

An industrial district around a mining resource: the case of marble of Macael in Almería

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ABSTRACT: Marble quarries in Macael have been exploited since ancient times but its complex industrial district had to wait till the fifties to emerge. This industrial district includes extraction, processing and marketing activities. In the 1980s some development programmes were designed in order to modernize and boost the marble sector. Since then, it has become an international reference for ornamental stones. The sector has undergone a great transformation: from being a mining agglomeration to become an industrial district. This shift has provided the district with a great dynamism and resilience. Moreover, its competition position has considerably changed. It used to be based on comparative advantages but nowadays it is based on competitive advantages. In its heart a nodal enterprise Cosentino has emerged, which has become an international leader on a global scale.

JEL Classification: L72; R30; R58.

Keywords: marble, Almería, local development policy, industrial district, crisis.

Un distrito industrial alrededor de un recurso minero: el caso del mármol de Macael en Almería

RESUMEN: Las canteras de mármol de Macael han sido explotadas desde la antigüedad, pero no es hasta mediados del siglo pasado cuando comienza a formarse un complejo industrial que engloba a la extracción, la transformación y la comercialización. En los años ochenta del siglo pasado se llevaron a cabo varios planes de desarrollo local para modernizar e impulsar este sector convirtiéndolo en un referente internacional en piedras ornamentales. El sector ha sufrido una gran transformación en su configuración pasando de ser una aglomeración minera a un distrito industrial, lo que le ha dotado de un gran dinamismo y resiliencia. También ha cambiado su posición competitiva que ha pasado de estar basada en ventajas

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comparativas a ventajas competitivas. Y en su interior ha surgido una empresa nodal (Cosentino) que se ha convertido en una multinacional líder a nivel mundial.

Clasificación JEL: L72; R30; R58.

Palabras clave: mármol; Almería; política de desarrollo local; distrito industrial, crisis.

1. Introduction

Almería has become a benchmark for the marble sector in Spain and internationally. According to the data from the Mining Statistics in 2013, 41 out of the 85 Spanish marble quarries were located in the province of Almería (48.2%), from which 921,609 tons were extracted (44% of the total marble in Spain). Furthermore, Almería is considered the most important marble reserve in Spain in both senses: quantity and quality. Most firms linked to the ornamental stone concentrate around the «Marble County» (Comarca del Mármol), a region which consists of five municipalities (Macael, Olula del Río, Fines, Cantoria and Purchena) and spreads on a 228 km² surface. Marble quarries in Macael have been exploited since ancient times but it was in the eighties when a radical change regarding its extraction, processing and marketing processes took place. It was then when the marble industrial district emerged and was characterised with a great dynamism and resilience.

The marble industrial district in Macael represents a completely new and relevant case study. Thus, when economic activities around mining are studied, only few researchers use the theoretical framework of industrial district. Alfred Marshall (1920) had already considered among the various origins of localized industries the existence of mines and quarries in the neighbourhood. Based on the approaches given by scholars devoted to the study of Italian industrial districts (Becattini, 2004), helpful analysing tools can be used in order to characterise our current case. We can consider the industrial district as a unit of analysis instead of the sector concept. Apart from those external economies already depicted by Marshall —contextual knowledge, auxiliary industries and services, and specialized labour market— further external economies can be studied like small firms dominance, the presence of an institutional and cultural environment embedded in a locality, and flexibility. Regarding the firm dimension, we do not have necessarily to focus on the analysis of small firms. It is crucial to study the added value generating chain, especially when elaboration and marketing strategies are incorporated to stone extraction processes. If we want to analyse the role of the supporting policies undertaken by the Administration it is unavoidable to take into account the access to nearly-public goods —training and infrastructure, among others. It is also attempted to search for the reasons explaining the district competitive advantages through the Competitiveness Diamond. The role played by the firms' strategies is also discussed. Schumpeter's contribution known as «creative response» helps extraordinarily understand the emergence of a multinational company within the district.

Figure 1. Marble County in Almería

Source: *enciclopedia.us.es* and own elaboration

Although we can find many studies on industrial districts around natural resources (mining), only few analyze the factors explaining its dynamics. However, it is necessary to give evidences which explain the disappearing of most industrial districts and the survival of a few, like the Marble case in Macael. The marble industrial district has a long history and for this reason the study of its dynamics is necessary and appropriate. This approach differs from the current general context where most research works analyse districts from a static point of view (Wang *et al.*, 2014).

We also integrate into the analysis entrepreneurial aspects. Firms' heterogeneity within a district is usually ignored but they show different abilities, objectives and strategies (Crespo, 2014). We consider necessary to introduce the analysis of firm strategies and capabilities in a district to understand its dynamics (Belussi and Sedita, 2009), especially if the research focuses on the different actuation lines followed by the firms in order to face up the crisis, as it is the case. Furthermore, exploring the emergence of a multinational company within the district enriches this recent research line (Sedita *et al.*, 2013).

This paper examines the configuration and dynamics followed by the marble industrial district in Macael. The paper is organised as follows. After this introduction, the coming section shows the long history trajectory of the marble quarries in Macael. The third section reviews the role of the Public Administration in the mod-

ernisation and fostering of the marble activities in the County, as well as in the configuration of the marble industrial district. The fourth section deals with the industrial district dynamics since the 1980s; main structure changes are then highlighted. In the fifth section, the crisis impact on the district and the strategies to exist the crisis implemented by the district firms are pointed out. Finally, the main conclusions of this study are drawn.

2. A long historical background

In the Macael County, marble extraction has been practiced for centuries due to the availability of a high quality resource in the region. But this activity has also been discontinuous along the years according to the needs at a given time. Marble from Macael has drawn builders' attention since ancient times but it was in the roman time when its use acquired a bigger prosperity. Arabs fostered the industrial activity from the 10th to the 15th century. Although the marble demand depends on the construction needs, its extraction has not ceased and it was used in monasteries, cathedrals and monuments during the 16th, 17th and 18th centuries (Carretero Gómez, 1997).

A decisive feature, which will play a relevant role in the future district configuration, is that marble quarries were «communal properties for all inhabitants». This is a key factor that explains the ancient fight of the Macael population to defend the quarries property against individual interests and Administration acts. It also explains its unique extraction system: first as a communal good and then as a good under municipal management. The particular system of land property and extraction licences made that marble extraction was concentrated in inhabitants' hands. However, Macael population had limited finance resources and were scarcely trained as entrepreneurs. Along the time many family owned enterprises were set up to exploit quarries with a low degree of mechanisation. Nevertheless, this fact was decisive to preserve quarries and avoid over-exploitation. These are the foundations for the marble industrial district based basically on small and medium enterprises.

Until the early 20th century, marble exploitation and elaboration was quite rudimentary. For instance, the 25 sawmills in the County only worked in winter. In this season they could profit from the waterfalls of the old mills to produce boards from the extracted marble blocks. The first lorries, which replaced old carts to transport marble in the site, were used in 1950; in 1955 petrol compressors were introduced in the quarries; and the saw electrification allowed in 1965 the use of a new generation of marble extraction machines.

Despite the above-mentioned improvements, the sector underwent a deep crisis in the eighties as a consequence of its important structure deficiencies. Regarding the extraction system, the old technified small quarries were not able to rationally extract the product so that the benefit percentage was reduced. Furthermore, the small-holdings under-used machinery, the work in the quarries was often hindered. All this meant higher exploitation costs. Regarding marble transformation, the poorly equipped firms were not able to produce a well-finished product. Their small dimen-

sions made not possible to cope with bigger jobs and firms could not collaborate in these cases since the product was not homogeneous. With a low quality product, they could not introduce an aggressive marketing campaign in foreign markets. As far marketing was concerned, it showed notable deficiencies. The buyers were forced to go to the Marble County in order to purchase the product. In many cases, the product was sold in rough or semi-processed. Hence most added values were lost (Carretero Gómez, 1995).

Even though so many deficiencies were present in the marble extraction, elaboration and marketing, an ever-growing number of enterprises agglomerated around the stone. In 1983 there were 241 firms which employed 1.708 workers. Most enterprises were small and medium ones (83% of the firms had under 11 employees) (Table 1).

Table 1. Firms classification in the Marble County according to activity and size in 1983

Activity	Extraction		Extraction with workshop		Transformation		Crafts		By-products		Services		Total	
	N.	workers	N.	workers	N.	workers	N.	workers	N.	workers	N.	workers	N.	workers
1 to 5	31	87	9	39	45	145	32	122	5	22	38	81	160	496
6 to 10	5	40	13	110	9	68	5	32	3	27	5	35	40	312
11 to 15	2	24	10	138	3	44	1	12	1	12	1	12	18	242
16 to 20	—	—	1	20	2	37	1	18	—	—	1	17	5	92
21 to 30	—	—	7	173	1	9	—	—	—	—	—	—	8	182
31 to 40	1	33	4	143	—	—	—	—	—	—	1	35	6	211
Over 40	—	—	3	127	1	46	—	—	—	—	—	—	4	173
Total	39	184	47	750	61	349	39	184	9	61	46	180	241	1.708

Source: Asociación de Empresarios del Mármol de Almería (1984) and own compilation.

3. Public Administration Stimulus

The implementation of the *Global Actuation Plan for the Marble Region of Macael* in 1983 supposed an inflection point for the sector evolution which was undergoing a very critical situation at that time. The Plan was promoted at its beginnings by the IPIA (Instituto de Promoción Industrial de Andalucía - Institute for Industrial Promotion in Andalusia) and during its implementation (1983-1992) many old problems, dragging the sector, were solved and new approaches for the difficult situation were proposed (Barzelay and O’Kean, 1989). Hence the new industrial structure fostered by this Plan led to a mechanization improvement of the quarries and elaboration factories, bigger marble blocks could be extracted and a higher quality in the final product was achieved. Regarding extraction, the main programme contribution

was the division of the quarry field in «units of exploitation» made up of several quarries with similar features. Thanks to this measure, technical equipment could be used rationally, continuity in marble supply was assured and a higher security in the exploitations was introduced. Such improvements played an essential role in the reduction of extraction costs, increase of the reservoir life and productivity. In the product transformation phase, the new industrial structure served as foundations to rationalise the activity, resize firms and update technologies. Many non-competitive small firms devoted to construction materials shifted to the craftsmanship sector. A further major contribution of the Plan was its capacity to agglutinate all involved agents, wills were brought together to overcome obstacles and reach joint goals (Barzelay, 1991).

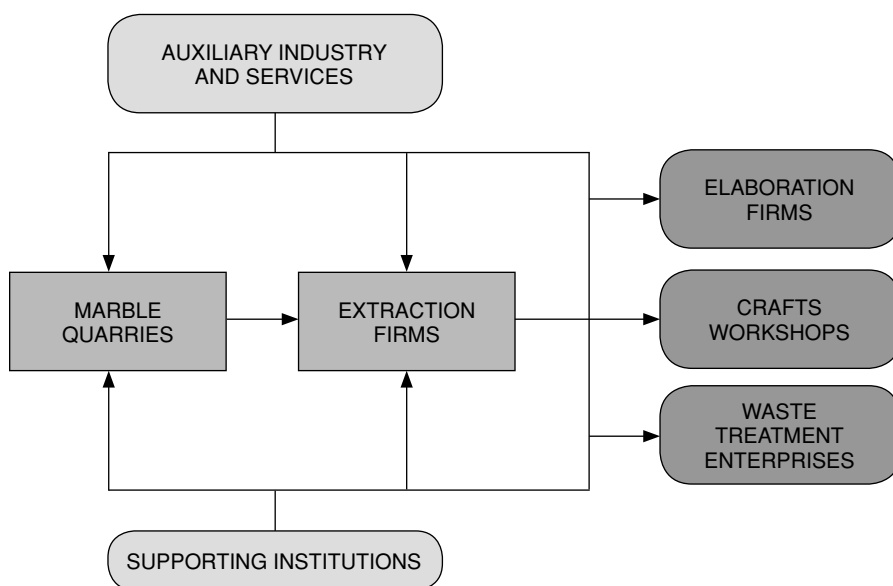
Later on, with the aim of fostering the sector after the economic recession during the early nineties, the APEM (Businessmen Association of Marble in Almería) introduced in 1996 the *Strategic Plan for Macael*, under the frame of *Integrated Actions to Promote Local Productive Systems* launched by the IFA (Instituto de Fomento de Andalucía), the regional development agency of Andalusia government. The previous boosting initiatives in some sectors and territories were to be revitalised. The Plan aimed at reforming the County into «an international workshop for the research, applied arts and supply of the natural stone»; at the same time, it pursued the competitiveness improvement of the enterprise tissue in order to position it at the top range of national and international markets (Carretero Gómez, 2004).

The Strategic Plan brought its predecessor Actuation Plan a step further and assured continuity. The latter had an integration character and had consequences on the entire sector: infrastructure, firm equipment, productive efficiency, quality, product design and development, internal articulation of the production tissue, marketing, training, etc. Moreover, as the previous Plan, it was implemented in a favourable economic period (1996-2000). Thanks to the measures introduced by the Strategic Plan and its goal of making the County an elaboration centre, the sector took a huge step forward in introducing added value to the regional product and to other products exported from different national and international quarries. In addition, the complete technical dependency of the 1980s was overcome and the region started to produce technologies which met local needs. The by-products firms were strengthened up and helped reduce the environmental impact of the extraction activities. A huge effort to diversify markets was undertaken and it was expected to improve sales in international markets, which only represented a 10% at that time (Carretero Gómez and Aznar Sánchez, 2012).

A further decisive event in Macael, in 2002, was the inauguration of the *Centro Tecnológico Andaluz de la Piedra*, (Andalusia Technology Centre for Stone). It was set up to boost quality, promote research and development projects, offer entrepreneurs quick information about activities related to the natural stone and enable the technology transfer among the sector enterprises. It also promotes firm cooperation, market analysis and studies (Carretero Gómez, 2004). In 2006 the *Fundación Marca Macael* (Foundation Marca Macael) was grounded as a platform for marketing campaigns of the brandname «Marbles from Macael» and natural stones.

Even though many features of an industrial district were already present previous to the Public intervention (proximity, identification between community and enterprises, social relationships, etc.), there is no doubt that the Administration Action contributed to the agglomeration of firms linked to marble extraction, elaboration and marketing. It can be considered that this agglomeration became an industrial district after such interventions. The marble industrial district of Macael already appeared in the map of the Spanish industrial districts of 2001 elaborated by Boix and Galletto (2006). The central core of the marble industrial district integrates activities linked to extraction and product transformation (elaboration firms, crafts workshops and waste treatment enterprises). Around this core, a great variety of enterprises and auxiliary industries is to be found, as well as institutions devoted to its development (Figure 2).

Figure 2. The marble industrial district in Macael



Source: Personal compilation.

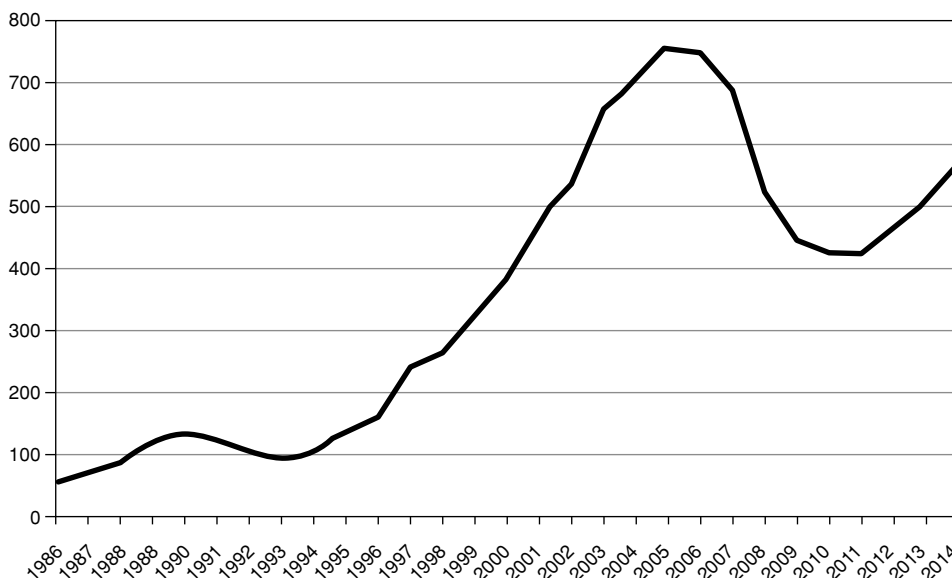
The industrial district is mainly made up of family owned small enterprises, constituted as limited liability companies. However, the district has acquired along the time a higher level of diversification and complexity. Extraction activities have a lower weight compared to elaboration and transformation ones. In the elaboration process, the contribution of crafts firms stands out since they generate a great added value. Furthermore, industrial craftsmanship has become more important than the traditional ones. This trend has provoked a higher level of technification and the employment of highly qualified workers. All this generates a relevant competitive advantage. In the last years, new enterprises devoted to waste treatment have emerged,

as well as marble by-products processing firms which obtain crushed, micronized materials and lime. Among the enterprises and industries providing auxiliary services, some of them are specialised on the manufacturing of machinery for marble extraction and elaboration or on the supply of compressed air to the quarries. Other enterprises belong to different industrial sectors but have adapted themselves to the marble district needs and particularities: industrial cleaning of sewage from marble cutting, repair of machines and industrial vehicles, packages, supplies for productive firms, computing and communication, consultancy, etc. Institutions supporting the development of the district activities are very heterogeneous and work on different fields: assuring sector interests (Businessmen Association of Marble in Andalusia), promoting training and research (Andalusia Technology Center for Stone and Andalusia Marble Scholl), dissemination of product expertise (Foundation Marca Macael), etc.

4. Industrial District Dynamics

Since the Public intervention stimulus took place within the marble industrial district in Macael, this began to experience continuous positive dynamics till the crisis in 2008 (Figure 3). In 1993 sales accounted for 96 million euros and in 2005 they increased up to its maximum, 761 million. In 1994 there were 3.200 employees and the cipher grew up to 5.959 workers in 2007, reaching its maximum.

Figure 3. Evolution of annual sales of the marble sector in Almería (in million euros)



Source: Asociación de Empresarios del Mármol de Andalucía (several years).

Besides this notable quantitative increase, deep qualitative changes took also place with a considerable new configuration of the industrial district. The most important step forward was to become an elaboration centre where almost all extracted marble was processed, as well as other blocks coming from foreign quarries. Formerly only a small proportion of the extracted marble was transformed in Almería. Thanks to this qualitative change, the district acquired almost the entire added value from the extracted stones in Almería and began to provide added value to stones coming from external quarries. This practice originated a significant increase of the importation of marble blocks: in 1998 importations accounted for 4.368 tons and in 2007, 58.641 tons. They come mainly from Turkey, followed with considerable distance by Italy and Portugal; further origins are Egypt and Iran (Carretero Gómez and Aznar Sánchez, 2012). This transformation was essential for the industrial district dynamics since the reservoir life has been extended and, at the same time, the dependency on local stone has been reduced. It has proved to be an important competitive advantage based on the availability of highly qualified and specialised workforce.

A further crucial event in the district dynamics was the evolution of the family owned enterprise Cosentino into a multinational company. The family Cosentino began to work with marble in the forties, the firm was mainly focused on the quarry exploitation and the elaboration of basic marbles. The second generation grounded in 1979 the enterprise called «Mármoles Cosentino, S.A.» with 17 employees at its beginnings. At first, the history of this enterprise is similar to the one of many others in the County. However, the brothers Martínez-Cosentino became aware that if they wanted to increase its business volume, their activities should go beyond mere local marble extraction and transformation. They considered very risky to depend on a unique local natural resource and address sales only to the Spanish construction sector, which was and is very instable (Martínez-Cosentino, 2010). Taking into account all these aspects, they decided to launch a strategy of differentiation and international expansion based on research and innovation.

Under this context, the enterprise addressed its efforts during the eighties to the search for new material and market segments. As a consequence of these guidelines, in 1986 a new product known as «Marmolstone» was launched to the market. Nevertheless, the many quality problems made the project fail. The enterprise was about to disappear. However, research activities did not cease and in 1990 Cosentino developed a new product called «Silestone». The new produced material brought together in a unique surface the best features of a natural stone with outstanding physic and mechanic characteristics completely new in the market. Moreover, the enterprise focused on new market niches apart from the traditional ones: its specific application as kitchen worktop. The strategy proved to be a real success and placed the enterprise as the international leader in this market segment.

Constancy in research and innovation has allowed the enterprise to develop new materials which have become international references within their markets. In order to face up the competition of manufacturers from other countries who offer similar products but at lower prices, in 2004 the «antibacterial Silestone» was put on the market with relevant differentiating improvements. With this innovation, Cosentino

placed into the market the unique quartz surface with antibacterial protection. This surface was the most secure and hygienic within the kitchen worktop market. Furthermore, this surface could be introduced in such exclusive segments as hotels and catering establishments, hospitals and laboratories.

The second driver for growth was the willingness to acquire international presence. The creation of Silestone led the enterprise to a regular exporting activity to several markets and the company step into internationalisation. The availability of a differentiated product with the highest quality level and a secure service were the foundations for the internationalisation process. At the early nineties, the enterprise started to sign up exclusivity agreements with suppliers to introduce Silestone in several markets (United States, Canada, Israel, Italy, Belgium, South Korea, Singapore, etc.).

In 1997 a determining step for the enterprise internationalisation was taken: the constitution of a subsidiary company in the United States with a local partner. Cosentino was in charge of manufacturing the quartz surfaces, whereas its local partner was responsible for the exclusive distribution of Cosentino products in the United States, Canada, Mexico and Puerto Rico. This subsidiary company opened up the distribution channels to the most important kitchen market in the United States, controlled by two big chains (Home Depot y Lowe's). Cosentino made a great inversion in promotion and publicity to generate a brandname image among end clients. The Silestone kitchen worktop experienced a huge success and sales increased dramatically (Martínez Mendiara, 2012). In 2010 Cosentino acquired the whole share capital and the full incorporation of the subsidiary company into the Group structure took place.

From this experience on, Cosentino followed the same patterns in its internationalisation process. It established trading contacts with the desired markets through the participation at specialised international trade fairs and signed exclusive distribution agreements with local partners. When regularity of sales in those markets was reached, a trading subsidiary company was grounded and headed by an expert in the specific market. Cosentino offered shares to its local partners but it always kept over 50% of the company shares with the aim at implementing its control policy over distribution. If business volume increases enough, production centres and transformation workshops are set up in those countries. Cosentino offers there its knowhow and designs training plans for employees. Regarding management and marketing, the subsidiary company is quite autonomous but positive results are always required (Llano Irusta, 2008). This flexible model of trading organization enables a quick and systematic adaptation to the continuous market changes and to its particularities. Within each market, the preferred products and the distribution channels may vary greatly. Following this concept, Cosentino increased its trading infrastructure. Nowadays it controls over seventy suppliers all over the world and owns 15 subsidiary companies (Aznar Sánchez, Carretero Gómez and Velasco Muñoz, 2015).

Its differentiation and internationalization strategy was a success from its beginnings. Since 1990, Cosentino grew uninterruptedly. Sales have dramatically increased: in 1990 they accounted for 10 million euros and in 2000, 70 million; in

2010, 305 million and in 2014, 560 million euros. The number of employees has also increased from 200 in 1990; to 630 in 2000; 1.950 in 2010 and 2.645 employees in 2014. This dynamic has made Cosentino gain relevance within the marble industrial district; it has become the leader and nodal company within the industrial district. Ciphers are overwhelming; in 2013 its exploitation income and number of employees represented over the 90% of the district firms (table 2).

Table 2. Ranking of enterprises linked to ornamental stones in the Marble County (2013)

<i>Enterprise</i>	<i>Exploitation incomes (thousand euros)</i>	<i>Employees</i>
Cosentino	267.817	1.145
Cuellar Arquitectura de Mármol	6.032	40
Mármoles Camar	2.113	29
Mármoles Cosaga	1.402	22
Artesanos del Mármol	824	20
Mármoles Naturales Macael	483	15
Mármoles Arriaga Cruz	809	14
Carmona Mármoles	551	14
Antonio Carmona	308	14
Mármoles la Viña	1.230	12
Mármoles Pérez García	733	12
Mármoles Antonio el de Pura	3.501	10
Mármoles Sotomar	781	10
Rest (36 enterprises)	8.075	110
Total	294.659	1.467

Source: SABI. Data from enterprises with information at the database in 2013.

5. Crisis-response strategies of the industrial district

The deep international economic crisis and the falling of domestic demand due to the decline of the Spanish construction sector in 2008 provoked the most important regression of the marble industrial district in recent times. Between 2005 and 2011, sales decreased 44.2%, ciphers went from 761.2 to 425.1 million euros. Impact on employment was also notable, between 2007 and 2012 the direct employed-district workforce was reduced to 50%, from 5,959 to 2,941 employees respectively. The number of enterprises have been drastically reduced to almost its 50%, in 2007 there were 307 and in 2014, 168. The crisis has directly impacted on extraction firms and

on those small and medium enterprises which supplied domestic market. Over 60% of them have disappeared due to lack of productive efficiency and financial capacity to face up non-payments and debts (Escuela del Mármol de Andalucía, 2013).

The district enterprises are following different actuation lines to face up this situation. The actions taken on the marble extraction and elaboration field have started to improve their operative efficiency. The productive technology has been optimised in order to offer a quick service of high quality. Cost control has also been strengthened up. A further actuation line has been the diversification and empowerment of auxiliary production (industrial craftsmanship, stone crushing and micronized minerals), it has been re-oriented to new market niches. A new product differentiation strategy has been launched, as well as the specialisation on high quality exclusive products. These new products have a considerable added value and are directed to design and decoration businesses. Hence, promotion campaigns addressed to architects and designers have been carried out since they can prescribe the product use. The participation at trading specialised fairs has been reinforced, as well as inverse trading missions. A new strategy based on the brandname «Mármol Blanco de Macael» (White Marble from Macael) has been programmed. The district also aims at achieving the designation of origin of the raw material (Escuela del Mármol de Andalucía, 2013).

The main strategy to increase sales and balance the decline of domestic demand has been a strong internationalization process. The most frequent and successful formula is the search for a local dealer in the target market. A contract of exclusivity is signed up to assure the distribution of products from the district enterprises. In other cases, the followed formula is the implantation of a trading agent in the target country (Analistas Económicos de Andalucía, 2013). A further successful strategy in international markets is offering an integral service, which goes beyond the mere product sale. In order to meet such requirements, new consortia have been set up to offer a turnkey service to end clients. It includes assessment, manufacturing, elaboration, installation and the after sale customer service.

The internationalization strategy of the district has been very successful. In 2005 exports accounted for 137.9 million euros, and in 2014 they increased up to 303.4, its historical maximum. Sales on foreign markets went from 18.1% of total sales in 2005 to 53.1% in 2014. A market diversification has also been experienced. In 2009 the main client was the United States but in last years it is Russia. Other countries like Germany, Brazil and Saudi Arabia are becoming also relevant clients of the district (Analistas Económicos de Andalucía, 2013).

Enterprise cooperation should be underlined as a qualitative aspect in this internationalisation strategy. In the district there was already a widespread cooperation culture, very successful in the fields of supplies and by-product treatment. Currently, cooperation is taking place through small and medium enterprises' alliances in order to meet certain project requirements, subcontract other enterprises, meet certain product demands or produce some parts. These cooperation relationships require a clearer division of work and enable specialisation, so that subcontracting enterprises

can improve their competitiveness and productivity. Moreover, they can cope with big projects and place themselves at international markets (Aznar Sánchez, Carretero Gómez y Velasco Muñoz, 2015).

A further feature to be mentioned regarding district dynamics is the emergence of several driving enterprises with outstanding leadership skills. On the one hand, we can find medium productive enterprises devoted to marble elaboration, which have obtained a relevant advantage thanks to its distribution channel. Most of them own quarries, many of which are also abroad, so that they can purchase raw material at a good price and considerable supply availability. They have a strong production capacity, a sophisticated production system, an outstanding logistic capacity and own stores in different regions. They are developing a brandname policy together with important communication strategies. On the other hand, we can find the group of exporting craftsmanship made up by enterprises which followed a product differentiation strategy and reached new market niches. They produce mainly industrial crafts from stone. Some of these enterprises carry out integral projects. They combine crafts and industrially elaborated products and they usually outsource the manufacturing of processed material. These driving enterprises have experienced a great development in a short period of time and they are already over ten (Agencia de Innovación y Desarrollo de Andalucía, 2014). The evolution of these driving enterprises will be decisive for the district future due to their relevant dragging effects and internal dynamization.

During the crisis Cosentino has kept a positive evolution. Between 2005 and 2010 sales increased 55%, they went from 170 to 305 million. Regarding employment, it also increased its cipher 35%, from 980 to 1,950 employees respectively. This positive behaviour in a general context of crisis is the result of its constant strategy of innovation and internationalization. The Group continued to introduce new materials to its product portfolio (Eco, Sensa, Prexury, etc.) but the most valuable is the one known as «Dekton». Its launching into the market took place in 2013 and the company invested 128 million euros in its production. Dekton is an innovative ultra-compact surface with better technical behaviour than Silestone. It is made up of inorganic raw materials. Its features make it a suitable material to revolutionise the international architecture and decoration world, the new market segment on which Cosentino focuses. In fact, Dekton has allowed the Group to increase its activity in the architecture and design field, as well as strengthen its position in fields like facades and outdoor applications. Dekton is the third Cosentino product in terms of turnover.

In 2008 a shift in the internationalisation policy took place. The company was aware that to capture markets and create the highest added value possible, it had to participate in the last chain link as well. It has to reach the final consumer (Martínez-Cosentino, 2008). For this purpose, it developed a new trading model based on its stores which were labelled «Cosentino Centres». They were no longer mere storage places for marble-workers, they started to be the place where new clients (architects, designers, kitchen and bathroom furniture sellers, installers, etc.) gathered. These Centres founded an integrated organization unit for delivery, exhi-

bition and sales. They were responsible for the market development and service of a territory. This model presents some advantages. The costs of the value chain were reduced since scale economies were achieved thanks to the existing material distribution and promotion channel. Moreover, a better service is offered to its users and real needs of the market can be better understood (Martínez Mendiara, 2012). The Centres act also as training and updating institutions for different collectives. Such business model has worked really well and the company started to widespread its Centres. It has nowadays 94 Centres around the world. In 2013 the Group took a step forward with the creation of the so-called «Cosentino City». An exhibition site located in the town centre of big cities like Sydney, Singapore or New York. They have been specially designed to welcome architects and designers.

The differentiation and internationalization strategy followed by Cosentino during last years has also been very successful. Currently, Cosentino Group is the international leader in quartz surfaces and the biggest enterprise in the sector of ornamental stones. It has seven manufacturing sites (six in Spain —Almería— and one in Brazil), 15 bathroom and kitchen worktop elaboration sites (14 in The United States and one in Almería), an intelligent logistic platform in Spain, two dealing hubs in USA and over 90 Cosentino Centres all over the world. Over 90% of the Group turnover comes from abroad —560 million euros in 2014—. The Group owns subsidiary companies in 15 countries (USA, Holland, Belgium, Austria, Ireland, United Kingdom, Germany, Sweden, Portugal, Italy, Switzerland, France, Brazil, Mexico and Australia) and work directly with employees, producing and trading agents in 29 countries of the five continents. It sells products in over eighty countries.

It should be highlighted that even though it is now a multination company, headquarters are still located in the district, where the industrial Park is to be found, as well as its production, administration and logistic centre from which the whole international trading system is monitored. The main following manufacturing sites are located in the district: the three manufacturing plans for Silestone and Eco by Silestone, one for Cosentino marbles, a modern manufacturing centre of kitchen worktops and a producing plant for special materials and the generation of physical samples. The new manufacturing plant of Dekton and the intelligent logistic platform are also located in the district.

6. Conclusions

Marble quarries in Macael have been exploited since ancient times and are still active. One of the key reasons that explain the continuity of this economic activity is that quarries were communal properties until the 19th century, when they started to be considered own properties under municipal management. This feature made the district to be based on small family owned firms from its origins. A recent key factor, that has contributed to foster district activities, has been the configuration of a marble industrial district embracing marble extraction, elaboration and trading.

In the 1980s the stimulus given by the Public Administration was decisive to implement some local development actions which improved the activity competitiveness and brought the district into a growing phase. Moreover, some of the development measures contributed to a shift in its competitive position: from being based on comparative advantages (availability of an unique natural resource) to competitive advantages (research and innovation, qualified and specialised workforce, trading channels, marketing, etc.). The shift from extraction activities to a transformation place of own and foreign raw materials let the district reduce its dependency on local raw material and increase added value.

Furthermore, Public intervention allowed the evolution from a mining agglomeration to an industrial district with great dynamism and resilience. And when the crisis in 2008 hit the sector, it could be faced up thanks to several response strategies, many of which are based on enterprise cooperation. A further outstanding fact within the district has been the adopted differentiation and internationalisation strategy based on research and innovation. They were carried out in the eighties by the Cosentino company, an international leader within the natural stone sector. Hence Cosentino has gained relevance within the marble industrial district in Macael and has become the driving company within it.

Two key aspects impacted decisively on the configuration of the industrial district. On the one hand, Cosentino's behaviour within the district. The enterprise's aim at keeping its main activities and its headquarters in the district territory had a very positive connotation. Furthermore, this company supports and collaborates with other district firms, especially financing some activities and in the trading field. It participates at educational and socio-cultural projects, funds grants, etc. Nevertheless, externalities of the industrial district have been seriously affected by the presence of this leader and nodal company (expertise transfer, availability of highly qualified workforce, suppliers' presence, etc.). It is also interesting to underline that small and medium size enterprises are dynamising the district, some of them have become driving enterprises and contribute to the industrial district renewal and resilience.

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