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## **Analysing Linkages between Strategy, Performance, Management Structure and Culture in the Spanish Fresh Produce Industry<sup>1</sup>**

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### **Abstract**

This article reports the results of an industry-level study that seeks to identify empirical regularities between firm strategy, management style, organisational structure and performance in the Spanish fresh fruit and vegetable (fresh produce) industry using strategic group analysis. Groups were formed from key dimensions reflecting firms' strategic orientations. Performance levels did not differ systematically between strategic groups, but performance was found to be influenced by the alignment between entrepreneurial culture and organisational structure. A move towards greater flexibility and/or adopting an entrepreneurial style are both likely to contribute to an improvement in the overall performance of the firm.

**Keywords:** strategic groups, business strategy, management structure, fresh produce

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## **Introduction to Strategic Group Analysis**

Observed differences in performance levels by firms within a given industry have led to research on the strategies followed by firms belonging to different 'strategic groups' in order to identify the business orientation which yields the best performance. Strategic group analysis supposes that driving forces and success factors may differ systematically among firms (Mason and Ezell, 1993). Therefore, it becomes necessary to understand the complex patterns of inter-firm differences. The possibility of classifying a large number of firms in a reduced number of clusters makes the analysis of business heterogeneity more manageable (Flavian and Polo, 1999).

Accepting the presence of distinct groups with different strategies represents a departure from industrial organisation theory where firms are seen as similar – except for firm size – and all facing the same environment of threats and opportunities.

Many studies have focused on the relationships between strategic group membership and firm performance in order to identify the business orientation that yields the best performance (see Flavian and Polo, 2000 for a review). A central idea has been to use mobility barriers to explain inter-group performance differences. However, inconclusive results from empirical studies on inter-group performance differences have pointed to the importance of individual firm strategies within identified groups. Cool and Schendel (1988) referred to the 'risk profile' of individual firms, suggesting that 'group members may not realise similar returns to the extent that important differences exist in their stock of assets' (p. 209). Lewis and Thomas (1994) explored the issue of heterogeneity within groups and found that for some performance measures, within-group variation dominated the between-group variation. Similarly, Thomas and Venkatraman (1988) argued that 'rejection of performance differences across groups implies that attention should be focused on 'within-group' differences in performance and on the identical skills and assets of different players' (p. 548). This suggests that other variables are significant – such as organisational culture and structure – and/or that the individual firm may be the important unit of analysis for explaining performance differences.

Latterly performance research has refocused into new areas: innovation in the Spanish food and drink industry (Garcia Martinez and Briz, 2000); the degree of alignment between firm strategy and IT strategy (Cragg et al., 2002); gender effects on management on firm performance (Dwyer et al., 2003); and the effect of American-style high-performance work systems on organizational performance in Pacific Rim firms (Bae et al., 2003).

One of the most fertile areas has been the effect of supply chain management and interfirm relationships on performance (Ittner et al., 1999). Issues associated with supply chain management include analysis of the impact of quality management, supply management, and customer relations practices on corporate performance (Tan et al., 1999), the impact of integrative supply chain

structures (Vickery et al., 2003); interfirm supply chain coordination and better logistics performance in the US food industry (Stank et al., 1999); and approaches to performance assessment in a supply chain context (Milgate, 2001; Chan and Qi, 2003).

Among typical constructs used for manufacturing industries, recent research has continued to emphasised the importance of export orientation in New Zealand (Dean et al., 2000); manufacturing strategy in Spanish industries (Avella et al., 2001); the integration, or alignment of manufacturing and marketing/sales strategies in the US (O'Leary-Kelly and Flores, 2002); manufacturing flexibility among SMEs in Taiwan (Chang et al., 2003); and the impact of organizational culture on firm performance (Chan et al., 2004).

An interesting methodology among the recent 'classical' analyses is that of Lee and Habte-Giorgis (2004) who took a sequential approach to firms' strategy, export activity, and performance in a section of the US manufacturing industry. The research reported here adopted a focus on some of the classical variables affecting firm performance, but also reflected the perception of the growing significance of interfirm relationships on performance. A sequential and innovative approach was used to analyse business heterogeneity among Spanish fruit and vegetable (fresh produce) exporting firms by first identifying groups of competitors pursuing similar marketing strategies, and then testing the linkages between strategic group membership and firm performance. Finally, the additional dimensions of organisational culture and structure were incorporated into the analysis of firm heterogeneity. This is of interest since it has been shown empirically that a poor fit between management culture and organisational structure is related to poor business performance (Ward and Duray, 2000).

The academic aim was to make theoretical advances by exploring the interactive effects of management style and organisational structure on business performance, and to determine whether an alignment between the entrepreneurial orientation of senior management and organisational structure is associated with firm performance.

The study is of practical importance too. The Spanish fresh produce industry is notable for the contribution that it makes to the Spanish agricultural economy, accounting for (inter alia) around 50% of the final vegetable production and around 32% of the total agricultural production. Fresh produce exports reached 1.12 billion Euros in 2001 (a 10% increase from the previous year), which represents almost half of the total agrifood exports (Pozancos, 2002). Moreover, Spain has a leading position in international trade as the largest world exporter of fresh produce. However, the requirements of an increasingly demanding market-place are such that the sector can no longer rely on traditional notions of performance but, like other sectors and countries, must develop and sustain competitive business strategies (Poole, 2000).

This sector of the Spanish economy has not been thoroughly researched and the implications of the study should advance the understanding of the industry and

enable both public and private sector participants to take appropriate policy and private initiatives to enhance business performance. Furthermore, the insights gained will be relevant to practitioners in other countries.

The paper is organised around seven sections. After this introduction, Section two explains the research methodology. Section three presents the steps followed to identify strategic groups, and section four profiles the resulting clusters. Sections five and six give an account of further analyses, which examine the linkages between strategy, performance, corporate culture, and organisation structure. Finally, the paper provides conclusions and recommendations.

## **Research Methodology**

### *Selection of Strategic Variables*

Variables should represent the relevant aspects from a strategic perspective, and thereby specific variables will be different depending on the industrial sector being studied (Thomas and Venkatraman, 1988). To that end, in order to establish the reliability and representativeness of the variables used in this study, the questions in the survey were refined through in-depth executive interviews with 10 senior managers from fresh produce companies in Spain, and representatives of trade organisations.

Four marketing constructs were developed to identify strategic typologies consistent with the literature surveyed (e.g. Strandskov et al., 1999; Hooley et al., 1992; Cool and Schendel, 1987, 1988). The measures chosen are summarised in Table 1, and a description of each strategic component is given below:

**Marketing objectives:** A starting point in any strategy development is the firm's strategic objectives/goals. Porter (1980) characterised the sources of competitive advantage as low cost or differentiation. However, in practice, firms can pursue either or both – or even other strategies.

Eleven questions relating to various aspects of marketing strategy (i.e., quality, consumer service, new product development and economies of scale) were selected to measure a business' competitive strategy. Respondents were asked to indicate the importance of each marketing strategy to their firm's overall strategy using a five-point scale ranging from 1 ('Not at all important') to 5 ('Extremely important').

**Strategic focus:** Naver and Slater (1990) proposed the following three behavioural components: customer orientation, competitor orientation, and interfunctional co-ordination. The first two cover all activities involved in acquiring information on buyers and competitors in the target market and disseminating it throughout the firm's functional areas. The third factor (based on the customer and competitor information) encompassed the firm's efforts to create superior value for its customers through a coordinated and cross-functional management structure.

This study included seven questions to determine the strategic focus of the sample firms. Five questions were directed to measure customer orientation: proximity to export markets; breadth of ranging collaboration with customers; presence of experienced/trained personnel; existence of a dedicated supply chain; and the extent of personal contacts with overseas distributors. Two additional questions measured firms' responsiveness to competitors and inter-functional co-operation respectively. Each response to attitudinal statements was measured using the above five-point scale.

**Market targeting:** Targeting, or the scope of the business strategy, includes factors like breadth of product line, the range of buyer segments served, and the geographical reach of product-market strategy. These three constructs relate to both Miles and Snow's (1978) typology and Porter's (1980) generic strategies. Geographical scope was measured as the percentage of total sales generated abroad. Two constructs were included to determine product scope: the extent to which firms seek to offer a broad range of products, and willingness to supply distributor brands. Customer scope was accounted for by the extent to which firms expand by penetrating established markets, and by developing new markets for their products. Both product and customer scope questions were measured along attitudinal statements using the previous five-point scale.

**Marketing positioning:** A firm can be differentiated favourably from its rivals, *inter alia*, by providing superior service, using a strong brand name, offering innovative features, and providing superior product quality (Day and Wensley, 1988). These positioning strategies expand beyond physical product attributes to incorporate all activities and linkages of the business. Additionally, firms can differentiate in terms of cost and price.

Respondents were asked to indicate on a five-point scale ranging from 1 ('Much lower/poorer than competitors') to 5 ('Much higher than competitors') the positioning of their main products with respect to their main competitors on the following dimensions: price, quality, service, marketing, branding, innovativeness, and technological level.

### *Sampling Frames and Data Collection*

Data were gathered through a large-scale postal survey sent to Spanish fresh produce companies. Two sampling frames were used. The Federation of Fruit & Vegetable Producers and Exporters (FEPEX) provided a list of its associates, which accounted for more than 70% of fruit and vegetable exports (excluding citrus fruits). Information on citrus producers was obtained from the Spanish Citrus Management Committee, a professional association representing the majority of Spanish citrus fruit exporters.

The questionnaire was pre-tested among senior managers of 7 companies and 5 trade association representatives who completed the draft questionnaire and provided feedback on the comprehensiveness and phrasing. Copies of the final

questionnaire were sent to senior managers. The initial mail-out contained a copy of the questionnaire, a personal letter to respondents explaining the objectives of the research and requesting their co-operation, and a copy of the letters issued either by FEPEX or the Spanish Citrus Management Committee depending on the respondent's membership. A reminder letter with an additional copy of the questionnaire was posted five weeks after the mail-out, and a second remainder six weeks later, which noticeably improved response rates.

Completed questionnaires were received from 132 firms, giving a response rate of 20%. This was considered satisfactory given the inherent problems with international postal questionnaires. Of these responses, 34 came from citrus producers (16% response rate) while the remaining 98 came from horticultural businesses (22% response rate). 70% of respondents were SMEs (less than 50 permanent/regular employees). As an indication of industry orientation towards export markets, 72% of respondents indicated an export intensity (% exports/sales) greater than 75%, with 23% of respondents involved in export activities for over 20 years.

### **Identification of Strategic Groups**

A number of multivariate analysis techniques were applied to identify strategic groups in line with recent food industry studies in this area (Traill, 2000; Flavian and Polo, 1999; Strandkov et al., 1999; Oustapassidis, 1998).

Initially, Cronbach's Alphas were computed to measure the reliability of the initial constructs. The analysis was performed separately for the items of each construct indicator. The scale reliability values (coefficient  $\alpha$ ) and item-to-total correlations are reported in Table 1. Reliability for marketing objectives, strategic focus and marketing positioning scales exceeded 0.7, the threshold recommended by Nunnally (1978) for exploratory research. The market-targeting construct did not meet this criterion, and was excluded from further analysis due to its low reliability.

To control for possible industry effects, reliable strategic variables were compared between citrus and other horticultural producers. ANOVA results showed statistically significant differences between both groups for only 2 of the 25 strategic variables at the 5 per cent significance level. Hence, industry effects were minimal in the study, and data were pooled for further analysis.

Factor analysis was conducted to measure the underlying structure of 25 marketing strategy variables, and to address the problem of multicollinearity among variables in subsequent analyses (Ketchen and Shook, 1996). A varimax rotation was conducted and the standard criterion of an eigenvalue  $>1$  was applied to determine the appropriate factor structure. Six factors were extracted and collectively accounted for 63% of the total variance (Table 2).

**Table 1: Reliability Analysis**

	<i>Cronbach Alpha</i>	<i>Item-to-Total Correlation</i>
<b><i>Marketing Objectives</i></b>	.7381	
Development of new products/varieties		.4320
High quality products		.2694
Differentiate products/services		.3673
Market research to identify new products/services		.3759
Reduction of production costs		.3689
Economies of scale in marketing		.4317
Adoption of certified production systems (i.e. traceability, integrated production)		.3492
Customer service		.4916
Big marketing effort		.4972
Competitive pricing		.3237
Control of channels of distribution		.3856
<b><i>Strategic Focus</i></b>	.7815	
Proximity to Export Markets		.3205
Wide-ranging collaboration with customers (i.e. category management, ECR)		.5320
Experienced/trained personnel		.6247
Dedicated supply chain		.4268
Personal contacts with overseas distributors		.4904
Respond rapidly to competitors' actions		.6105
Information shared among functional areas		.5765
<b><i>Market Targeting</i></b>	.4273	
Penetrate established markets		.2850
Develop new markets for the product		.2739
Broad range of products and services		.2213
Manufacturing of distributor brands		.2757
% total firm sales generated abroad		.0677
<b><i>Marketing Positioning</i></b>	.8897	
Price positioning		.6837
Quality positioning		.7366
Service positioning		.7566
Marketing effort		.6278
Brand positioning		.6321
Innovativeness		.6502
Technological positioning		.7094



**Table 2: Factor Analysis of Marketing Strategy Variables**

Item	F1	F2	F3	F4	F5	F6
	Undifferentiation	Consumer Focus	Distribution Orientation	Price Differentiation	Marketing Differentiation	Customer Orientation
Quality level of main products	<b>0.844</b>	0.059	-0.116	-0.100	0.004	0.237
Service level offered to customers	<b>0.841</b>	0.045	-0.028	0.136	0.080	0.014
Price level of main products	<b>0.807</b>	-0.058	-0.003	-0.080	-0.001	0.232
The firm's technological level	<b>0.778</b>	0.152	-0.068	0.181	0.125	-0.180
Brand awareness of main products	<b>0.702</b>	-0.021	0.175	-0.241	0.091	0.086
Innovativeness	<b>0.689</b>	0.178	0.041	0.135	0.314	-0.134
Level of marketing effort	<b>0.663</b>	0.073	0.381	-0.097	0.242	-0.318
Information shared among functional areas	0.099	<b>0.740</b>	0.149	0.201	0.140	0.092
Development of new products/varieties	0.117	<b>0.711</b>	0.147	0.042	0.209	-0.110
High quality products	-0.032	<b>0.603</b>	-0.103	-0.007	0.048	0.106
Experienced/trained personnel	0.104	<b>0.594</b>	0.207	0.426	-0.014	0.206
Market research to identify new trends	0.012	<b>0.553</b>	0.349	-0.213	-0.028	0.345
Dedicated supply chain	0.076	<b>0.525</b>	0.240	0.340	-0.016	-0.327
Control of channels of distribution	0.099	0.280	<b>0.670</b>	0.200	-0.099	0.229
Proximity to export markets	-0.131	0.040	<b>0.620</b>	0.109	0.171	0.026
Personal contacts with overseas distributors	0.127	-0.038	<b>0.620</b>	0.402	-0.256	0.207
Big marketing effort	0.075	0.389	<b>0.526</b>	0.129	0.147	0.089
Competitive pricing	-0.065	0.073	0.114	<b>0.773</b>	-0.009	0.251
Reduction of production costs	-0.075	0.127	0.306	<b>0.606</b>	0.090	-0.055
Respond rapidly to competitors' actions	0.121	0.347	0.222	<b>0.547</b>	0.156	0.446
Economies of scale in marketing	0.132	-0.026	0.163	0.165	<b>0.805</b>	-0.052
Adoption of certified production systems	0.118	0.221	-0.038	-0.073	<b>0.715</b>	0.048
Differentiate products/services	0.211	0.119	-0.025	-0.001	<b>0.697</b>	0.217
Customer service	0.024	0.147	0.232	0.276	0.263	<b>0.680</b>
Wide-ranging collaboration with customers	0.127	0.109	0.461	0.235	0.010	<b>0.587</b>
<i>% of total variance</i>	<b>17.2</b>	<b>11.6</b>	<b>9.6</b>	<b>8.8</b>	<b>8.5</b>	<b>7.2</b>
<i>Cronbach Alpha</i>	<b>0.8897</b>	<b>0.7468</b>	<b>0.6636</b>	<b>0.6630</b>	<b>0.6846</b>	<b>0.7032</b>

The cut-off for interpretation purposes was factor loadings greater or equal to  $\pm 0.5$  on at least one factor. These loadings may be considered to be a conservative criterion (Kim and Mueller, 1978; Nunnally, 1978).

As Table 2 shows, a highly interpretable simple structure factor solution was obtained (i.e. only one loading on any factor for each variable). Cronbach alphas are also reported. All six factors show reliable scales greater than 0.6, the recommended limit in explanatory analysis (Robinson et al., 1991). These factors are summarised below:

- Factor 1: 'Undifferentiation': adoption of a wide range of strategies;
- Factor 2: 'Consumer Focus': a commitment to satisfy changing consumer demands by investing in high quality products and experienced personnel;
- Factor 3: 'Distribution Orientation': associated with channel management and 'push marketing';
- Factor 4: 'Price Differentiation': a single underlying construct comprising price-related variables;
- Factor 5: 'Marketing Differentiation': a commitment to differentiation of products and services and quality assurance schemes;
- Factor 6: 'Customer Orientation': emphasis on customer services and joint collaboration ('Customer' here means the immediate buyer of the firm's products, rather than the final consumer).

Resultant uncorrelated factor scores were used as the input variables to classify firms. Though original information may be lost by using factor scores, this method has the advantage of generating orthogonal dimensions for subsequent analysis and reducing potential problems of 'noise' due to interdependence of input data (Douglas and Rhee, 1989).

Determining the appropriate number of clusters is paramount in strategic group analysis. This study followed a standard 2-stage procedure. Ward's hierarchical method based on squared Euclidean distances was initially applied to determine the number of groups and the initial cluster centres for subsequent K-means cluster analysis. The criteria for formation of homogeneous clusters were the simultaneous analysis of the total variance explained by each cluster stage ( $\sigma^2$ ) (50% in this study) and the increase in the variance explained by the division of the sample into the immediate superior number of clusters ( $\Delta\sigma^2$ ) (less than 5%) (Fiegenbaum and Thomas, 1990, 1994). Hence, the appropriate number of clusters was determined when both criteria were simultaneously satisfied:

$$\sigma^2 \geq 50\% \text{ and } \Delta\sigma^2 \leq 5\%$$

Results suggested a seven-cluster solution as the most appropriate representation of the data. A final seven-cluster solution using K-means cluster analysis was then developed using the initial seed points from the Ward's

method. The procedure defined seven groups<sup>2</sup> with the centroids shown in Table 3. All six variables exhibited significantly different patterns at the 1 percent significance level. In addition, a MANOVA test confirmed that the groups had a significantly different profile.

## Characterising the Strategic Groups

Based on the six statistically significant cluster means for the derived factor scores and a number of profiling variables not included in the cluster solution, the seven strategic groups can be described as follows:

*There were three clusters following a focused strategy:*

CL6: Marketing Differentiators - Firms within this cluster were characterised by a strong commitment towards differentiation of product and services, such as the adoption of quality management schemes to satisfy increasing demands for food safety by international customers. Profiling variables like the high percentage of sales of branded products confirmed this marketing orientation. CL6 marketing focus was coupled with a long-standing export commitment (over 26 years- the longest among all groups), with all products being sold abroad. This has resulted in the development of important distribution networks and personal contacts with overseas distributors, as indicated by the high percentage of produce supplied directly to foreign retailers and importers.

CL3: Distributor Oriented - CL3 exemplified the establishment of personal supply chain relationships with distributors and control of distribution channels. Firms' commitment to 'push marketing' and to establishing the required infrastructure/commitment for its execution were indicated by high expenditures on advertising and sales promotions. Firms within this cluster were the newest in the export market (average of 9 years) with below-average export sales volumes. As a result, their customer base was more diverse with a significant share of their products being sold in the domestic market.

CL5: Price Differentiation – It is the largest group with 25.2% of the sample. CL5 strategic orientation focused on competitive pricing through rapid response to competitors' actions and control/reduction of production costs. The focus on the competitor environment relegated customer demands to secondary importance (scores for market-oriented factors were negative). Export intensity was among the highest with a particular focus on foreign importers as the main business partner. Fresh produce were mostly sold as branded goods, though the share of own label products was the highest of all groups.

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<sup>2</sup> Though clusters are not well balanced, they still provide a useful insight into the different marketing strategies followed by Spanish fresh produce companies.

*Three clusters exhibited more diverse strategies:*

CL1: Market Orientation (supported by Price Differentiation) - CL1 exhibited an outward strategic approach by focusing on the requirements imposed by its customers and demands from final consumers. Changing demands were satisfied by new product development and closer collaboration with customers through a wide range of marketing initiatives. The strategy was supported by pricing initiatives to maintain its competitive advantage.

CL7: Market Orientation (supported by Marketing Differentiation) - A similar outward orientation was also exhibited by CL7, though the complementary factor in this group was marketing characteristics such as the adoption of certified production systems for enhanced traceability and quality assurance. This cluster was characterised by important expenditures on promotion and R&D, with the highest mean scores of all clusters for both variables. The group customer base was very diverse, with most products being sold as branded products. It showed the lowest export intensity of all groups.

CL2: General Differentiators - This group also showed a more diffuse strategy with several factor scores exhibiting high values. Distinct features of this cluster were its large firm size and high traded volumes. Export intensity was above average and businesses had a long history in export activities (23 years on average). Expenditures on R&D and advertising/promotional activities were also above average. Products were mostly sold as branded goods as in previous groups, though the share of own label was above average.

*The final cluster appeared to have no clear strategy:*

CL4: Undifferentiation - It is one of the largest groups containing 24.3% of the sample. This cluster showed a positive, though low, score for only one factor. Based on the profiling variables, CL4 did not show any distinct feature, with cluster mean values just below or above overall mean scores. The moderate positive score for 'undifferentiation' suggests that some attention is given to elements of the marketing mix; the moderately negative scores for price differentiation, marketing differentiation and customer orientation suggest less emphasis on cost and price competition and on servicing customer needs. There were lower scores still for maintaining close organisational linkages to customers and also for servicing the preferences of final consumers. The next section reports results to test the hypothesis that profitability levels differ systematically between strategic groups.

## **Strategic Groups and Business Performance**

The present study was set to test whether performance levels differ between strategic groups. Five performance indicators were introduced in this analysis, and for each measure, respondents were asked to indicate the development of the firm's main products over the last three years vis-à-vis their competitors, using a five-point scale ranging from 1 ('very unsatisfactory') to 5 ('very satisfactory').

**Table 3: Strategic Marketing Groups**

Factors		Clusters							F Ratio	Significance
		1	2	3	4	5	6	7		
F1	Undifferentiation	-0.351	0.331	0.130	0.269	0.399	-3.209	0.064	21.820	.000
F2	Consumer Focus	0.847	0.617	0.216	-0.612	-0.470	0.050	0.743	12.589	.000
F3	Distribution Orientation	0.274	0.503	1.077	-0.631	0.418	0.225	-1.389	19.987	.000
F4	Price Differentiation	0.497	-0.415	-0.607	-0.274	0.736	0.271	-0.307	12.345	.000
F5	Marketing Differentiation	-1.722	0.710	-0.050	-0.282	0.389	1.134	0.368	25.614	.000
F6	Customer Orientation	0.776	0.537	-0.973	-0.278	-0.078	-0.084	0.832	11.210	.000
<b>Number of cases</b>		<b>11</b>	<b>21</b>	<b>8</b>	<b>25</b>	<b>26</b>	<b>4</b>	<b>8</b>		
<b>Percentage of respondents</b>		<b>10.7%</b>	<b>20.4%</b>	<b>7.8%</b>	<b>24.3%</b>	<b>25.2%</b>	<b>3.8%</b>	<b>7.8%</b>		

**Table 4: Strategic Groups' Performance Profile**

Performance Indicators	Average	Clusters							F	Scheffé
		1	2	3	4	5	6	7		
Overall financial performance	3.36	2.45	3.52	3.29	3.44	3.56	na	3.38	2.596*	ns
Profit growth	2.86	2.18	2.81	2.86	3.00	3.00	na	3.13	1.379	ns
Market share	3.09	2.60	3.10	3.00	3.08	3.20	na	3.50	0.949	ns
NPD efficiency	3.01	2.36	2.89	3.29	3.00	3.28	na	3.13	1.868	ns
Marketing Effectiveness	2.40	1.67	2.38	3.00	2.43	2.54	na	2.29	2.420*	ns

\* (p<0.05)

Self-reported performance measures have been used in a number of studies (Douglas and Rhee, 1989; Hooley et al., 1992; Hyvonen and Kola, 1995), but their use has been criticised because of their subjectivity. However, the study of Dess and Robinson (1984) on subjective performance measures showed a reasonably high correlation between self-reported objective measures and subjective ratings.

A one-way ANOVA test was used to assess association between group membership and each of the performance indicators. The Scheffé test was used to determine which group means were different from each other. Results are summarised in Table 4. Given the reduced number of observations, CL6 was excluded from the analysis. Between-group differences were statistically significant for overall financial performance and marketing effectiveness at the 5% significance level. For the remaining performance indicators, however, within-group variance dominated between-group variance, supporting the hypothesis that strategic heterogeneity within groups is one cause of performance differences within groups (Lewis and Thomas, 1994).

CL5 and CL2 showed the highest overall financial performance, outperforming the remaining groups, in particular CL1. In terms of marketing effectiveness, CL5 also emerged as a 'high performer' group together with CL3. Despite a weak financial performance, the commitment of firms in CL3 to 'push marketing', with significant investments in advertising and sales promotion, resulted in an effective marketing performance.

The performance indicators that best distinguished between strategic groups were identified using multiple discriminant analysis. Five functions were obtained. The first two accounted for 79% of the total variance, and were considered as the most effective indicators in discriminating between strategic behaviour and levels of performance. Function 1 related to the overall financial performance, marketing and NPD effectiveness, while function 2 was market share. Hence, non-financial indicators appeared to be more effective in discriminating between strategic groups than financial measures. Profitability growth, in particular, was a poor discriminator. Similar, results were also reported by Hooley et al. (1992).

Table 5 shows the percentage of companies in each cluster indicating a satisfactory performance<sup>3</sup> for the best discriminant performance measures. Clusters showed a distinct performance profile depending on the nature of the performance criteria, with the exception of marketing effectiveness where all clusters but one showed disappointing performance levels. These findings support the proposition that business performance is not a unitary concept, such as neo-classical profit maximisation, but one which consists of multiple objectives, and implemented through multiple strategies, possibly both short and long-term. Results showed important trade-offs between performance measures

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<sup>3</sup> % of respondents who indicated a 'somewhat satisfactory' (score of 4) or 'highly satisfactory' (score of 5) performance.

depending on firms' strategic orientation, which managers must juggle to satisfy different stakeholders.

Market-oriented companies were expected to be high performers. However, results did not support this assumption. CL2 performed best financially with the highest percentage of companies reporting better overall financial performance. Similarly, it reported the highest rate of new product development of all groups. These results could be explained by the significant amount of resources invested by CL2 in R&D. However, while similar efforts were devoted to advertising and promotional activities, evidence suggested an ineffective marketing strategy. Hence, the result indicated a mismatch between the cluster's strategic focus and its strategic actions, which will be addressed in the next section.

CL7 showed the best performance in terms of market share, reflecting the group's focus on the immediate customer and final consumer. However, while investments in R&D led to efficient NPD, similar efforts on advertising and sales promotions did not translate into an effective marketing strategy. CL1 showed the worst performing strategy with the lowest percentages for all criteria. Marketing effectiveness in this group was nil despite the cluster's market orientation.

These results indicate that while a consumer orientation is necessary, it alone is not a sufficient strategy to create a differential advantage and guarantee high performance. Complementary elements like a well-developed marketing strategy or marketing planning are important predictors of business performance. Results also showed the importance of a competitive pricing strategy in order to achieve adequate performance levels, as shown by CL5.

**Table 5:** Performance Differences between Strategic Groups

Performance Indicators	CL1	CL2	CL3	CL4	CL5	CL6	CL7
Overall financial	0%	48%	29%	44%	44%	na	38%
Market share	20%	27%	38%	29%	36%	na	50%
NPD efficiency	9%	37%	29%	24%	36%	na	25%
Marketing Effectiveness	0%	5%	33%	5%	8%	na	0%

## Strategic Groups and Organisational Culture and Structure

Having rejected the hypothesis that business performance differs systematically between strategic groups, this section of the paper introduces the interactive effect of management style and organisational structure on business performance to test the hypothesis whether an alignment between top management's entrepreneurial orientation and organisational structure is associated with the level firm performance. As noted earlier, it has been empirically shown that a poor strategic fit is associated with poor performers (Ward and Duray, 2000). Morgan and Strong (2003) study on high technology, industrial manufacturing firms in the UK found a positive association between management orientations that were defensive, future-oriented and employed

high levels of analytical capacity. Strategies that were proactive, risky, and aggressive were not found to be successful.

### *Entrepreneurial Style Index*

Seven variables were introduced to measure risk taking, innovation and proactiveness as distinguishing characteristics of an entrepreneurial firm (Miller, 1983) (Table 6). Respondents were asked to self-rate their corporate attitude on each management style measured on a five-point Likert scale ranging from 1 ('totally inadequate') to 5 ('totally adequate').

The rating of these items was then averaged to arrive at a single entrepreneurial style index for each business: the higher the index, the more entrepreneurial the firm. Since the items in this scale focus on different areas of management style, they were factor-analysed in order to assess their 'factorial validity' (Allen and Yen, 1979). Results produced a single structure factor solution, suggesting that it was appropriate to combine these items in a single scale. In addition, the Cronbach alpha of the scale was 0.82, indicating the reliability of the construct.

### *Organicity Index*

Five variables were introduced to measure 'organicity' in the sense of non-mechanistic structures: flexibility in administrative relations, informality, authority vested in situational expertise, etc. (Colvin and Slevin, 1988; Khandwalla, 1977) (Table 6). The current capabilities of firms on each

**Table 6:** Entrepreneurial Style and Organicity Indexes

	<b>Cronbach Alpha</b>	<b>Item-to-Total Correlation</b>
<b>Entrepreneurial Style Index</b>	<b>0.8236</b>	
Risk taking		0.3925
Product superiority		0.6113
Innovativeness		0.5322
Cross-functional collaboration		0.5283
Rapid identify changes in market conditions		0.6726
Business planning		0.7352
Generate profits sufficient to fund future operations		0.5091
<b>Organicity Index</b>	<b>0.8671</b>	
Flexibility to respond to changing circumstances		0.5585
Implement employee skill development programmes		0.6692
Structure organisation to optimise workforce		0.7883
Provide working environment to optimise workforce effectiveness		0.7686
Create and operate appropriate control systems		0.6718



organisational structure measure were self-assessed using the same five-point Likert scale as with entrepreneurial style. The rating of these items was then averaged to arrive at a single organicity index for each business: the higher the index, the more 'organic' the firm's structure. The Cronbach alpha of the scale was 0.87, and factor analysis also provided a single factor solution.

The entrepreneurial and organicity indexes for each cluster are shown in Table 7. A one-way ANOVA test indicated a statistically significant difference between clusters for entrepreneurial style ( $p < 0.01$ ) and organisational structure ( $p < 0.10$ ). Clusters were then classified as entrepreneurial/conservative and organic/mechanistic according to whether their entrepreneurial style and organicity scores were above or below the overall mean value of these indices (3.36 and 3.23 respectively).

Next, the linkage between business performance and management style-organisational structure was analysed. Performance was measured as a combined index based on the discriminant performance measures presented in section 5: the higher the index, the better the overall performance. The Cronbach alpha of the scale was 0.7, and factor analysis also provided a single factor solution.

Table 7 shows the performance index for each cluster. A one-way ANOVA test confirmed statistically significant differences ( $p < 0.01$ ) between clusters regarding their overall performance. Results indicated that a move towards greater organicity and/or adopting an entrepreneurial style are both likely to contribute to an improvement in the overall performance of the firm.

**Table 7: Strategy, Performance and Management Style**

	Performance*	Entrepreneurial Style*	Organicity**
<b>Conservative/mechanistic</b>			
CL1	2.29	2.85	2.91
CL4	3.01	3.14	2.97
CL6	na	3.18	3.21
<b>Entrepreneurial/mechanistic</b>			
CL2	2.98	3.45	3.18
<b>Entrepreneurial/organic</b>			
CL3	3.15	3.37	3.44
CL5	3.16	3.61	3.51
CL7	3.11	3.76	3.58

\* ( $p < 0.01$ )

\*\* ( $p < 0.10$ )

#### Conservative-mechanistic firms (style $\leq 3.36$ and organicity $\leq 3.23$ )

- CL1: showed the lowest indices for both entrepreneurial style and organicity despite its outward-oriented strategic focus - Market Orientation. Performance levels, both financial and non-financial, were low.
- CL4: lacked strategic focus and had an unstructured, reactive management style. The group was unable to respond quickly to changes in the environment, and lacked flexibility and co-ordination between departments. Strategic actions were opportunistic, and the group was unable to generate sufficient profits to fund future operations, resulting in average performance levels ('stuck-in-the-middle').
- CL6: exhibited a reactive, conservative management behaviour despite being one of the most focused groups in terms of strategic variables. Results indicated a rigid organisation with lack of communication between departments, unable to anticipate changes in market conditions. As a result, the group was unable to offer superior products or successfully introduce new products.

#### Entrepreneurial-mechanistic firms (style $> 3.36$ and organicity $\leq 3.23$ )

- CL2: a dynamic and progressive management style resulted in a high level of financial performance. However, the large size of firms within this cluster conferred a lack of internal flexibility to react promptly to market changes. Marketing effectiveness was weak despite important investments in promotional activities.

#### Entrepreneurial-organic firms (style $> 3.36$ and organicity $> 3.23$ )

- CL5: showed a balance between more positive structural and management style options. Results indicated an alignment between the cluster's focused strategic orientation and its internal structure and management culture.
- CL7: a flexible internal structure has enabled the group to outperform in terms of market share in line with the group's strategic focus on the market.
- CL3: showed a commitment to 'push-marketing' and important investments in advertising and sales promotion, and was the highest performer for market effectiveness.

## Conclusions and Managerial Implications

This paper has explored business heterogeneity in the Spanish fresh produce sector by grouping firms into homogeneous groups –'strategic groups'– characterised by similar strategic orientations defined in terms of key marketing dimensions. It is evident that strategic groups can be identified, and Table 8 provides a summary of these profiles. Results support the proposition that, in practice, firms pursue different strategic objectives simultaneously.

**Table 8: Strategic Groups Summary**

Strategic Groups	Strategic Focus	Characteristics	Performance	Management Style / Organisational Structure
CL1 (n=11)	Market Orientation (Price Differentiation)	<ul style="list-style-type: none"> <li>◆ wide customer base</li> <li>◆ branded products</li> </ul>	Worst performance overall	Rigid organisational structure where management style is reactive and opportunistic
CL2 (n=20)	General Differentiators	<ul style="list-style-type: none"> <li>◆ large firms</li> <li>◆ long standing commitment to export activities</li> <li>◆ high investments on R&amp;D and advertising/promotional activities</li> <li>◆ high proportion of own labels</li> </ul>	Best across most criteria, except marketing effectiveness	Dynamic management style but lack of organisational flexibility
CL3 (n= 8)	Distributor Orientation	<ul style="list-style-type: none"> <li>◆ Small in size and new in the export market</li> <li>◆ high expenditure on advertising and sales promotion (push-marketing)</li> <li>◆ diverse customer base</li> <li>◆ branded products</li> </ul>	Best across non-financial indicators	Pro-active management style within a conservative organisational structure
CL4 (n=25)	Undifferentiated	<ul style="list-style-type: none"> <li>◆ diverse customer base</li> <li>◆ medium export intensity</li> </ul>	Mediocre, expect on overall financial performance	Unstructured, reactive management approach. Strategic actions are opportunistic
CL5 (n=26)	Price Differentiation	<ul style="list-style-type: none"> <li>◆ High export intensity with foreign importers as the main business partner</li> <li>◆ High proportion of own label products</li> </ul>	Good across most criteria, except marketing effectiveness	Pro-active management culture and flexible internal structure
CL6 (n=4)	Marketing Differentiation	<ul style="list-style-type: none"> <li>◆ branded products</li> <li>◆ long-standing export focus                             <ul style="list-style-type: none"> <li>- high export intensity</li> <li>- all products go to export markets</li> </ul> </li> <li>◆ well-developed distribution network</li> </ul>	na	- Reactive, conservative management behaviour resulting in a rigid organisation
CL7 (n=7)	Market Orientation (Marketing Differentiation)	<ul style="list-style-type: none"> <li>◆ low export intensity</li> <li>◆ important investments on promotional and R&amp;D activities</li> <li>◆ diverse customer base with most products being sold as branded products</li> </ul>	Mediocre, expect on market share	- Flexible internal structure with a pro-active approach to market changes and strategic actions

Strategic groups were tested for performance differences using both financial and operational measures. Results did not support the hypothesis that business performance differs systematically between groups in the Spanish fresh produce sector, nor that strategic groups are constructs which have predictive validity in determining performance differences (Lewis and Thomas, 1994). There could be some intra-group heterogeneity along a small subset of strategic dimensions, which could lead to performance differences within groups.

For each firm within a group, it is probable that the portfolio of strategic objectives may be ordered according to a different hierarchy. The ordering of objectives may vary over time, as a result of changes in the external environment, and particularly of changes in the internal environment. These changes may take place in the quality and quantity of firm resources, and also will reflect the interests of different managers and other stakeholders. This calls for intra-group analysis focused on differences in the asset profiles, capabilities and skills needed to implement strategies, and on firm organisation, both structural and cultural factors, which may dominate group level effects.

This paper has incorporated some of these interactive effects to explain between-group performance level differences, suggesting that organisational performance improves when there is a 'positive fit' between management styles and various contextual factors (Bozarth and McDermott, 1997). The implications of this research for the Spanish fresh produce industry reside in the empirical results which support the Colvin and Slevin (1988) proposition that management styles which enhance communication, joint decision making and cross-functional collaboration, coupled with flexible organisational structures which minimise bureaucratic barriers to innovation, best allow firms to respond quickly to environmental opportunities and challenges and result in optimal performance levels. This research has not attempted to characterise respondents according to the (simplistic) depiction within the literature of a dualistic a) modern/efficient and b) traditional industry structure. The clusters identified suggest a more complex pattern of management, organisation, strategy and performance. At the very least, the results challenge managers to a) identify and articulate clearly their firm's objectives, strategies and organisational structure, b) discern the firm's culture, and c) appraise their own managerial style. The interrelationships between these variables are complex, and there is no single prescription for a strategic fit. Specific recommendations are made more problematic also because optimal performance must account for the objectives of other firm stakeholders, something that has yet to be explored, and also those of supply chain partners.

However, the results of the research do suggest that there is a limited commercial future for the archetypal small Spanish firm with strong family leadership, a rigid structure with limited managerial skills, and doubtful prospects for a smooth generational succession. The entrepreneurial ethos that originally gave rise to such

firms is likely to be ill-adapted to contemporary opportunities and challenges, notably the interdependencies associated with close supply chain relationships. Further research into the long tail of traditional 'family-type' firms in the Spanish fresh produce industry is indicated.

While this paper is an advance in strategic group analysis through the introduction of new factors explaining performance differences, the problem of within-group variation in performance still remains. Hence, the present research will benefit from further firm-level studies of differential asset and managerial profiles which may affect the returns to firms within the same strategic group.

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