic objectives, and implementing a proper monitoring and control system.

5. EXAMPLE COMPANY

DFK is a family SME located in the ceramic industry in Castellón (Spain). It produces and distributes both wall and floor tiles. It currently uses red-firing, white-firing and porcelain tile bodies from external spray-dried powder plants, and has moved its model catalogue towards formats with unit surface area sizes between 0.15 and 0.5 m^2.

A joint stock company since its foundation over 30 years ago, DFK has both a domestic (20%) and export customer base, mainly to European markets (60%) and with smaller interests on the east coast of the USA (10%) and M.E.N.A. region (10%).

At present, it sells its production (70%) through retailers in Spain and in a few other European countries. The remaining customers (30%) are specialist companies distributing to construction professionals. For a number of models (20%), manufacturing is shared with other ceramic firms, who in turn also produce for DFK.

The company developed geometrically during the 1990s and had a healthy financial and production record up until 2007. Quite rightly, with such high turnovers, assuring production prevailed over creating a specialist management structure trained in business management.

A severe drop in sales occurred in 2008 as a result of the crisis that hit the entire sector. A strategy of survival was chosen, which meant drastically reducing volume while keeping the sales potential, which would enable it to overcome its excessive operating leverage and high production and administration resources.

Nowadays, free of financial burdens and in an improved market situation, it proposes to harness General Management and the Board of Directors' confidence in the future of the ceramic industry and formulate a new strategy that takes the company to a favourable competitive position and ensures its continuity.

Its production workshop and finished product warehouse, of which it is the exclusive owner, have sufficient size and utility service connections to produce up to 18,000 square metres of ceramic tiles per day, to provide indoor storage for up to 1,200,000 m^2, and to dispatch up to 25,000 m^2/day, 15% of which as loose boxes.

Its main processing equipment is modern but limited to a daily output rate of 12,000 m^2. A capital outlay of €2,000,000 is required in order to adapt to current criteria for quality and finishes and energy efficiency standards, which, to avoid further financial burden, is to be contributed by the partners.

Annual turnover with the existing equipment is €35 million, with a headcount of 115 people: 75 in Production, 15 in Warehouses, 10 in General Admin, and 15 in Sales.

6. SECTORIAL ENVIRONMENT ANALYSIS

6.1. GENERAL ENVIRONMENT ANALYSIS

General environment refers to anything that is beyond DFK's scope of action, the nature of which is becoming increasingly dynamic and affects all companies. PEST macro environment analysis considers the following factors:

POLITICAL-LEGAL: The employment situation is considered to remain within the confines of the current legal framework.

ECONOMIC: The world economy and domestic economic policy, despite certain difficulties in China's economy, enhance economic cycles with growth.

SOCIO-CULTURAL: The skills of available labour, the social structure and the patterns of consumption in Spain all transmit a feeling of stability.

TECHNOLOGICAL: Thermal technology and automatic management are evolving rapidly and are determining factors in factory design in all industrial sectors.

6.2. INDUSTRIAL SECTOR STRUCTURE

The intensity of competition within the CIS is substantial, due to access to the CIS being free with affordable entry barriers, most firms businesses not having bargaining power with their suppliers and customers because of their size, and rivalry being unbridled because, on a global scale, the numerous companies and products are all quite similar.

By acquiring ceramics firms distributed in areas of the world with higher potential earnings or growth, important financial corporations determine trends in the CIS without even being leaders in the sector with power to shape developments and their outcome.

6.3. SPECIFIC SECTORIAL ENVIRONMENT ANALYSIS

Consolidated growth of the CIS is confirmed as a result of the improved economic situation in Spain and increased global demand. This growth will continue as the use of ceramics linked to rising income levels in developing countries extends and their qualities compared to alternative products are better appreciated in traditional markets. These are the circumstances in which this analysis of the forces of competition in the CIS is carried out.

6.3.1. THREATS FROM NEWCOMERS

Industrial concerns and groups with a global outlook participate in the CIS, forming companies with intense capital requirements that overcome the difficulties of gaining access to distribution channels. However, they are larger than DFK and with their leading position in terms of costs do not directly compete with its products and customers.

6.3.2. INTENSITY OF RIVALRY AMONG EXISTING COMPETITORS

Globalization and the collapse of borders have strengthened competition enormously on both domestic and foreign markets. Groups with a significant share of the CIS market set up new plants or acquire companies struggling to re-launch or compete in the low-cost niche.

6.3.3. PRESSURE FROM ALTERNATIVE PRODUCTS

DFK and in general the entire CIS compete globally with other companies that produce alternative or substitute products (parquet, linoleum, *terrazzo*, natural stone, ...), which restricts potential returns by placing a cap on prices and on the use of ceramic products.

6.3.4. BUYERS' BARGAINING POWER

The turnover that DFK represents for its customers is a small fraction of their total business and with low costs, they can change suppliers. These buyers are powerful, have a lot of information about demand, market prices, costs, and so can push prices down while demanding higher quality and services.

6.3.5. SUPPLIERS' BARGAINING POWER

Suppliers who sell DFK essential inputs (GLAZES, COLOURS, CLAY, MACHINERY, ...) are strong companies for whom DFK is not a major customer. They exert constant pressure on DFK in an attempt to raise prices, an increase in costs that DFK cannot pass on in its prices.

6.4. STRATEGIC GROUPS

It is admissible to simplify the definition of strategic groups for the Spanish CIS since all the companies in it compete within the same product and market parameters. DFK can hardly use the business criteria of companies in remote geographical areas with very different size, ideas, origin and social, economic and cultural environments.

The following strategic groups are identified in the Spanish CIS, with a population of 80 firms with a turnover of more than 5 million Euros:

Group and Companies			Characteristics
GC	No.	%	
GC 1	1	0,01	Absolute differentiation in terms of quality, continuous effort in marketing, own distribution. **High turnover: > €100m.** Highly qualified management. Continuous investment in branding and service. Diversification relates to product ranges and other products.
GC 2	8	0,10	Seeks low costs and high economies of scale, backward vertical integration, co-operation in product. **High turnover: > €100m.** Domestic and export distribution through powerful specialist groups. Certain % of customer brand products. Great effort in low pricing policies. Experienced management. Continuous investment in production.
GC 3	16	0,20	Seeks low costs with certain differentiation in the product. **Moderate turnover: between €50m and €100m.** Domestic distribution to important retail outlets and exports through specialist groups. Fully amortised facilities. Certain % of customer brand goods. Co-operation in products.
GCE 4	21	0,26	Seeks low costs with low sales prices. **Moderate turnover: between €50m and €100m.** Domestic distribution to retailers and exports through groups specialising in construction. Fully amortised facilities. Certain % of customer brand goods. Co-operation in products and market alliances.
GE 5	24	0,30	Seeks low costs with certain amount of differentiation in product and service. **Low turnover: between €20m and €50m.** Domestic distribution to retailers and exports through specialist groups. Fully amortised facilities. High % of own brand goods. Certain co-operation in products and market alliances. Good reputation with its customers.
GE 6	8	0,10	Differentiation by segment of added value or restricted demand products, no distribution – **Low or very low turnover: between €5m and €20m.** Branding policy.
GE 7	2	0,03	No differentiation and no Brand. **Low or very low turnover: between €5m and €20m.** Originally family businesses that adhere to traditional Business Management methods with no specific strategic positioning. Its customers are generally other firms in the CIS.
Total	80	1,00	

To distinguish between GCs, size and resources were taken into account, i.e. not only their destination market but also the particular features of the companies in it. Within the companies in each GC, there may be variations in terms of technology and prices, although their markets, products and 'management' concepts are similar.

However, given the admittedly didactic nature of this research, the number of GCs has been simplified in order to transmit a clear and simple message that encourages managers to implement a rigorous strategic review of their companies.

6.4.1. DFK's SITUATION IN A STRATEGIC GROUP

In view of its manufacturing equipment and facilities, type of product and market, DFK is seen to fit into GC 5.

6.5. SWOT (and CAME) ANALYSIS

This paper employs qualitative and comparative analysis based on actual experience and knowledge of the CIS and on parameters describing the evolution and valuation of the sector.

COMPANY	MARKET
WEAKNESSES (Correct)	**THREATS (Adjust)**
Limited financial and credit resources	Technological changes in the sector (energy efficiency, versatility, quality,..)
Traditional strategy with no positioning	Newcomers
Under-developed value proposal	International competition in quality, product and prices
Scant purchasing power	Dynamic offer from competitors leads to significant changing costs
Scant selling power	Sector concentrated into powerful groups
Management with no specialist training	High percentage of suppliers are powerful enterprises
Company's production technology improvable	Customer base shifting towards large retail and wholesale groups
STRENGTHS (Maintain)	**OPPORTUNITIES (Exploit)**
Own polishing and edge-grinding equipment Owns buildings and machinery	Ceramics market worldwide and in EU shows promising annual gains (≈4 %)
Partners willing to undertake changes and invest to improve	Partial market alliances with companies in the CIS
Product quality good and well-renowned	Collaboration in specialist manufacturing projects with companies in the CIS
Experience and well-known Brand	Possibility of increasing output from current plant with the same fixed costs
Large number of retailers loyal to the brand	Differentiate the product better in terms of quality
Has its own distribution channels in some countries	Concentrate efforts on the domestic and European markets
Indoor warehouse with fast and highly efficient picking system	Seek customers with small orders and tight deadlines who are less sensitive to price

6.6. COMPETITIVE EDGE

For DFK, in an industry with great similarity in its products, materials and manufacturing technologies and markets that mainly focus on sale price, its **competitive edge** has traditionally been a question of differentiating the standard of quality it offers, renewing and expanding its product catalogue and providing the customer with fast and prompt delivery lead-times.

Obviously, these value-generating attributes are also held by certain competitors, so they should not strictly be referred to as a competitive advantage. However, DFK's differentiation, perceived as real by its customers, has been used by the company, together with its knowledge and solid position on the European market, to achieve higher selling prices.

7. STRATEGY FORMULATION

7.1. STRATEGIC ACTIONS

For DFK, who considers the General Environment to be sufficiently stable for its purposes, the chosen strategy is to remain in GC 5 and to improve its **competitive edge consisting of differentiating its product range and demand with its intimate knowledge of the customer**, which entails a re-organisation of its resources and capabilities in a well-coordinated fashion and a global orientation of all its decisions and actions, both in the present and in the future.

However, it also has to consider which customers it intends to satisfy, **selecting a particular segment it knows very well**, either because of their selling capability in the case of wholesalers, or because of their loyalty and particular market in the case of retailers, or, in the case of specifications writers, because they appreciate the design and style.

Thanks to the phenomenon of globalization, it is becoming increasingly difficult to compete on domestic and international markets and to maintain long-term results. One has to differentiate oneself even more from the competition, i.e., DFK has to offer **unique added-value products,** and pay special attention to ensure that such specialisation does not result in restrictions on the total volume produced.

On the basis of the study of the DFK value chain, the key is to withdraw deliberately from competing at price level and to strengthen the own assets that the company has accumulated as a result of its track record and which the competition can scarcely copy: **brand, quality, advertising and attending trade fairs, style, design and responsiveness**.

The actions to be taken to gain a strategic position **FOCUSED on differentiation** of its products and added value/specialisation for customers, in an attempt to become one of the most successful companies with a modest share of the market, can be summarized as:

7.1.1. INCREASE ADDED VALUE

Given that the products made in the CIS are undistinguishable or hard to differentiate, their added value must be increased:

- Encourage a verifiable improvement of quality, style and design.
- Provide greater sales service and engage in more stages (polishing, edge-grinding, finishing, ..).
- Offer coordinated accessory products (taps and fittings, *objets décor*, ..).
- Provide technical support on the use and installation, with the company's own team of specialist technicians (architects, decorators...).

7.1.2. SPECIALISE BY PRODUCT TYPE OR SEGMENT

The CIS is characterised by the large number of items in its product ranges. The adopted strategy means specializing in a very narrow group of products with high added value. (**STRATEGY FOCUS**).

7.1.3. SPECIALISE BY TYPE OF CUSTOMER AND TYPE OF ORDER

Specialise in orders for which the customer is less sensitive to price:

- Small-sized customers or with small annual volumes.
- Customers who appreciate the extra added value that can be provided with the product or service.
- Small orders with fast or special delivery.
- Complex and small-run orders.

7.1.4. FOCUS ON GEOGRAPHIC AREA

Cover a certain geographic area where sales focus and actions are concentrated as a means of achieving cost savings.

7.1.5. MAINTAIN ECONOMIES OF SCALE AND MINIMAL, LOW-COST FACILITIES

Economies of scale in manufacturing, distribution and service:

- The DFK manufacturing plant is reformed into strict production methods with fewer models and an increase in the size of production runs to achieve verifiable economies of scale.
- Business alliances/concentration to promote synergies by producing each model in the most efficient plant, joining warehousing systems and logistic assistance and concentrating customer technical equipment and services.

Competing with companies that could be included in the same STRATEGIC GROUP, overcoming low profits in the CIS, calls for:

- Maintaining minimal facilities without surpluses.
- Achieving lower indirect costs.
- Exerting strict costing control.

8. STRATEGIC PLAN

The Strategic Plan is to maintain a competitive position of differentiation with greater added value and specializing in types of customers, products and orders, in remote geographic areas and seeking economies of scale and cost reductions, without increasing production.

8.1. OBJECTIVE

Production: Keep annual output at 3.6 million sq. metres

Average selling price: Increase of 4 €/m^2 over the next SIX years and maintain that trend thereafter.

Average cost: Maximum acceptable increase over initial average cost = 2 €/m^2 in Year II.

- Provide the customer with:
- Good impression of value from DFK products.
- Interpretation of an atmosphere of comfort and style.
- Also highlight the technical quality of the product.
- Capacity to help customers to specify their tastes.
- Vocation to serve special orders.

8.2. AREAS AND ACTIONS

STRUCTURE: The current structure of DFK - functional with a General Management overseeing all three business areas: Sales, Administration and Production, should remain but some areas should be strengthened as explained in the table below:

GENERAL MANAGEMENT	OBJECTIVE
Direction	Draw up detailed documentation for the SP and transmit its requirements and targets to all departments in DFK. Inform the shareholder of the improved competitive edge and the other benefits it is expected to provide.
HR	Provide DFK with personnel that can meet the specifications of the Jobs set down in the SP.
Management	Put the SP and its monitoring and control procedures into practice through a Controller allocated to General Admin.
Finance	Activate the lines of finance required to apply the SP with no cash restrictions.

TECHNICAL	OBJECTIVE
R&D&I	Reporting directly into the General Manager, R&D&I is responsible for reducing the range of models to high added-value and/or aesthetically fashionable products, paying special attention to presentation. It will draw up the new product design protocol in accordance with the SP: a single body, limited number of formats and colours, textures, and finishes.
DESIGN	Will provide the technical design of the products within the technical capabilities of the main process equipment and will propose new items of equipment required to meet the demands made by new products.
FACTORY	Will produce the products to quality standards in accordance with the SP and will implement continuous improvement and renovation of those items of equipment needed to develop new products. They will also enhance the on-going quest to reduce operating costs.

SALES	OBJECTIVE
MARKETING	To strengthen long-term relations with customers by knowing their methods and their buyers with the aim of increasing the perceived value of DFK products so that they come to the conclusion that they receive more than they expect. Careful design of the retail environment. Enhance communications with very advanced IT systems and properly coordinated with written publicity and participation in high-level professional forums relating to the design of residential and commercial environments.
SALES CUSTOMER SERVICE	Increase staff qualifications and set up a high-level design application and decoration department for customers. Their skills will enable them to hold direct conversations with professional specifications writers in any EU country on technical issues related to ceramic products. Attentive staff, displaying an image of taste and high education, capable of winning customers' trust. Assume an increase in the share of picking sales and special orders.
LOGISTICS	Construct indoor industrial storage for all areas of the warehouse except the loading bays in order to minimise the loss of image caused by the deterioration of packaging and losses from broken boxes.
	Reduce picking time: Automate operations with special handling gear depending on the dispatch loading plan.
	Reduce loading times: Container loading bays in pits allows for one-level loading without the need for ramps or lifting platforms.
	Improve service in special orders: Increase resources to take on part of the supply management without the customer providing the means of transport.

ADMIN	OBJECTIVE
Control	Set up the position of "Controller" to assume responsibility for implementing the SP and for monitoring its progress, results and proposing amendments to the day to day business of the company and the CIS.

8.3. INVESTMENT AND PROFITABILITY ANALYSIS

Assuming that DFK's income statement is positive and that its balance sheet is healthy without financial costs, the SP forecasts cost increases over six years. These costs are compared to the increases expected in sales prices over the same period. The difference shows the funding requirements for the implementation of the SP and the predictable outcome.

The figures shown are merely indicative and in the first year include the costs of developing the SP in detail and an assessment of its implications per department. The following years are estimates made as a teaching exercise. An additional line has been added to the TECHNICAL area in the MANUFACTURING department. It is intended to weigh the higher cost incurred by increasing product quality so that it is perceived by the customer.

STRATEGIC AREA		COSTS IN MILLION EURO PER YEAR					
AREAS	DEPARTMENT	I	II	III	IV	V	VI
DIRECTION	Direction	0.1	0.05	0.05	0.05	0.05	0.05
	HR	0.4	0.05	0.05	0.05	0.05	0.05
	Management	0.05	0.05	0.05	0.05	0.05	0.05
	Finance	0.05	0.05	0.05	0.05	0.05	0.05
SALES	Marketing	0.1	1.0	1.0	1.0	1.0	1.0
	Sales	0.05	1.0	1.0	1.0	1.0	1.0
	Logistics	2	0.2	0.05	0.05	0.05	0.05
TECHNICAL	R&D&I	0.05	1.2	1.0	1.0	1.0	1.0
	Design	0.05	1.2	1.0	1.0	1.0	1.0
	Factory	0.05	2.0	0.5	0.5	0.5	0.5
	Costing + Quality	0	0.5	0.5	0.5	0.5	0.5
COST INCREASES M€/yr		38,00	37,00	39,00	39,00	39,00	39,00
Production m^2/yr	Δ in sales €/m^2	0	0.8	1.7	2.7	3.8	5
3,600,000	Δ in sales M€/yr	0	2.88	6.12	9.72	13.8	18
Variation in Δ in costs M€/yr		-38,00	-4.42	0.87	4.47	8.43	12.75
RESULT AFTER SIX YEARS : Million €							19.2

8.4. CONTROLS (M: Monthly. Q: Quarterly. A: Annual)

Nº	Area	Control or Report	Frequency		
			M	T	A
1	Direction	SP tracking and risk reports		X	X
2	Controller	Customer perception of DFK		X	
3	Controller	Income Statement and P&L Account		X	
4	Controller	SP implementation report		X	X
5	Controller	Reduction of products in catalogue report		X	
6	Controller	Increase in perceived differentiation		X	
7	Sales	Number and average size of orders delivered	X		
8	Sales	Average distance of order delivery	X		
9	Sales	Customer order centre of gravity (distance/size)	X		
10	Sales	Average increase in sales price		X	
11	Sales	Time devoted to design and customer support service		X	
12	Sales	Sales of supplementary products		X	
13	Logistics	Finished Goods in Warehouse report and Pareto chart	X		
14	Logistics	Percentage of picking – no. of orders and average	X		
15	Logistics	Average size of shipment loads	X		
16	Admin	Sales report and Pareto chart		X	
17	Admin	Increased turnover report		X	
18	Admin	Cost reduction report		X	
19	Production	Production report: average number and size of production series	X		
20	Production	Pareto chart of production series	X		