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PORTER'S GENERIC STRATEGIES, STRATEGIC GROUPS AND FIRM PERFORMANCE IN THE CONSTRUCTION INDUSTRY: A COMPLEMENTARY TEST*

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Abstract

A central theme in the strategic groups literature is that there is a theoretical relationship between groups and firm performance. However, the empirical evidence is conflicting. The aim of this research is to study this linkage through two analysis. Thus, the analysis that has been traditionally used (performance differences *between* groups) is complemented with an analysis of performance differences *within* each group. In order to set up strategic groups, we carry out an analysis about the firms operating in the Spanish construction industry, using specific variables associated with Porter's generic strategies.

1. INTRODUCTION

Since it was introduced by Hunt (1972), the concept of the strategic group has received increasing attention in the strategic management and industrial organization literature. Nevertheless, many ambiguities still surround the strategic group concept. Thus, among these ambiguities are the related issues pertaining to the existence and definition of these groups and the lack of convincing evidence that different strategic groups exhibit differing performance results (predictive validity).

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Thus, our aim is to provide new empirical evidence of a relationship about which previous research has not succeeded in obtaining conclusive results. In this respect, in addition to the analysis that has been traditionally used to verify this relationship, that is, test whether or not statistically significant differences in performance exist *between* groups, we also apply another less often used analysis, namely the one in which we test whether or not significant differences exist *within* each group.

In order to set up strategic groups, we have proceeded to carry out an analysis about the firms operating in the Spanish construction industry, more precisely in residential construction industry, using a set of specific variables associated with the business strategy level. As we are going to see on the following pages, these variables are essentially related to Porter's (1980) generic strategies, like other previous studies. We must say that the choice of the construction industry is due to several reasons or motivations. Firstly, we must highlight the importance and weight this industry has in the economy, both in terms of national product and employment (in Spain, about 7% and 10% respectively). Secondly, it is an industry that has not received much attention in the field of research on strategic management and strategic groups. Moreover, residential housing builders follow a wide variety of business strategies, this aspect being especially relevant when it comes to undertaking an empirical study on strategic groups.

We can point out some contributions of this research. We apply two complementary tests to analyse strategic groups-performance link. Moreover, we focus on an industry which had not yet received significant attention in strategic management research. Finally, we discuss some insights about predictive validity of strategic groups and Porter's generic strategies.

We have structured this paper in several sections. In first place, we have reviewed the previous literature that has focused on the relationship between strategic groups and firm performance. Next, we have shaped the research design. The following sections are dedicated to the presentation of the results obtained and the discussion of these results. We finish with conclusions.

2. BACKGROUND

We must point out that the impact of the group membership on firm performance has been one of the central topics in the research dedicated to strategic groups (Cool and Schendel, 1987; McGee and Thomas, 1986; Thomas and Venkatraman, 1988).

The theoretical link to support a direct relationship between both aspects has been the concept of mobility barriers (Caves and Porter, 1977), referring to factors that prevent or hinder the movement of firms from one strategic group to

another. In essence, low mobility barriers allow firms to rapidly enter and exit different strategic groups while high mobility barriers deter such movement between groups. Mobility barriers help define, therefore, both the degree of group contestability and the stability of group membership over time. Mobility barriers are derived from a variety of sources and tend to be industry specific. Moreover, since these barriers differentially protect strategic groups, entry conditions and the scope for collusive agreements differ between strategic groups. From this, it is inferred that industry participants can have sustained performance differences.

If we focus on the empirical studies about group membership-firm performance relationship, we can firstly mention the earliest studies about strategic groups. Thus, we can say that the investigations carried out by Hunt (1972) and Newman (1978) had as their aim to identify the relationship between the industry structure and the industrial performance. They reached the conclusion that the existence of a high level of intra-industrial heterogeneity is going to make it difficult for firms to sign agreements, which, in turn, means that industrial profitability levels would be lower than those in more homogeneous industries. Porter (1979) already focuses on the impact the firm's belonging to a certain strategic group has on firm performance, by comparing the return on investment levels of the two groups established according to size. The result of the analysis was that the group of leaders obtained higher profitability levels than the group of followers, although the difference is not statistically significant. Oster's results (1982), in turn, show that in only 4 out of 19 industries do significant profitability differences appear among the groups based on advertising intensity.

With these precedents, the main idea we can draw from the review of the empirical studies carried out from then on is the heterogeneity of its results. In this sense, it is very difficult to give conclusive, incontestable statements about the relationship between group membership and firm performance. Thus, some studies have indeed identified significant differences among strategic groups (Mascarenhas and Aaker, 1989; Reger and Huff, 1993). Other investigations have not reached clear conclusions (Amel and Rhoades, 1988; Cool and Schendel, 1987; Frazier and Howell, 1983; Fiegenbaum and Thomas, 1990; Lawless, 1989; Wiggins and Ruefli, 1995). In some studies the existence of significant differences is confirmed or rejected depending on the strategy and performance measures used and depending on how many groups are set up (Dess and Davis, 1984; Lewis and Thomas, 1994).

As for generic competitive strategies, we can also refer to several researches in which was analysed the relationship between firm performance and group membership, taking as a reference some competitive variables associated with Porter's (1980) typology. Thus, in addition to the above-mentioned study by Dess and Davis (1984), we can highlight, among others, those by Miller and Friesen (1986a, 1986b), Robinson and Pearce (1988), Kim and Lim (1988), Wright et

al. (1991), Miller (1992) and Davis and Schul (1993). This set of studies provided no clear empirical evidence of the connection between strategic groups and firm performance either. In short, we can point out that empirical research has not provided conclusive evidence of the group-performance relationship, this being one of the most often criticised aspects of strategic groups. For instance, Barney and Hoskisson (1990) suggest that it may be necessary to abandon this concept and redirect attention toward other potential determinants of performance.

Most studies only analyse performance differences among groups. This will be our first analysis about group-performance link. However, in some works an attempt was made to test whether or not differences exist among the firms belonging to the same group. In this case, the analysis moves away from the study of differences *between* groups, and has concentrated on the study of differences *within* each group. Along these lines, we can highlight the study by Cool and Schendel (1988), where significant performance differences are identified among the firms of single groups. This result can be considered as an empirical support to the resource-based view of the firm (Wernerfelt, 1984; Barney, 1991; Grant, 1991; Peteraf, 1993), a framework that places emphasis on the internal aspects of each firm as factors determining its competitive advantages and, therefore, its profitability. In this respect, although a group of firms may show similarities in some strategic dimensions, each of these firms may have distinctive elements, like the skills of their managers or their culture and structure, which can bring about performance differences among these companies. We also study performance differences within groups, which will be our second analysis about group membership-firm performance relationship.

3. RESEARCH DESIGN

Sample Selection and Data Collection

As is recommended in studies on strategic groups focusing on one industry, it is important to acquire a certain level of knowledge about that industry, namely, whether or not some specific variables are to be selected and used. This is why, on an initial stage of our research, we carried out a study on the construction industry by means of in-depth interviews with professionals (discussions with industry executives and experts) and compiled the material that had been published about it. This preliminary study enabled us to get to know the main features of this industry, helped us to select the firms that were later analysed and made it easier for us to design the questionnaire, which was the main data collecting tool.

Our first intention was to study construction firms in general. However, one of the fundamental characteristics of the construction industry is its high degree of

heterogeneity. Thus, we can use the Standard Industrial Classification (SIC) in order to know the diverse activities integrated into this division. Three broad types of construction activity are covered: (1) major group 15: building construction by general contractors or by operative builders; (2) major group 16: heavy construction other than building by general contractors and special trade contractors; (3) major group 17: construction activity by other special trade contractors.

Special trade contractors are primarily engaged in specialized construction activities, such as plumbing, painting and electrical work, and work for general contractors under subcontract or directly for property owners. General contractors usually assume responsibility for an entire construction project, but may subcontract to others all of the actual construction work or those portions of the project that require special skills or equipment. General contractors thus may or may not have construction workers on their payroll. Building construction general contractors are primarily engaged in the construction of dwellings, office buildings, stores, farm buildings and other building construction projects. Operative builders who build on their own account for resale are also included in this division. However, investment builders who build structures on their own account for rental are classified in real state (major group 65). General contractors and special trade contractors for heavy construction other than building are primarily engaged in the construction of highways, pipelines, communications and power lines, sewer and water mains, and other heavy construction projects.

It seems necessary to choose one of these major groups for a better study focus. Firstly, our study will focus on firms that assume responsibility for an entire construction project. Moreover, an important aspect of the construction industry is the distinction between building construction and heavy construction. The analysis of these two activities proves the existence of differences in the productive characteristics as well as in the dimensions and strategies pursued by the firms competing in one or the other activity. For that reason, we choose one of these groups for using specific variables. In our case, the focus has been on the building construction, and more precisely, on residential construction. Therefore, our attention is focused mainly on home building firms. Lastly, to have a guarantee that these companies were the ones that took the strategic decisions related to the dwelling to be built, we have focused our study on operative builders rather than on contractors.

We selected from the Ardan database the Alicante-based firms in Spain appearing in the group of operative builders. The population consisted of 109 firms headquartered in Alicante, and our intention was to analyse all of them. In the end, a total of 88 firms (80.7%) offered their collaboration. Although the overall response rate is elevated, we addressed the potential for nonresponse bias by comparing firm size in terms of annual sales. A T-test revealed no significant differences between mean sales of respondents and nonrespondents ($t=0.069$,

$p=0.945$). The mean sales for the responding firms was 2.75 million euros, and the mean number of employees was 26. Therefore, our sample include primarily small firms. In fact, construction is essentially a large industry of small firms (Langford and Male, 2001).

The person in the firm that we have contacted is the Chief Executive Officer (CEO). Various studies on strategic issues refer to the suitability of using these informants (Shortell and Zajac, 1990; Snow and Hrebiniak, 1980; Zahra and Covin, 1993), since these individuals will definitely be the ones who have a better and deeper knowledge of their company's strategic aspects, taking, as they do, the most important decisions.

The method used to collect the information through the questionnaire was the on-site personal interview. Thus, the questionnaire was administered in person, so that scales and any ambiguities could be explained. We previously contacted the CEOs by phone in order to give them information about our research and to check their willingness to collaborate with us. In this initial telephone conversation, we also arranged, with the CEOs that agreed to take part in our research project, dates to visit them.

Variables and Measures

The bases for our determination of the business strategy are to be found in Porter's (1980) generic competitive strategies. We choose this option to define strategy because industry executives and experts pointed out in previous discussions that there are a set of competitive variables associated with dwellings (price, quality, size) which can help to establish strategic groups in this industry. This variables are related to Porter's generic strategies. This typology has been the subject of considerable investigation (Karnani, 1984; White, 1986; Wright, 1987; Hill, 1988; Mintzberg, 1988; Murray, 1988; Kotha and Vadlamani, 1995; Campbell-Hunt, 2000).

In order to establish strategic groups, various options appeared in front of us that had been used in previous studies to measure Porter's generic strategies. On the one hand, a possibility was to base our study on some secondary information source, like, for instance, an available database offering information about the firms to be analysed. In this respect, some studies have used the PIMS database (Hambrick, 1983; Miller and Dess, 1993; Miller and Friesen, 1986a, 1986b). However, if we consider the specific group of firms we are going to analyse, no databases exist from which we can obtain information about their competitive orientations.

Another option was using primary information sources, through the opinions supplied by the firms' managers. In this sense, various studies have used a set of competitive methods based on Porter's (1980) generic strategies typology in order

to evaluate the firm strategy (Davis and Schul, 1993; Dess and Davis, 1984; Robinson and Pearce, 1988). An analysis of these competitive methods seemed to suggest to us that they were not suited to the characteristics of the construction industry. This is because, on the one hand, some of them could not be applied to this industry and, in addition to that, other methods that could be appropriate to the construction industry were simply not mentioned. Furthermore, among the competitive methods used in earlier studies appear not only aspects that can be considered as product attributes which can represent competitive advantages, but also aspects reflecting firm resources (Campbell-Hunt, 2000), these being two aspects that we wanted to distinguish in our research.

Taking all the above into account, we finally preferred to use competitive attributes specific to the residential construction industry that were also easy to understand for the CEOs. In this way, we obtained information about the characteristics of the most common type of dwelling built by the firms, in an attempt to know each company's competitive orientation. In this respect, the competitive attributes of the dwellings to be included in the questionnaire were determined in advance by means of conversations held with professionals of this industry, among whom were managers of home building firms. The main characteristics highlighted in these interviews were the price, the area, the bedrooms, the bathrooms and the quality level of the dwelling. The price is measured in thousand euros, the area in square meters, and the bedrooms and bathrooms by their number in each dwelling. On the other hand, the quality level was measured taking as a reference seven criteria relative to the finish aspects which, according to the professionals in the industry are the ones customers appreciate the most. These finish aspects are flooring, coverings, woodwork, metalwork, bathroom fittings, paint and glazing. Each of these seven aspects were assessed using a scale going from 1 (minimum quality) to 5 (maximum quality). In this way, a total of eleven variables were used to determine the competitive strategy. These variables reflect Porter's (1980) typology of generic competitive strategies, where price is the main variable linked with cost advantage and the rest of variables are associated with product differentiation. The information for these variables were derived from questionnaire.

The professionals of this industry told us that two appropriate parameters to evaluate firm performance are return on sales (ROS) and return on assets (ROA). In order to use these measures, we needed to have accounting data about the different companies. The main source of information we used for this purpose is the SABE database (Spanish Balance Analysis System) where are collected the financial statements presented by firms at the Trade Register. We must point out that the data used corresponded to three years (1996 to 1998).

Analytic Procedures

Before applying the analysis to test whether or not significant performance differences exist between and within the groups, we have used the cluster analysis to obtain these strategic groups. In order to determine our group structure, we have followed the two-stage process recommended by various authors (Ketchen and Shook, 1996; Punj and Stewart, 1983), which firstly consists in using a hierarchical method to obtain the appropriate number of groups and then using a non-hierarchical method.

Because significant correlations appeared among competitive variables (see Table 1), the cluster analysis was carried out once a principal components analysis had been applied on these variables, seeking to summarise the information in a lower number of non-correlated components. Furthermore, thanks to this analysis we eliminate the problem derived from the different measurement units of the original variables.

4. RESULTS

Obtaining the strategic groups

Table 1 shows the means, standard deviations and correlations of competitive variables.

TABLE 1

Means, Standard Deviations and Correlations of Variables^a

Variables	Means	S.D.	1	2	3	4	5	6	7	8	9	10
1. Price	94.94	48.62										
2. Area	114.49	49.83	.96									
3. Bedrooms	3.33	1.06	.78	.82								
4. Bathrooms	1.89	0.47	.57	.62	.80							
5. Flooring	3.60	0.80	.61	.61	.61	.53						
6. Coverings	3.75	0.81	.65	.65	.62	.60	.88					
7. Woodwork	3.68	0.80	.64	.65	.60	.58	.89	.90				
8. Metalwork	3.41	0.74	.68	.69	.59	.54	.75	.75	.73			
9. Bathroom fittings	3.52	0.75	.73	.74	.58	.47	.74	.76	.79	.82		
10. Paint	3.55	0.74	.60	.60	.56	.48	.66	.65	.67	.74	.81	
11. Glazing	3.66	0.84	.58	.56	.50	.49	.62	.67	.66	.74	.71	.59

^a All correlations are significant with $p < .001$

Given the high correlation levels found across the original variables, we have carried out a principal components analysis. With this aim, in addition to observing these correlations, we have verified the suitability of the information in order to be able to use this statistical technique, if the two criteria we have used are met

(KMO index = 0.89; Bartlett's test with $p < 0.001$). Using the criteria of an eigenvalue above one, we have reduced the eleven original variables to two factors which account for 79% of the total variance. Table 2 shows the principal components analysis of competitive variables, after the varimax rotation has been carried out. The first factor is associated with those variables related to finish quality, so it can be given that denomination. In turn, the second factor includes the three competitive variables having to do with the dwelling size (area, bedrooms and bathrooms) and the price. This aspect shows us the great weight which the size of the dwelling has on its final price. Therefore, this component can be defined as price-size factor.

TABLE 2

Rotated Factor Matrix of Competitive Variables

Variables	Factors	
	Finish quality	Price-size factor
1. Price		.79
2. Area		.83
3. Bedrooms		.89
4. Bathrooms		.78
5. Flooring	.84	
6. Coverings	.82	
7. Woodwork	.84	
8. Metalwork	.81	
9. Bathroom fittings	.83	
10. Paint	.76	
11. Glazing	.75	
Eigenvalue	7.73	1.03
Explained variance (percentage)	70.30	9.39

Starting from the two extracted components, we have proceeded to carry out a hierarchical cluster analysis, using Ward's method and squared euclidean distance as a distance measurement. In order to determine the appropriate number of groups, we have used two criteria, namely, the observation of the dendrogram and the agglomeration coefficients analysis (Ketchen and Shook, 1996). Both aspects recommended a structure of four groups. This number of groups was used as an input for another cluster analysis, using a non-hierarchical method (K-means), which determined the final four-groups structure. Table 3 shows the characteristics of each of the groups obtained.

The observation of Table 3 leads us to consider that, with regard to the competitive variables of the built dwelling, the four-group structure that is obtained forms a continuum, where firms belonging to group 1, which build, on average, the most expensive, the largest (in terms of area and number of bedrooms and

TABLE 3

Competitive Characteristics of Strategic Groups

Variables	Strategic Groups			
	Group 1	Group 2	Group 3	Group 4
1. Price	199.35	94.89	77.89	55.71
2. Area	224.58	112.31	98.91	71.94
3. Bedrooms	5.00	3.42	3.38	2.00
4. Bathrooms	2.42	2.00	1.97	1.22
5. Flooring	4.50	4.15	3.13	3.06
6. Coverings	4.75	4.23	3.31	3.17
7. Woodwork	4.58	4.23	3.25	3.06
8. Metalwork	4.42	3.92	2.94	2.83
9. Bathroom fittings	4.58	4.04	3.00	3.00
10. Paint	4.33	4.08	3.13	3.00
11. Glazing	4.50	4.31	3.16	3.06
Number of enterprises	12	26	32	18

bathrooms) and the highest quality dwellings are located at one end, while, at the other end, are firms belonging to group 4, which build dwellings with a lower price, more reduced size and lesser quality levels. Between these two groups, we find two other groups of firms showing intermediate levels for the different competitive attributes. Thus, according to Miller and Dess (1993), Porter's framework could be improved by viewing it as providing important dimensions of strategic positioning rather than distinct strategies. Every firm can be represented on a plane, graphing the price (cost) on y-axis and differentiation (size and quality) on x-axis. Therefore, we have two dimensions, related to Porter's competitive advantages, rather than two distinct strategies.

Statistically significant differences are obtained among the four groups, both in factor scores and in each of the original competitive variables ($p < 0.001$ in all cases). On the other hand, in 93.2% of the cases, the classification obtained coincides with the cluster analysis and with that derived from the application of a discriminant analysis.

Strategic groups and firm performance

Firstly, we are going to carry out the analysis that has traditionally been used to study the link between the concept of strategic group and firm performance, that is to say, to test whether significant differences exist between strategic groups.

As we have explained, we are going to use as performance variables ROS and ROA, taking in both cases the mean for three years. A one-way analysis of variance (ANOVA) was used to test whether average performance levels differ among strategic groups. The results obtained appear on Table 4. These results show that, at a

TABLE 4

Descriptive Statistics and Test of Performance Differences Between Groups

	Descriptive Statistics ^a				ANOVA	
	Group 1	Group 2	Group 3	Group 4	F	p
ROS	7.16 (5.96)	7.63 (4.36)	6.91 (5.34)	7.69 (6.28)	.123	.946
ROA	7.42 (4.37)	7.43 (6.58)	6.50 (5.72)	6.99 (5.51)	.147	.931

^a Means, and standard deviations in brackets

significance level of 5 percent, no statistically significant differences appear among the groups we have obtained.

For our second analysis, we are going to carry out a test to determine whether or not differences in terms of profitability appear within the groups among group members. We will use, specifically, the test made by Cool and Schendel (1988). These authors, having information about the profitability levels of each firm for several years, use a firm returns as a data subgroup within each of the previously identified strategic groups, after which they test the hypothesis of equality of means for every strategic group. Since we have data available for a three-year period about the two return measures we are using, we can carry out this test. Since the assumptions of equal variances across the different firms were violated, a parametric ANOVA was not performed. Its non-parametric counterpart, the Kruskal-Wallis one-way analysis of variance, was therefore applied. The results obtained appear on Table 5. There is evidence of the existence of significant performance differences among firms within each strategic group.

TABLE 5

Performance Differences Within the Groups^a

	G1	G2	G3	G4
ROS	**	†	***	**
ROA	**	*	*	*

^a Obtained from the Kruskal-Wallis statistic† $p < 0.10$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

5. DISCUSSION

We would like to refer to various implications derived from this study. Firstly, as regards the group-firm performance relationship, the same as in other earlier investigations, no evidence is obtained of the predictive validity of strategic groups. In our research, this fact may be due to the used variables. Our approach is specifically based on the fact that because several firms belong to the same strategic group, this does not mean that these are identical firms, but merely that they

follow a similar competitive strategy, specifically product-market strategy. However, they can show differences in resources, which, according to the resource-based view, become the main determining factors for firm profitability. Therefore, group members may not realize similar returns to the extent that important differences exist in their stock of assets (Cool and Schendel, 1988). The predictive validity could increase when we take into account the factors which are going to exert the strongest influence on firm performance, according to the resource-based view. In this sense, it would be necessary to include not only tangible resources, but also other intangible ones, having to overcome the problems involved in measuring this type of resources. We must point out that some of the studies in which empirical support has indeed been obtained for the predictive validity of strategic groups have taken into account the firm resources in the definition of strategy they have used. Thus, we can refer to Mehra's (1996) study, where the resource-based view is used for the determination of the strategic groups in banking industry.

On the other hand, we would like to refer to Porter's (1980) generic strategies and firm performance. Firstly, a central issue that permeates research is the question of whether generic strategies are mutually exclusive or not (Dess and Rasheed, 1992). Porter considers each generic strategy to reflect a fundamentally different approach to creating and sustaining a competitive advantage, and a firm must make a choice between them or it will become stuck in the middle. However, there have been numerous findings that support the viability of combining more than one generic strategy (Hall, 1980; White, 1986; Kim and Lim, 1988; Hill, 1988; Murray, 1988; Wright *et al.*, 1991). A related issue seems to be whether Porter's low cost and differentiation strategies represent the two ends of a single continuum or two separate continua, that is, whether a firm's choice of strategy should be conceptualized as a point in a straight line or as a point in a two-dimensional space. In our research, we obtain evidence of that dimensional view.

Moreover, we have obtained that no significant performance differences exist among the four strategic groups. Considering these results, a possible explanation for the similar performance obtained by these groups of firms could be found in the fact that the higher prices paid by customers for larger, higher-quality dwellings are offset by the higher costs incurred in the construction of this type of houses. This matter has to do with the principle of equifinality, which opens up the possibility that all or some of the groups in a particular industry occupy positions yielding statistically equivalent performance levels.

Furthermore, apart from being able to say that the group with the highest price and differentiation levels (group 1) does not show significantly different profitability levels from those in the group with the lowest price and differentiation levels (group 4), the two intermediate groups (groups 2 and 3) do not significantly differ in their profitability levels from the two extreme groups either. With this fact, we can mention some implication about Porter's 'stuck in the middle' idea. Since

the 'stuck in the middle' position is occupied by groups 2 and 3, we do not obtain empirical evidence that these groups should have a significantly lower profitability level than that of groups 1 and 2. This leads us to think that the stuck in the middle, conceived as a non-desirable position because it implies lower performance to those in other positions, is not represented by groups 2 and 3, but will occupy some position located in such a way that a firm with lower prices can be found for stuck in the middle's differentiation level, or that a company offering higher differentiation levels for stuck in the middle's price may exist. Dess and Rasheed (1992) point out that when empirically investigating the viability of combining Porter's generic strategies, it is very important to distinguish between firms that are stuck in the middle and those that combine generic strategies. Often researchers have tended to group both of these types of firms together. This tendency to group stuck in the middle firms with "combination" firms can potentially lead to severe aggregation errors. In our research, groups 2 and 3 reflect these combination firms.

CONCLUSIONS

We conclude that for the strategic groups set up according to the business strategies of home building firms, and more specifically, according to the competitive characteristics of the built dwellings, that no significant performance differences in terms of profitability appear *between* groups, whereas significant differences do appear *within* each group.

In our view, our main contribution is the application of two analysis to study the strategic group-firm performance link. Thus, the traditional test of equality of returns among groups has been complemented with analysis of return differences within groups. In this case, we have used the test made by Cool and Schendel (1988). Moreover, we have used the construction industry as our context, and we have pointed out some insights about predictive validity of strategic groups and Porter's generic strategies.

As limitations for this research, the results obtained are subordinated to strategy and performance measurements and the procedure for group identification. Anyway, we believe that the analysis of the group-performance relationship (predictive validity) is neither the only *raison d'être* nor the only usefulness of strategic groups. In fact, this concept also has a descriptive validity, as it offers a vision of industries taking as a reference some strategic variables. Besides, it has been proved in some studies on cognitive groups (Reger and Huff, 1993) that groupings have a significant influence on strategic decision-taking and on the firms' positioning. Other interesting studies are the ones which have used the groups to analyse rivalry among firms, distinguishing rivalry between groups and rivalry within each

group. In this respect, it has been claimed that this rivalry can influence firm performance (Cool and Dierickx, 1993).

In relation to future research, apart from some ideas already mentioned previously, we must point out that this study has helped us to check that there is a wide variety of firms among the strategic groups that were set up. This result can be seen as giving support to the resource-based view, a logical and necessary step for future research being to study which are the specific resources that can become a source of competitive advantage and, therefore, as a factor determining firm profitability in this industry. In this respect, in order to study and detect these resources, a lot of attention must be paid, not only to the variables used to represent and measure them, but also to the methodology that is going to be used. These resources could be employed for the establishment of a new strategic grouping that has as its aim to test whether performance differences exist, in this case, among those groups and within groups.

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