

CUSTOMER-SUPPLIER RELATIONSHIPS IN THE DEVELOPMENT OF THE CERAMIC CLUSTER

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1. ABSTRACT

The Castellon Ceramic Cluster is a reality that has been a frequent and specific subject of study at **numerous editions of Qualicer**.

Customer-supplier relationships are key factors in defining a cluster structure, as they represent the main agents that form the network. All actors in the cluster can be seen in the role of either customers or suppliers in any of the main activities – exchange of goods and services, of knowledge, of resources, of information, regulations, etc.

One aspect that has not been studied in such detail is how the photo of a customer-supplier relationship has “evolved”, how it has adapted to particular needs at any time, what influence internal factors such as actors’ skills and training, strategies, means of connection between partners, etc. have had.

The aim of this paper is to present the results of an empirical study which analysed the relationships between customers and suppliers within the so-called Castellon Ceramic Cluster and how they have contributed to its development.

The analysis is based on field data taken at the present time from a questionnaire directed at different actors in the cluster from the current sub-sectors: ceramic tile, specialty tile, glaze, and machinery manufacturers, and suppliers of spray-dried powders and chemical additives.

In addition to analysing the evolution up to the present day, the paper attempts to outline a trend for the future and the role that each actor in the cluster tends to play in a global scenario of changing, highly competitive and fully internationalised markets.

On the basis of this work and regular follow-ups, a stable method of comparison and assessment of its evolution can be achieved, which in turn provides a source of standardised data with which to plan different ways of dealing with these relations.

2. INTRODUCTION

The ceramic cluster embodies all the typical features of this type of business concentrations. It is a network located in a specific place, based on a very specific business sector. And it is this very network that determines the relationships between all stakeholders, including those of knowledge transfer.

Traditionally, our sector has always been an open network with a steady flow of information and knowledge. That character has been forged by professionals in the industry, its inter-sectorial organisations and its customer-supplier relationships based on proximity.

The passage of time and greater qualifications and expertise of its members could result in two types of knowledge flow emerging (see bibliography below):

- Freely accessible flows (information)
- Non-freely accessible flows (knowledge).

The risks of believing the cluster to be the same today as it was 30 years ago and not seeing differences like this are that some actors in the sector may fail to comprehend the new trends in customer-supplier relationships, lose their ability to learn from those relationships, fail to take advantage of that exchange of knowledge, become mere buyers and ultimately, miss out on one of the main benefits offered by the cluster: knowledge transfer.

All companies find themselves forming part of a chain and some or most of their business takes place outside their particular sector, either upstream (with suppliers) or downstream (with customers). An integrated relationship between both actors in the chain is one that can help ensure the achievement of specific objectives. This obliges companies, especially industrial firms, to undertake a radical change in their customer/supplier relationships.

Such relationships can no longer be based solely on the action of buying and selling or on a purely transactional exchange in which price is the decisive factor. This is doubly important in a sector (like the cluster's) where technological progress and knowledge are not confined to each actor, are not held internally by each stakeholder.

Certain factors remain in the relationship over time, although they become more pressing as time goes by:

- Higher quality.
- Higher OTIF accuracy at delivery
- Speed and flexibility in response.
- More frequent deliveries broken into smaller batches
- Price reductions.

These are trends that remain and are enhanced as the pressure exerted by a highly competitive market increases.

Other factors appear over time:

- Higher R&D&I costs
- Higher product development costs
- Higher material reception monitoring costs
- Imposition of systematically increasing the value at each new phase of the product/process.

A restructuring of customer-supplier relationships is also necessary in order to tackle such changes.

This paper attempts to analyse (qualitatively) the changes in these customer-supplier relationships within the ceramic cluster, with a horizon of about one generation of professionals (i.e. about 30 years)..

3. EXPERIMENTAL

3.1. QUESTIONNAIRE:

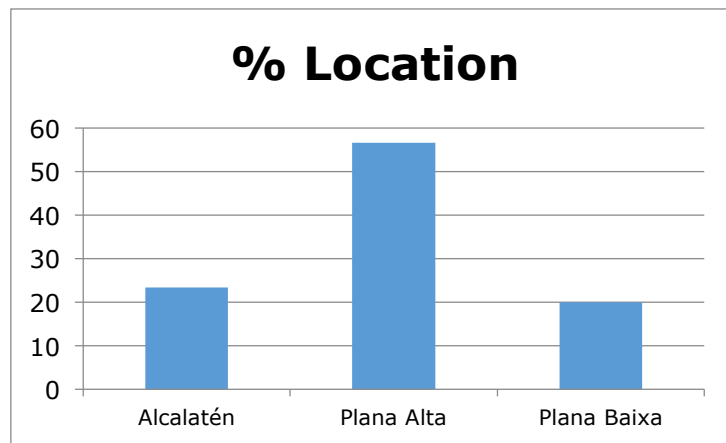
A questionnaire divided into different sections was prepared:

- Section 1: Identity. The purpose is to enable the results to be broken down by segment:
 - sector
 - size
 - turnover
 - location
 - age
 - relations with R&D&I
- Section 2: Customer-Supplier dialogue
- Section 3: Criteria in contract relations.
- Section 4: Profile of professionals involved in the customer-supplier relationship:
 - On the customer's side
 - On the supplier's side.
- Section 5: Joint projects/ventures
- Section 6: Trends in Procurement.

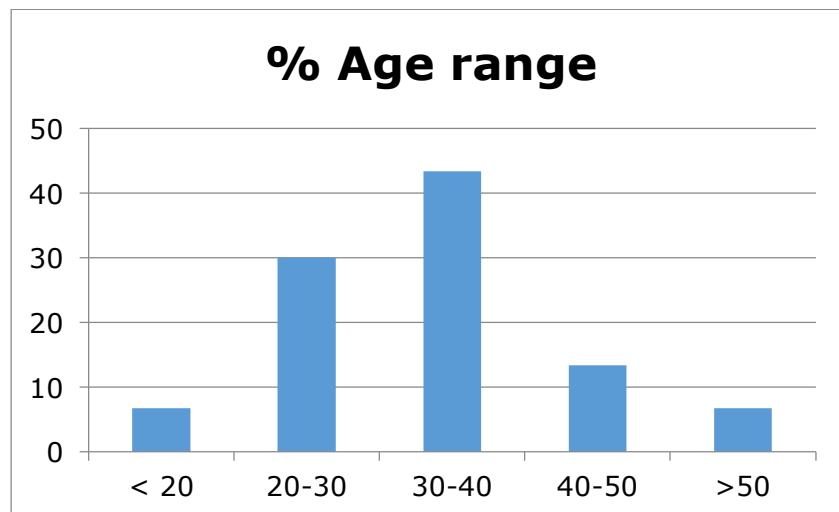
60% of respondents are found in ceramic tile (33%) and glaze (27%) manufacturers and the predominant size is a turnover of between €10 and €30 million. As far as number of employees is concerned, it is more balanced between the ranges of 10-50, 50-100, and 100-300.

This is due to how the ratio between turnover and workforce varies between different sub-sectors.

Fig. 4 shows respondents' geographical location in the Castellon area:

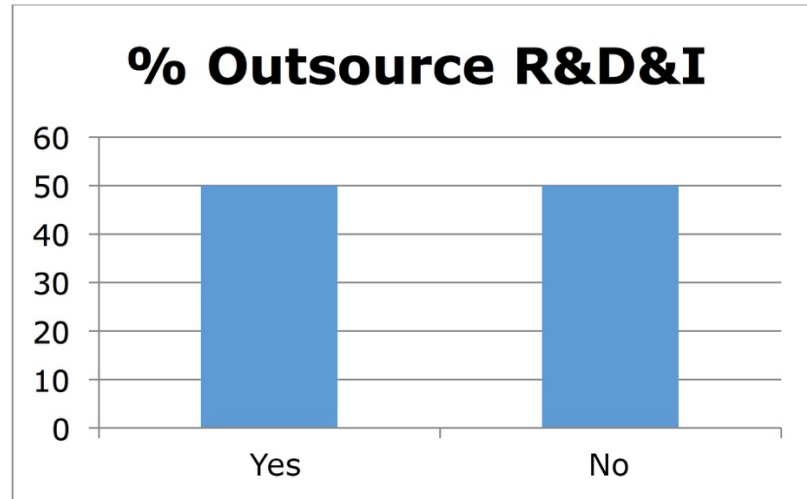


The age range of companies that responded to the survey is shown in Fig. 5:

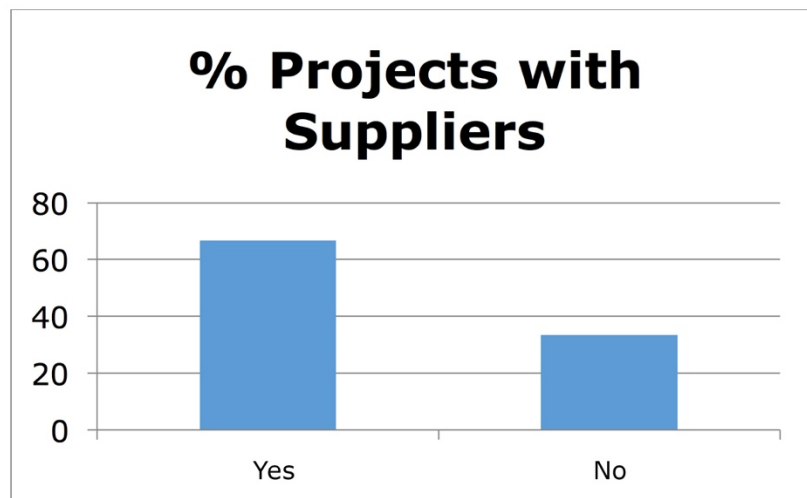


For the purposes of this study, the age range of less than 20 years is relatively small. The entire sample group is sufficiently representative to analyse the evolution of customer-supplier relationships.

In order to give an idea of the relations these companies hold with R&D&I, they were asked whether they outsource R&D&I services (Fig. 6):



Respondents were also asked (Fig. 7) whether they undertake joint projects with suppliers:



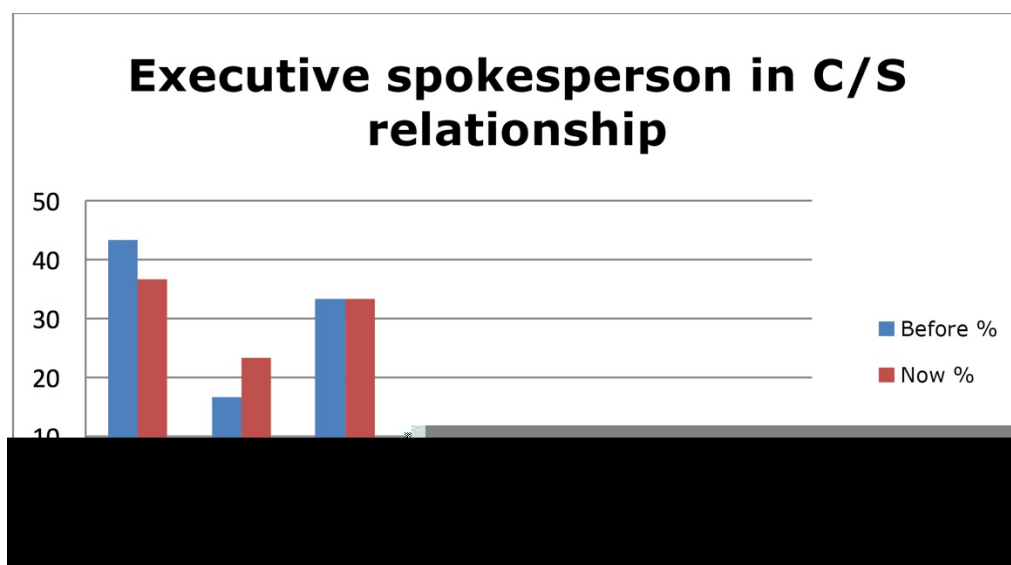
Figs. 6 and 7 show that the sample group undertakes more projects with external suppliers than with outsourced R&D&I service providers. This result is consistent with other studies that point to suppliers as a source of innovation services more than outsourced R&D&I (See I. Fernandez de Lucio. ATC Congress 2005).

Contrary to what might appear the case, glaze manufacturers are not the companies that most outsource R&D&I services.

As sources of R&D, companies in the sector rank suppliers in first place, followed by internal resources, and finally external services.

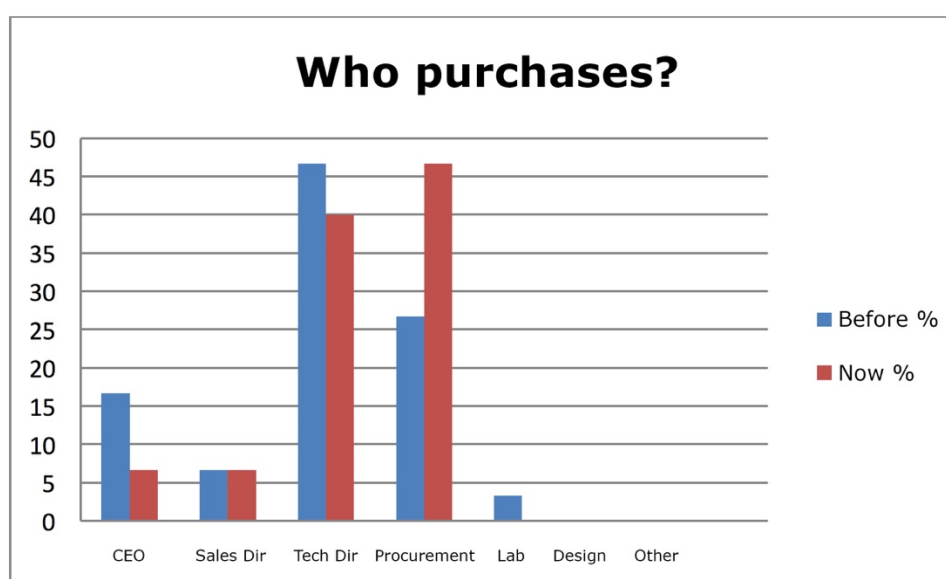
Thus, relations with suppliers (on the assumption that all sub-sectors are immersed in the customer-supplier chain) are a determining factor in the provision of R&D&I, apart from their actual service.

Looking now at the question of customer-supplier (C/S) communications, Fig. 8 shows the person who performs the dialogue:

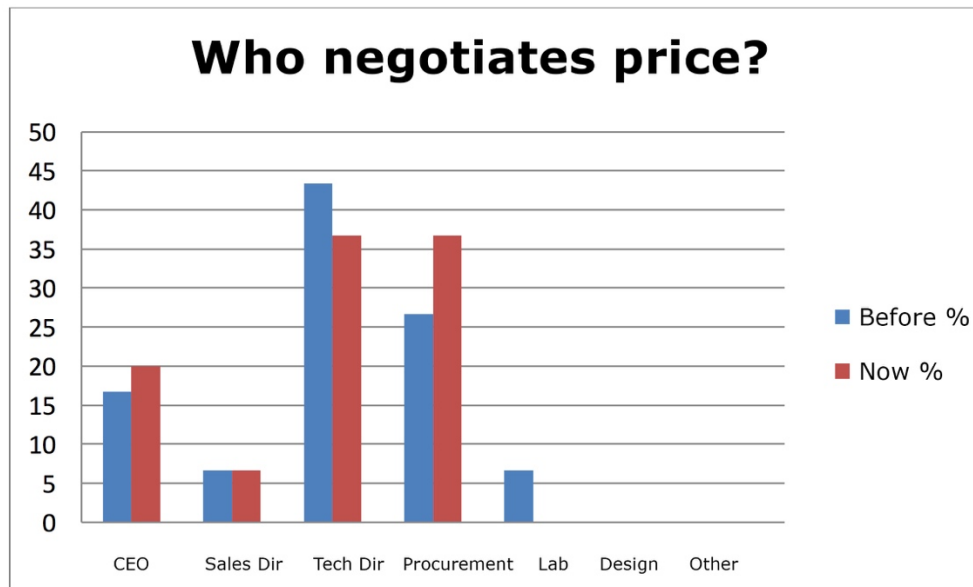


The changes over time are scant but an increase in participation by the Sales Director (Sales Dir) in dialogues with suppliers can be seen in parallel to a decrease in that role by the General Manager (CEO), while the other posts (Technical Director Tech Dir, etc.) stay the same.

In order to truly understand the above, it is important to see who does the buying (Fig. 9):



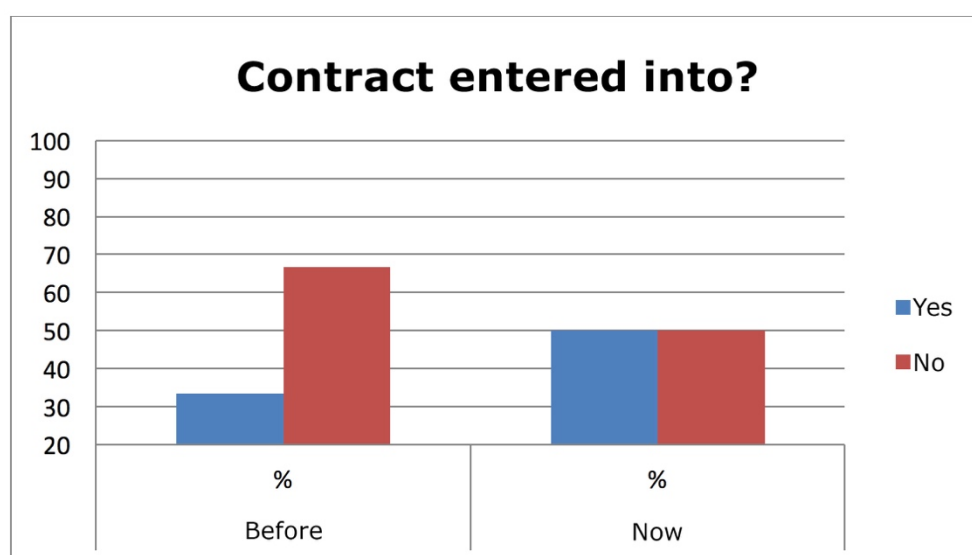
... and who negotiates the price (Fig. 10):

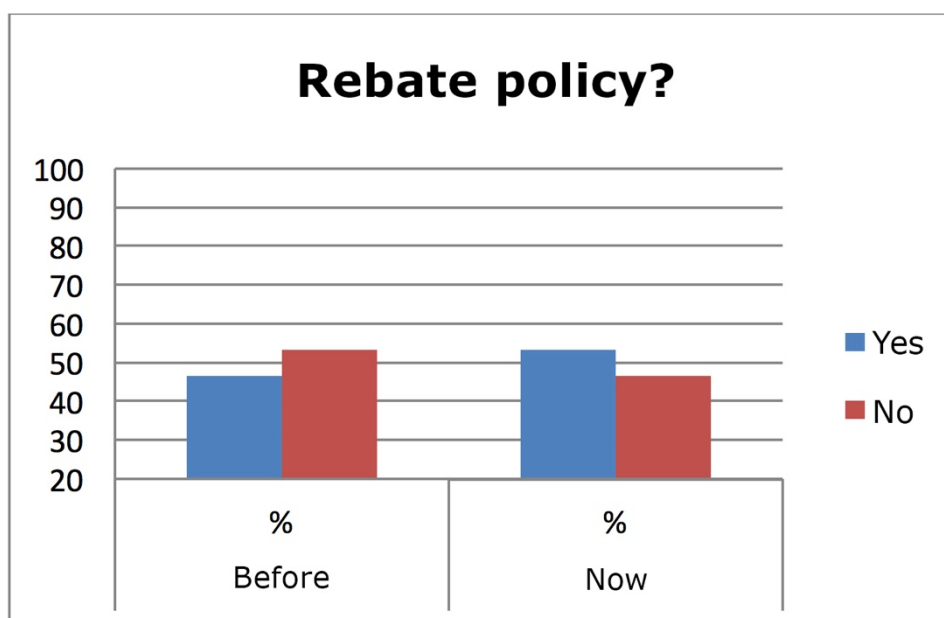
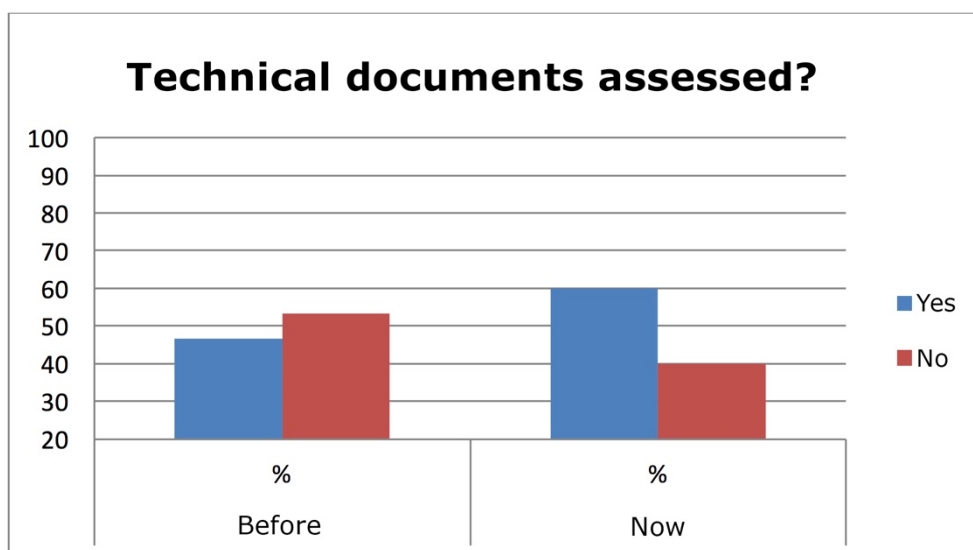


Purchasing is performed to a greater extent by the Procurement department.

From the three graphs, it is clear that there is a separation between the act of buying and the act of maintaining the relationship, although the CEO is involved in price negotiations.

Looking in greater detail at the act of buying, let us see whether a contract is entered into (Fig. 11), technical documentation is assessed (Fig. 12) and a discount policy is applied (Fig. 13):





The conclusions to be drawn are:

- More contracts are entered into today but it is still not the norm.
- Technical documentation is more generally assessed nowadays but it is still not the norm.
- A rebate policy (based on purchase volumes) is applied more than before but it is still not the norm.

Relationships in these fields have evolved only slightly and depend on the professionals and the culture of the company involved.

The following table (Fig. 14) shows how the profile of the professionals involved in the customer-supplier relationship has evolved (replies = "before" and "now"):

Sales	Improved training and qualifications and product and customer focus
Technical	Better qualifications (although less than others) and quality focus
Procurement	More professional, aggressive and greater scatter of suppliers
CEO	Better educated, the focus is more strategic and financial. More technical
Financial	Better training, preparation and available resources
Maintenance	Few changes and increased focus on cost
R&D	Exists

- The smallest increases in training, qualifications, or skills are seen in Maintenance and Technical staff.
- The highest levels are displayed by the Finance, CEO and Procurement depts.
- Sales remains at an intermediate level
- R&D appears (did not exist before)
- NOTE: The view changes slightly in respect to Customers "We see ourselves better than we see our customers".

When Fig. 14 is combined with Figs. 11, 12 and 13, the conclusion is that relationships are conditioned by how the professional skills of the actors in that relationship have evolved.

In order to provide greater detail regarding the Procurement function, the following table (Fig. 15) shows what demands are made in the relationship between these actors.

The size of the company influences all customer-supplier relationships both before and now.
Safety stocks are maintained (50%) or go down (50%)
Centralised Purchasing has a future for 85% of respondents – it is of less importance for glaze manufacturers
Greater empathy and preparation of meetings are areas for improvement in customer-supplier dialogues
Greater proximity, communications, loyalty, collaboration and joint projects are steps that strengthen relationships

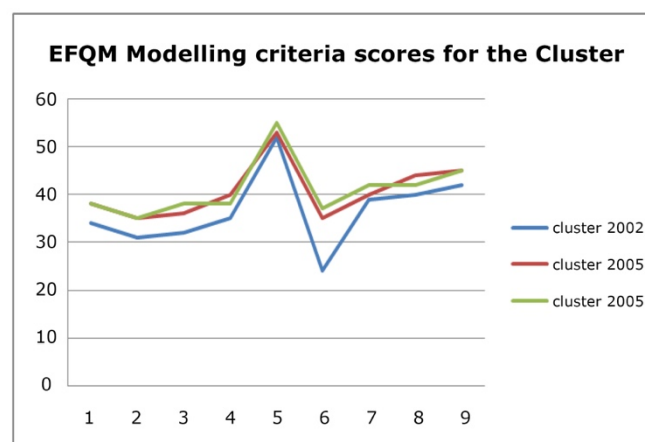
Finally, given that the R&D&I department is considered to be a newcomer, the profile of R&D&I professionals with regard to customer-supplier relationships was also tested (Fig. 16):

In-house R&D&I staff are better prepared for joint projects than customers' R&D&I staff
The same goes for suppliers, except in the case of tile manufacturers.
The number of projects with customers has increased (except tile manufacturers)
The number of projects with suppliers has increased (albeit not significantly, except tile manufacturers)
R&D&I departments have become widespread

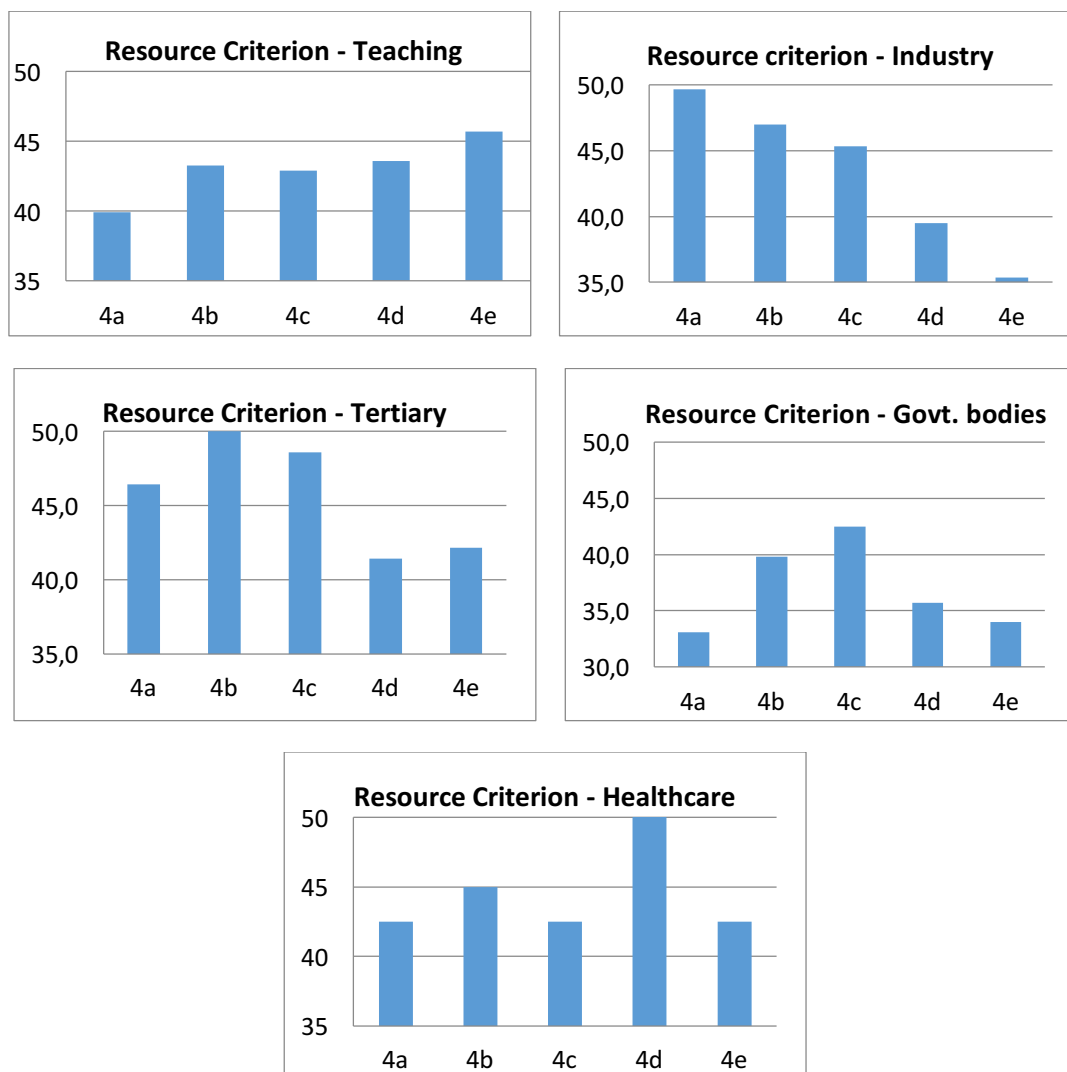
The tables in Figs. 15 and 16 show that where the greatest deficiencies are found in the C/S dialogue is in the case of tile manufacturer customers with suppliers of glazes, machinery and additives.

In general, it can be stated that customer-supplier relationships in the cluster could clearly be improved.

These results are consistent with other studies (See F. Corma Qualicer 2012), which analyse the evolution of EFQM Excellence Modelling enablers since 2002 (Fig. 17) and Criterion 4 (part 4.a that discusses supplier management), which has changed little over the last 10 years (and has even decreased slightly):



A comparison can also be made with other sectors (see References - F. Corma "Management para después de la crisis") and focusing on sub-criterion 4a Managing Partners and Suppliers (Figs. 18, 19, 20, 21 and 22.)



From these comparative data (the cluster has average scores of around 40), it is seen that:

- The cluster is below the average for the industrial sector analysed in that report.
- It is slightly below the Healthcare sector and Tertiary sector.
- It is similar to Teaching.
- It is higher than Government bodies.

5. CONCLUSIONS

Customer-supplier relationships in the Castellon Ceramic Cluster clearly have room for improvement. This is true both in absolute and relative terms when analysing their evolution and when comparing this with that in other sectors.

Furthermore, those relationships have changed focus over time. Whereas previously the centre of the relationship was located in the tile company, who dominated the relationship, now one can appreciate a shift towards suppliers serving tile manufacturers, especially in the case of suppliers who provide technology and know-how (Machinery & Glazes).

The relationship depends on the professionals who sustain it. Technical participants from tile manufacturers are seen to have evolved slightly less, especially Maintenance staff, whereas other functions have improved their score in that relationship (Sales, CEO, Procurement).

Any business strategy should include customer-supplier relationships as a fundamental part of the Value Chain. Making it come true calls for people well prepared to foster and nurture it. What differentiates the companies in this chain is precisely the people, their skills and their training.

The conclusion to be drawn from the results and experience in the sector is that a customer-supplier relationship based on Comakership criteria may be a primary factor in the industrial strategy, as it encompasses all the strategic developments taking place in the cluster:

- Quality Control in co-ordination with the supplier;
- Suitable position in the value chain with suppliers and customers.
- Total Management and Lean production strategies that optimise all processes in the chain.
- Product development that focuses on processes and vice-versa (Design Thinking and QFD) to achieve greater customer focus.

This requires undertaking people-related plans in order to bring about such strategies.

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