CONSUMER BEHAVIOUR IN THE CERAMIC PRODUCT REPLACEMENT MARKET AND COMPARISON WITH SUBSTITUTE PRODUCTS

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ABSTRACT

The present study is part of a larger project aimed at supplying companies in the Spanish ceramic sector with the information and knowledge needed on consumers for appropriate planning of ceramic product design. In particular, the study focuses on analysing the positioning of ceramic products and their substitutes (parquet, marble, carpeting and terrazzo).

Based on 602 personal interviews, the study has found that tile, marble and terrazzo form a triangle of direct competitors, not only in market share, but also in the mind of the consumer. They are characterised by attributes and technical or functional characteristics (cleanability, hardness, technical quality) which, although important, are today not the most relevant features. In competitive markets, intangible aspects are decisive in the product-purchasing decision, at least for the medium and high market segments. These aspects are related to warmth, image, prestige, fashion, design, the brand or the aesthetics, and as such are attributes more closely linked to the world of decoration, than of construction.

Another aspect highlighted by the study is the difference in terms of geographic areas. To be noted is the area of Bilbao as a zone in which no product has managed to associate itself with the most important attributes. On the other hand, the South of Spain displays different behaviour in the purchase and consumption of ceramic products than the North. This is no more than an expression of the heterogeneity of the Spanish market, but it does entail a policy of segmentation.

1. OBJECTIVES OF THE STUDY

The main objective of the study is to supply companies in the Spanish ceramic sector with information and the knowledge needed on markets, tendencies and consumers for appropriate planning of ceramic product design. In particular it is sought:

To supply the industry with information regarding substitute products (addressing the same need, though having different technologies; for example: parquet, marble, carpeting, terrazzo)

To analyse the positioning of ceramic products and their substitutes in terms of the different evaluations of their attributes.

2. RESEARCH APPROACH

The present study has been carried out in the course of the year 2003. The approach adopted in conducting the study is set out below.

2.1. DESIGN OF THE RESEARCH

In view of the aims of the study, the first step involved preparing a questionnaire. A pretest was performed with 20 people on a first questionnaire; these expressed their impressions and suggested improvements for the questionnaire. This was done in an attempt to confirm the validity of the questionnaire and to correct any possible deficiencies that might have survived previous checks. The pretest led to some changes and improvements, and thus yielded the definitive questionnaire.

In all, we held 602 interviews in six different localities: Madrid (131 interviews), Barcelona (130 interviews), Bilbao (80 interviews), A Coruña (80 interviews), Valencia (91 interviews) and Seville (90 interviews). This sample gives a sample error of ±4.07% (p=q=0.5; confidence level=95.5%). The data collection process was carried out by personal interviews conducted by professional surveyors of the selected citizens. The primary data collection period was during the second half of the month of September and the first week of the month of October in 2003.

2.2 MEASUREMENT OF THE VARIABLES

The questionnaire used to collection the necessary information for the study was divided into six parts. In the first, questions were asked relating to the most recent product purchase made in floor or wall coverings, the available budget, and the reason for and the level of involvement in the purchase. A second part then sought to obtain the interviewee's evaluation of different substitute products based on certain characteristics or attributes which were included. A third part asked questions aimed at analysing the sources of information most extensively used in the purchasing process and the interviewee's knowledge of ceramic products. The fourth part contained specific questions on ceramic materials directed at establishing the features that were most highly valued by the end-consumer. A series of questions then followed on the purchasing-decision criteria and the level of satisfaction achieved by the decision. Finally, the sixth part sought to elicit classification information from the interviewee.

The present paper focuses on the data obtained in the second part of the questionnaire, relative to the characteristics with which the interviewees associated the products involved in the study. To measure these characteristics a five-point Likert scale was used.

Table 1 lists the characteristics the interviewees were asked to rate, in a scale from 1 to 5, according to the degree in which they considered these characteristics to be associated or not with the products indicated; 1 indicates a very weak association and 5 a very strong association. In this case the question concerned ceramic products – the research target – and the products which the pretest had identified as its main substitutes (marble, terrazzo, parquet and carpeting).

	Characteristics	Ceramic tile					Marble					Terrazzo					Parquet					Carpeting				
1	Quality	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
2	Has a natural appearance	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
3	Generates a warm enviroment	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
4	Easy to clean	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
5	Higinic and anti-allergic (simple desinfection)	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
6	Low maintenance costs after installation	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
7	Appropiate price	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
8	Value for money	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
9	Prestige and image	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
10	This is what is always installed (tradition)	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
11	Product made in Spain	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
12	The manufacturing process of the product is respectful of the environment	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
13	Keeps perfectly with passing time	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5

Table 1. Characteristics for the evaluation of products used for covering floors or walls.

3. EVALUATION OF CERAMIC PRODUCT CHARACTERISTICS VERSUS THOSE OF SUBSTITUTE PRODUCTS

As all the characteristics or attributes indicated are positive, and the score rise with increasingly positive association of that characteristic with the product involved, it is reasonable to calculate a mean evaluation of all the scores for each product, and to consider this result on the same rating scale (from 1 to 5). Table 2 sets out the scores given by the 602 interviewees; it can be observed that in the overall evaluation, ceramic tile (3.91) receives the best score, closely followed by marble (3.84). Lower scores, albeit over 3, are then found for terrazzo (3.66) and parquet (3.50). At a greater remove, with the worst score, which is below 3, is carpeting (2.58).

TOTAL	Ceramic tile	Marble	Terrazo	Parquet	Carpe-ting
Quality	4.09	**4.42**	3.75	3.90	2.61
Has a natural appearance	3.67	**4.03**	3.58	3.91	2.45
Generates a warm environment	3.36	3.22	3.13	**4.06**	3.36
Easy to clean	**4.35**	4.16	3.98	3.35	2.11
Hygienic and anti-allergic (simple disinfection)	**4.34**	4.26	4.01	3.49	1.97
Low maintenance costs after installation	**4.16**	3.93	3.90	3.15	2.46
Appropriate price	**3.84**	3.20	3.64	3.18	2.97
Value for money	**3.92**	3.67	3.61	3.39	2.77
Prestige and image	3.78	**4.27**	3.31	3.88	2.49
This is what is always installed (tradition)	**3.84**	3.34	3.53	3.42	2.39
Product made in Spain	**4.02**	3.79	3.85	3.62	3.08
The manufacturing process of the product is respectful of the environmen	3.48	3.47	**3.49**	3.10	2.69
Keeps perfectly with passing time	3.99	**4.10**	3.83	3.02	2.16
Overall evaluation	**3.91**	3.84	3.66	3.50	2.58

Table 2. Evaluation of different products used for covering floors or walls (from 1 to 5).

Marble is the product most associated with quality (4.42) and has a natural appearance (4.03), quite a distance ahead of ceramic tile (quality: 4.09; natural appearance: 3.67).

In regard to the generation of warm environments, parquet (4.06) has the best score. The other products follow at a far distance in this section (tile and carpeting: 3.36; marble: 3.22; terrazzo: 3.13).

Ceramic tile receives its best scores, all close to or above 4, in cleanability (4.35), simple disinfection (4.34), low maintenance costs (4.16), having an appropriate price (3.84), as well as good value for money or the quality-to-price relation (3.92). In addition, tile is the product most associated with the attribute a product made in Spain (4.02)

On the other hand, marble (4.27) is the best-rated product in terms of prestige and image, followed by parquet (3.88).

As far as the manufacturing process is concerned, the most respectful of the environment are considered to be: terrazzo (3.49), ceramic tile (3.48) and marble (3.47). At some distance then lie parquet (3.1) and carpeting (2.69).

Carpeting (2.58) has been, by far, the worst-valued product in the study. It has received its worst scores in hygiene and simple disinfection (1.97), cleanability (2.11) and in conservation with passing time (2.16). Its best quality has been the generation of a warm environment (3.36), albeit with an intermediate score (very close to 3), comparable to ceramic tile.

If the surveys in the different localities are analysed, the following results are found. In Madrid carpeting is the worst-valued product. It only reaches the scores of the other products in warmth (3.15), and in no case does it score higher than 3.32.

In line with the general trend, in Madrid tile, marble, terrazzo and parquet are rated more or less uniformly, with parquet standing out positively in warmth (4.31), tile in cleanability (4.53), hygiene (4.44) and maintenance (4.23), and marble in prestige and image (4.48).

The scores obtained in Barcelona are similar to those in Madrid, although they generally display slightly lower values. Even so, to be noted is the low score for carpeting, the best score for parquet (4.26) in warmth, the superiority of tile in cleanability (4.23), hygiene (4.23) and maintenance (4.12). In prestige, marble receives the best score (4.01), although it is closely followed by parquet (3.89), with ceramic tile a short distance behind (3.68).

Bilbao displays somewhat singular results in comparison with the rest of the localities. The scores are in general lower and quite close among the studied products. Marble (4.70) is perceived as the product with the greatest quality and in this locality carpeting receives its best rating, compared with the other localities. It receives no score below 2.93 (hygiene) and obtains top scores in aspects such as warmth (3.65), appropriate price (3.48) and tradition (3.66).

In A Coruña similar evaluations were found to the overall average; however, to be noted are the high scores for ceramic tile in regard to cleanability (4.75), hygiene (4.71) and maintenance (4.49). In terms of prestige, terrazzo does very badly (2.69), only beating carpeting (2.23), and remains far behind parquet (4.38), which does best in this respect.

Valencia is where carpeting has scored worst, never exceeding 2.81 (warmth) and being rated behind the rest of the products in all respects. Parquet also appears with a particularly low score, especially in regard to cleanability (2.80), hygiene (3.11) and maintenance (2.96), compared with the scores for tile (4.58, 4.56 and 4.31 respectively).

In Seville, parquet and carpeting receive negative ratings in relation to the other products. Carpeting receives the worst scores in all respects, followed by parquet, which never reaches the scores for terrazzo, tile or marble. Tile stands out in price (4.16) and tradition (4.38); and marble in prestige and image (4.67).

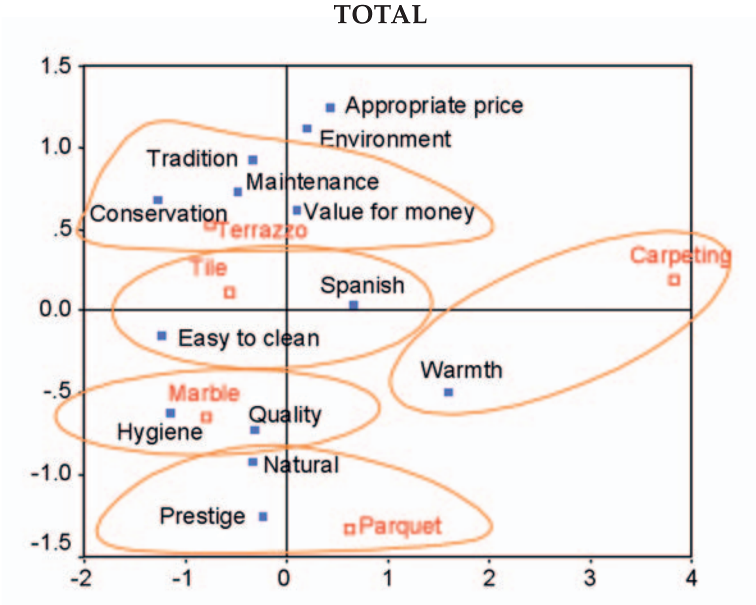
4. POSITIONING OF CERAMIC PRODUCTS

The following analyses the positioning maps, both overall and in the breakdown by the localities in the study.

When considering all the interviewees as a whole, the analysis of Graph 1 shows that tile lies very close to terrazzo and marble. In particular, tile is associated with cleaning ease and being a Spanish product. Terrazzo represents good value for money, tradition and keeps perfectly with the passage of time. And marble is linked to being a hygienic and anti-allergic product, and to quality.

As far as parquet and carpeting are concerned: parquet is associated with prestige and image, and having a natural appearance. On the other hand, carpeting is more closely associated with a warm quality.

TOTAL

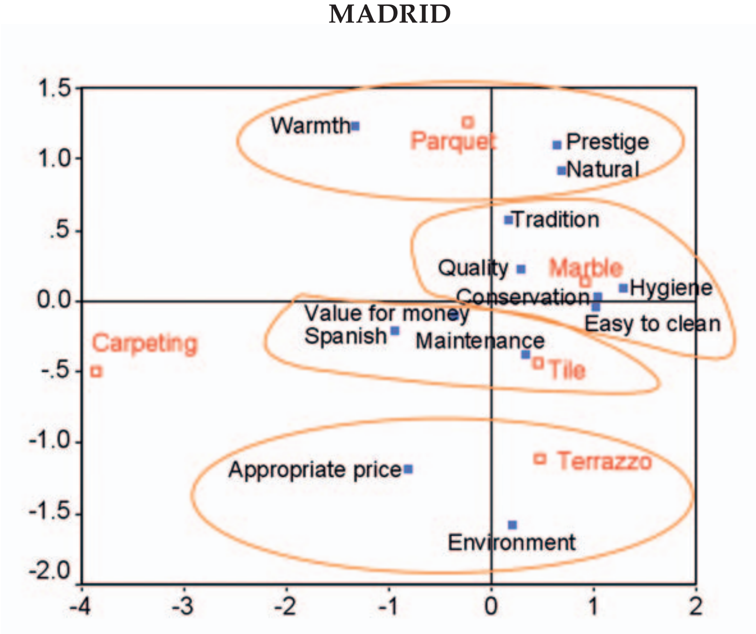


Graph 1. Positioning map obtained from the evaluation data. Joint representation of products and product properties (total sample).

Graph 2 sets out the results for Madrid. This graph shows that ceramic tile is associated with low maintenance costs after tile installation, good value for money, and being a product made in Spain. On the other hand, marble and terrazzo are the substitute products closest to tiles. Marble is associated with hygiene, good conservation with passing time, easy cleaning, quality and tradition. And terrazzo is linked to the environment and to appropriate price.

In regard to parquet, this is associated with being natural, having prestige and providing warmth. And, finally, carpeting is not clearly associated with any attribute.

MADRID



Graph 2. Positioning map obtained from the evaluation data. Joint representation of products and product properties (Madrid).

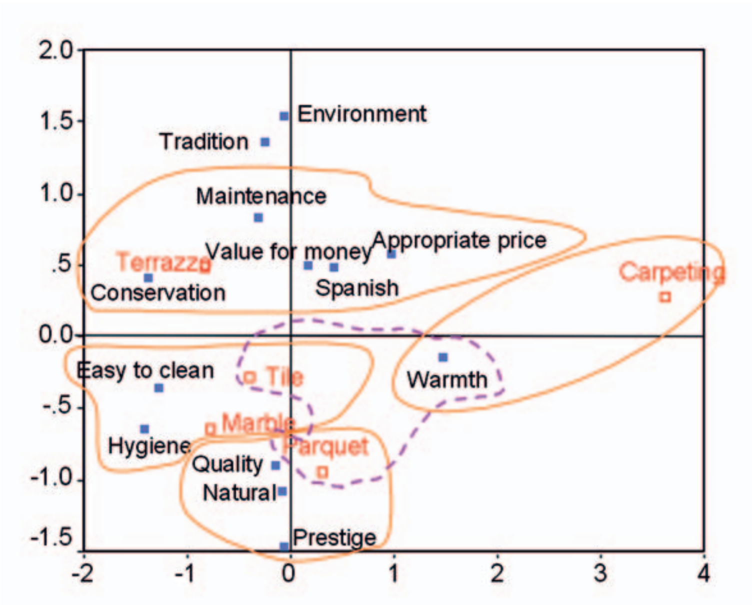
In the case of Barcelona, tile and marble should be considered jointly and are tied to hygiene and cleanability. Note that in this locality, ceramic tiles, parquet and carpeting can be linked to the attribute warmth.

With respect to terrazzo, this is associated with conservation, good value for money, being a product made in Spain, low maintenance costs after tile installation, and appropriate price.

Parquet is associated with quality, being a natural material, prestige and image. And, as remarked previously, carpeting can only be linked to the attribute warmth.

In this case, the attributes environment and tradition are not associated with any of the products considered.

BARCELONA



Graph 3. Positioning map obtained from the evaluation data. Joint representation of products and product properties (Barcelona).

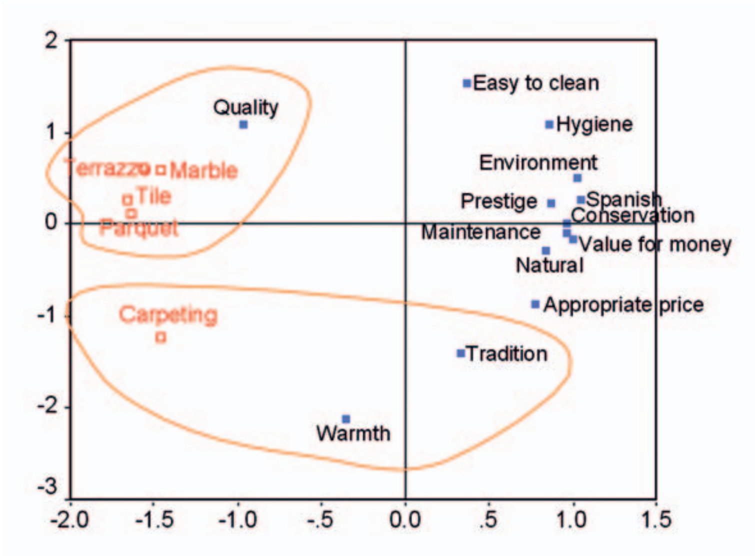
The case of Bilbao, reflected in Graph 4, is different from the average of the localities considered. In this locality all the products except carpeting are grouped under the umbrella of quality; i.e. ceramics, terrazzo, marble and parquet are considered to belong in the same group of competitors.

On the other hand carpeting is linked, although at some distance, to warmth and tradition.

In the positioning map of A Coruña (Graph 5), all the products considered are differentiated. Thus, tile is related to value for money, appropriate conservation, low maintenance costs after installation, being a product made in Spain, and whose manufacturing process is quite respectful of the environment.

The closest competitor to tile in A Coruña is marble, which is related to quality, easy cleaning and hygiene.

BILBAO



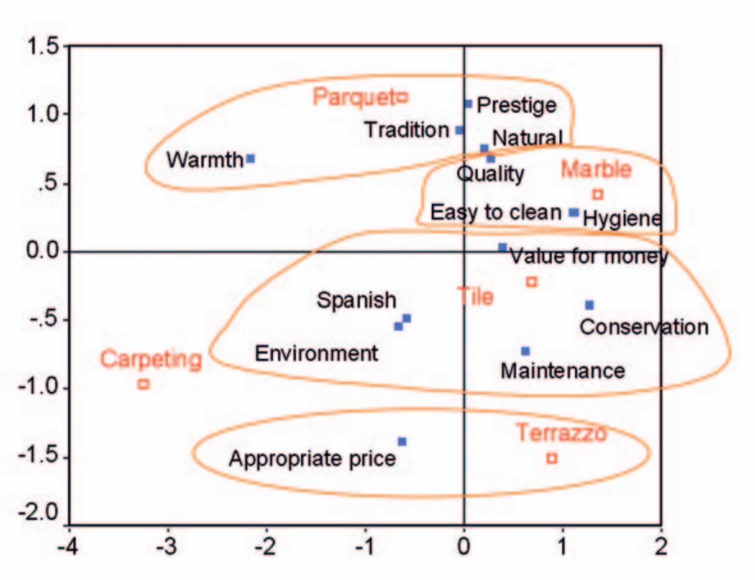
Graph 4. Positioning map obtained from the evaluation data. Joint representation of products and product properties (Bilbao).

The nearest following competitor to tile is terrazzo, which is solely tied to having an appropriate price.

In respect to parquet, this is linked to tradition, prestige, being a natural product and, to a lesser extent, to warmth.

As far as carpeting is concerned, this lies at a far remove from any of the foregoing products and is not clearly related to any attribute.

A CORUÑA



Graph 5. Positioning map obtained from the evaluation data. Joint representation of products and product properties (A Coruña).

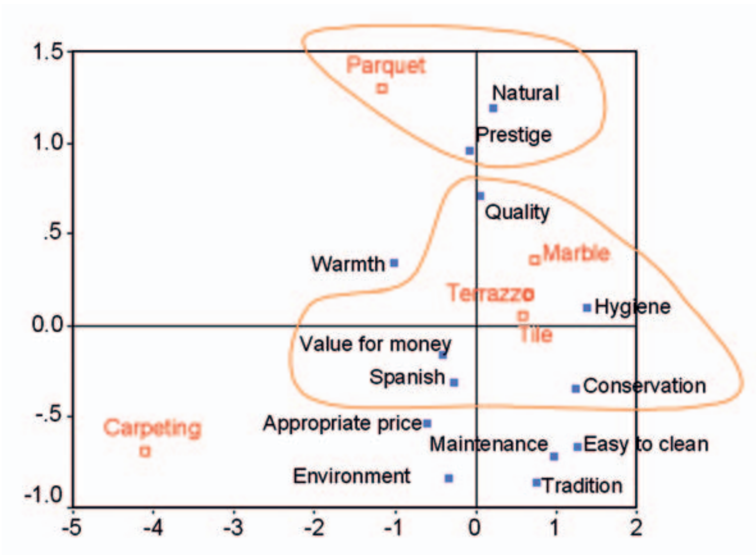
Graph 6 displays the results for Valencia. In this locality, tile, terrazzo and marble lie in the same competitive group, and are associated with features like quality, value for money, hygiene, conservation, and being a Spanish product.

On the other hand, parquet is related to being a product that has a natural appearance, high prestige, and an excellent image.

In regard to carpeting, this is not directly associated with any particular attribute, although the closest feature is appropriate price.

In this locality, a number of attributes, such as respect for the environment, are not linked to any product. This attribute could serve as a reference to differentiate ceramic tile from competing products like marble and terrazzo.

VALENCIA



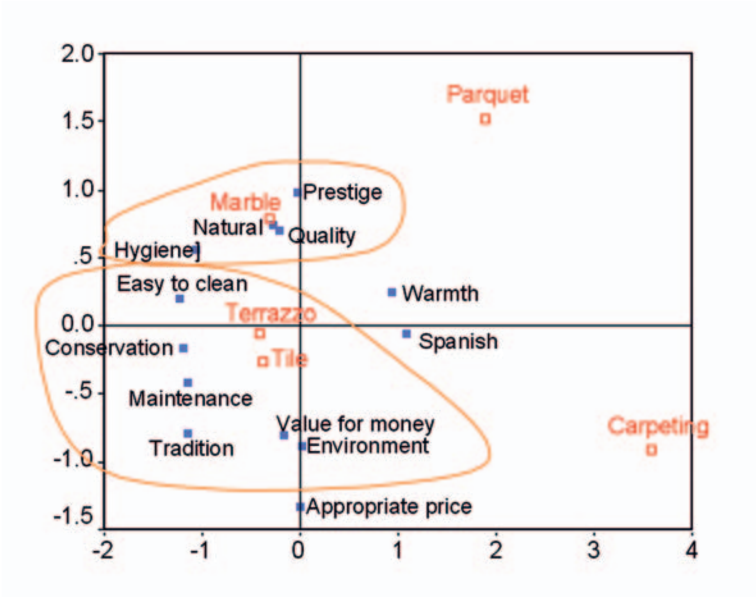
Graph 6. Positioning map obtained from the evaluation data. Joint representation of products and product properties (Valencia).

In the case of Seville, Graph 7 shows there is no direct association with any attribute in the case of parquet, or carpeting. However, both products lie at some distance from each other in the positioning map. Parquet is more closely associated with aspects relating to prestige and quality, while carpeting is closer to appropriate price.

As far as tiles are concerned, these are grouped with the terrazzo. The attributes with which these products are most closely associated are: easy cleaning, low maintenance costs, appropriate conservation with the passage of time, tradition, value for money, and production processes that are respectful of the environment.

Marble differentiates itself from tiles and terrazzo, and is linked to a natural appearance, hygiene, prestige and image, and quality.

SEVILLA



Graph 7. Positioning map obtained from the evaluation data. Joint representation of products and product properties (Sevilla).

5. CONCLUSIONS

5.1. CONCLUSIONS

As indicated at the outset, this study is part of a more extensive project devoted to a comprehensive analysis of the behaviour of the ceramic product consumer and the consumer's comparison of ceramics with substitute products. In this sense, in the course of the project, the different constitutive phases have been analysed of the consumer purchasing decision process: emergence of a need (purchase of floor tiles and/or wall tiles), information search process, evaluation of alternatives as a function of a series of features, taking of the purchasing decision and post-purchase evaluation.

The results set out in the course of the work focus on the evaluation of the features (see Table 1) of different purchase alternatives, which enable positioning each of those alternatives. However, this final part will set out the main conclusions from the whole project, focusing more on this positioning analysis.

As far as the use of ceramic tile is concerned, this is being displaced from some areas of the home (such as the dining room, corridors, bedrooms and the exterior), although it has been consolidated in others (kitchen and bathroom). Although parquet is the product that is gaining most in this displacement from the noble zones, terrazzo and marble are the ceramic product's direct competitors.

The positioning analysis has shown that tile, marble and terrazzo form a triangle of direct competitors, not just in market share, but also in the mind of the consumer and the specifications writer. They are characterised by technical or functional features and characteristics (cleanability, hardness, technical quality) which, although important, are nowadays not the most significant qualities. In competitive markets, the decisive aspects in the product purchasing decisions are intangible, at least for the high and medium segments. These aspects have to do with warmth, image, prestige, fashion, design or aesthetics, which are features more closely related to the world of decoration than that of construction. On a more concrete level, the following may be highlighted:

- In general, ceramic tile appears as the best rated product overall, standing out in relation to cleanability, simple disinfection and low maintenance costs. It also beats the other products in appropriate price and value for money, and is furthermore the product most closely associated with 'made in Spain'.
- Marble, the second best-rated product, is associated with quality, prestige and image, and having a natural appearance.
- Parquet is considered the most suitable product for achieving warm environments.
- Terrazzo is rated the product whose manufacturing process is most respectful of the environment.
- Finally, carpeting has been, by far, the worst-valued product; particularly significant are the negative evaluations obtained in hygiene and disinfection, cleanability, and in conservation with passing time.

This all means that the battle between the substitutes must centre on equipping ceramic products with more intangibles features (prestige, design, fashion and image). Without disregarding the technical characteristics that have brought it to its present level, we need to provide the intermediaries, specifications writers and consumers with greater value.

A further aspect that comes to the fore in the study is the difference in terms of geographic areas. The Bilbao area stands out as a zone where people spend a lot on reforming their home, and where no product has been able to associate itself with the most noteworthy features. On the other hand, the south of Spain displays different ceramic purchasing and consumption behaviour from that of the north. This is just a manifestation of the heterogeneity of the Spanish market; however, it does imply the need to develop segmentation policies.

It is to be noted that although the main reason for home reform is because of deterioration, decoration and design already account for a quarter of the reasons.

An important aspect to be considered is that the purchases made in floors and wall coverings in home reforms involve a high degree of engagement, since the buyer devotes a lot of time to this, while there is a high degree of self-expression, and much money is spent. This means that, just as in other sectors with a similar level of involvement, certain marketing strategies can be used.

The purchases in the replacement market generally tend to take place in ceramic product stores, and it is often a decision shared with a close relative. However, other channels also have an appreciable market share, such as own stores and specialised home centres.

Consumers are very satisfied with the acquired ceramic product and, in general, would acquire the same product again.

5.2. IMPLICATIONS FOR MANAGEMENT

There are important differences between the analysed zones, which is why it will be necessary to apply different commercial policies, on both a sectoral level and an enterprise level.

The ceramic product is increasingly perceived as an element related to decoration and design, and not as a building material. The companies must adapt to this scenario in their sales arguments.

It is necessary to undertake actions on a sectoral level, so that the ceramic tile is associated with intangible features, such as fashion, brand, prestige and image, and with the environment.

In products with a high involvement (personal expression, high economic cost, long purchasing process), brand plays an important role. This requires initiating appropriate marketing and communication strategies at company level.

It is necessary to look after the relations with distributors and specifications writers, since they are the main source of information on ceramic products in the case of the replacement market. However, these agents also perceive ceramic products as being predominantly related to technical features, and scarcely tied to intangibles.

In view of the above, we can say that it is necessary, in regard to the medium and high segments of the Spanish market, to change the communication focus and, therefore, the communication strategy. This change must take place in sectoral organisations, and in each company. In order to keep in the market, given the tendency to decoration, it is necessary to change the line of sales arguments with the intermediaries, specifications writers, and consumers. It is necessary to opt, decisively, for instruments of mass communication, at sectoral level and at enterprise level. In order to change the current positioning in the minds of the different players involved in the new building works and replacement market, a continuous effort over many years will be required. This message must be coherent with the message transmitted by personal communication, i.e. by the company sales representatives and also by trade fairs. Therefore, a change of mentality will be needed internally in each company. The message launched in the mass media will hardly be credible, if the sales representatives transmit a different message, tied to building construction and price.

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