



# Analyzing firm performance heterogeneity: the relative effect of business domain

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## Abstract

**Purpose** – An ongoing discussion in strategic management concerns the relative impact of specific strategic decisions on firm performance. In line with that tradition, this research seeks to analyze the relative impact of business domain choices on firm performance. More specifically, it aims to discuss a method of assessing the relative impact of firm and business domain effects on firm performance within a specific industry and to demonstrate the value of this method.

**Design/methodology/approach** – First, a model was developed to estimate the relative impact of firm versus business domain on performance. Second, all members of a specific SME-dominated industry, namely the Belgian electrical wholesale sector, were questioned in order to test the validity of the developed model.

**Findings** – The results indicate that: the firms in the analyzed industry operate within two distinct business domains; and business domain effects explain from 6.8 percent to 9.7 percent of the variance in the included performance variables.

**Practical implications** – The findings should urge managers to carefully (re)consider where they are competing and assess the relative performance impact of business domain choices within their industry.

**Originality/value** – It is widely agreed that industry membership has performance implications. The effect of industry membership considers performance variation between industries. This, however, is one of the first studies to further analyze performance heterogeneity within an industry by considering the relative effect of business domain choices.

**Keywords** Business planning, Performance management, Variance

**Paper type** Research paper

## Introduction

One of the major discussions in strategy concerns the determinants of firm performance. Academics from various backgrounds have focused on explaining firm performance and identifying the sources of inter-firm performance differences (McGahan and Porter, 1997). Researchers in the industrial-organization tradition, for example, have argued that industry structure is a central determinant of firm performance and influences the



competitive position of all firms in that specific industry (Chang and Singh, 2000). However, the inability of the industrial-organization tradition to provide a rigorous explanation for intra-industry performance differences has stimulated strategy researchers to focus on the firm itself (Chang and Singh, 2000).

As a result, firms were no longer viewed as identical “black boxes” in a given market structure but as dynamic collections of specific capabilities influenced by specific strategic decisions (Hawawini *et al.*, 2003). One of these vital strategic decisions is the (implicit or explicit) selected business domain (Sidhu, 2004). Nonetheless, assessing the relative impact of business domain effects on performance has received scant empirical study (McGahan and Porter, 1997). Moreover, these issues have only been seldom addressed within the context of SMEs (Chang and Singh, 2000).

The paper at hand tackles this issue by analyzing the relative impact of firm and business domain effects on firm performance within a specific SME-dominated industry, namely the Belgian electrical wholesale sector. The results of this study contribute to our understanding of the performance effect of business domain definitions and will help remedy the fact that “few articles have been published that specifically deal with how to support strategic analysis and management in SMEs” (Rangone, 1999).

### Defining the business domain

Performance differences among firms are often the subject of academic research (Verreynne and Meyer, 2008). The underlying motivation for this kind of research is the quest for those factors that may provide firms with a competitive advantage and hence drive firm profitability. Traditionally, the emphasis in analyzing variations in firm performance has been at the industry level (Frazier and Howell, 1983).

Nonetheless, the inability of the industrial-organization tradition to provide a rigorous explanation for intra-industry heterogeneity in performance has stimulated strategy researchers to focus on the firm itself (Chang and Singh, 2000). Hence the idea that a firm’s attributes, possessions, and actions are the driving forces behind performance attained a central position in the strategy field (Short *et al.*, 2007). Within this stream, one view focuses on the strategic decisions of organizations, and more specifically the selection of the competitive arena in which a company (implicitly or explicitly) chooses to compete within an industry. As strategic decisions will significantly affect a firm’s structural position in its industry (Frazier and Howell, 1983), it is likely that average performance differs between different competitive arenas or business domains within an industry. By considering business domains instead of the industry as the primary unit of analysis, researchers may gain a more in-depth knowledge of the rivalry patterns between firms and drivers of performance (Houthoofd, 2006).

The question now arises as to how business groups or business domains within an industry can be delineated. In most cases, the term “business domain” refers to the intersection between the supply side (the industry, a product-oriented classification) and the demand side (the “served market” in business language). A business domain can thus be defined as the competitive arena where firms with similar products target customers with similar needs.

Nevertheless, just as there is no best way to define an industry, there is no best way to define a business domain. Abell (1980), for example, was the first to add a third

dimension and defined a business domain as a three-dimensional strategic space consisting of:

- (1) customer groups served;
- (2) customer needs served; and
- (3) technologies employed.

Cool and Schendel (1987), Martens (1988), and McGee and Segal-Horn (1990), in contrast, used geographic reach, in combination with products offered and markets served, to picture the scope of the strategy of firms. Day (1981) and Porter (1986), on the other hand, suggested that in certain industries the level of integration (whether forward or backward) could be a relevant business domain dimension.

### **Prior research on the business domain-performance link**

Despite the fact that defining the business domain in which to compete is generally accepted as one of the major hurdles in strategy formulation, only a few studies have addressed the hypothesis that the selected business domain affects performance. Frazier and Howell (1983), for example, delineated clusters of firms in the hospital supply industry based on two criteria: the degree of scope and differentiation of: customer needs served with a given technology; and customer groups. Profitability (i.e. net profit before taxes, return on assets, return on net worth) did not differ significantly between these clusters. However, performance criteria associated with sales volume (for example average order size) did vary significantly across the identified clusters. Houthoofd and Heene (1997) analyzed the different business domain definitions within the Belgian brewing industry (36 firms). They were able to identify five clusters of firms based on a four dimensional "strategic space" consisting of buyer types, product types, geographical reach and level of vertical integration. These clusters (representing in fact firms competing within different business domains) differ significantly on a risk-adjusted return on assets measure. Sidhu *et al.* (2000) investigated how 56 firms in different industries conceptualize their business domain (and thus their competitive arena) and how this conceptualization affects performance. They found that delineating competitive arenas relatively narrowly (with an organization's technological competencies as the reference point) is positively associated with performance (i.e. sales growth). In stable industries, on the other hand, a broad definition (encompassing producers of substitute products) is positively correlated to sales growth. Wakabayashi (2005) studied the relationship between past business definitions and financial performance in 50 Japanese electric/electronics companies for a six year-period (1998-2004). His study results indicate that functional business domain definitions (i.e. elaborating customer-value orientation) have a positive impact on sales growth and on the growth rate of the aggregate market value of the firm.

### **Problem statement and research method**

Our analysis of the business domain-performance literature indicates that business domain definition choices do have performance implications, but that the relative effect of industry, firm and business domain on performance has received scant empirical study (McGahan and Porter, 1997). What is more, the analysis indicates that the cited issues have only seldom been addressed within the context of SMEs (Chang and

Singh, 2000). Despite the traditional explanation that the success of small firms lies in their capacity to select their battlegrounds carefully (Gomes-Casseres, 1997), it seems that research examining the performance effect of the business domain choices of SMEs is scarce. In combination with the observation that when a new venture succeeds or an existing one finds a sustainable path to growth it is “more often than not [...] in a market other than the one it was originally intended to serve, with products and services not quite those with which it had set out, bought in large part by customers it did not even think of when it started, and used for a host of purposes besides the ones for which the products were first designed (Drucker, 1985)”, it seems that insights into the relationship between the selected business domain and performance within a specific sector could provide entrepreneurs and managers of SMEs with valuable information about the adequacy and profitability of specific business models. Consequently, the paper at hand (a) discusses a method to assess the relative impact of firm and business domain effects on firm performance within a specific industry, and (b) demonstrates the value of this method by measuring the effect of business domain choices on performance within the context of a specific SME-dominated industry, namely the Belgian electrical wholesale sector.

*Research method: distinguishing firm effects from business domain effects*

Our study builds on research focusing on separating:

- industry performance effects from firm performance effects (McGahan and Porter, 1997, 2005; Rumelt, 1991; Schmalensee, 1985); and
- industry performance effects from group performance effects and firm performance effects (González and Ventura, 2002; Short *et al.*, 2007).

Prior research on industry and group effects has predominantly relied on analysis of variance to test whether the average performance of distinct business domains within a specific industry differ from each other significantly. In this paper we follow a related approach and use sequential analysis of variance to estimate to what extent the differences in firm performance are due to group effects. In the paper at hand, business domain definition is used as the central criterion to delineate the groups.

The basic model in our study specifies firm performance as determined by the following:

$$R_{ijt} = \mu + \alpha_i + \beta_{ij} + \lambda_t + e_{ijt}$$

where:

- $R_{ijt}$  indicates the year  $t$  performance of the firm  $j$  in business domain  $I$ ;
- $\mu$  is the intercept which captures the overall performance average if there were no other sources of performance variation;
- $\alpha_i$  is the effect on firm performance of belonging to business domain  $i$  and represents the average performance of firms in group  $i$ ;
- $\beta_{ij}$  is the effect of being firm  $j$  in business domain  $i$  and represents the average performance of firm  $j$ , which may differ from the average of its business domain  $i$ ;

$\lambda_t$  is the year effect which captures the average performance in year  $t$ ; and  
 $e_{ijt}$  is the residual term or unexplained performance (i.e. the part of the individual year  $t$  performance of a firm  $j$  in a specific business domain  $i$  that cannot be related to the year, the firm's average or the business domain average).

The study at hand focuses on one specific industry and examines almost all members of that industry. Therefore, we must treat the parameters in the expression above as fixed effects on performance. Treating the effects as fixed parameters has the advantage that we can actually estimate the value of each effect by calculating the Least Squares Dummy Variables estimator (LSDV). However, as we are not really interested in the absolute values of the effects but rather in the relative contribution of each effect to the dependent variable (i.e. firm performance), we will rely on the analysis of variance (ANOVA) in order to compare the variance of the dependent variable with the variances of each set of effects included in the model.

However, as in this specific case each firm belongs to only one business domain, the firm effects in the model are nested within the business domain effects. Consequently, it is impossible to introduce simultaneously all the effects in the ANOVA model as fixed parameters and assess the relative importance of each effect separately. Instead, a separate estimation has to be made for the nested firm effect by means of a sequential ANOVA model. In a sequential ANOVA, the effects are introduced sequentially and the percentage of the variance of the dependent variable that is covered by the effects included is registered. In the present study we incorporate first the year effects, then the business domain effects, and finally the nested firm effects, whereby random error accounts for any remaining unexplained variance. The increase in explained variance at each stage of the sequential procedure is interpreted as a measure of the importance of the last effect included.

#### *Research setting: data and sample*

The industry studied is a service industry consisting of 25 electrical wholesalers. We have chosen this particular industry for three reasons. First, all firms in this industry are non-diversified firms. Arbitrary splits of overhead costs are thus not needed. Second, this also implies that the corporate level strategy merges with the business level strategy. Third, the number of firms in the selected industry is limited. The limited number of firms makes it possible to get acquainted with all of the industry participants individually and provides opportunities for controlling the validity of the collected data.

A questionnaire was sent to all 25 members of the industry. The questionnaire was carefully prepared in collaboration with members of the wholesalers' interest group. The questionnaire was mailed by the interest group but completed questionnaires were returned directly to the first author, guaranteeing full discretion concerning the data provided. Additionally, we requested the wholesalers to include specific accounting data for the period 1998-2003 so that we could compute four performance measures (see research design for details). As the questionnaire disclosed the identity of the firm, the validity of the accounting and questionnaire data provided could be verified with other (financial and economic) sources.

In total, 20 firms completed the questionnaire. All participating firms were small, family-owned private firms. Sales vary from EUR 4 million (25th percentile) to more

than EUR 28 million (75th percentile) with a median of EUR 8 million. Total employment ranges from 14 (25th percentile) to 78 (75th percentile) with a median of 28 employees (see Table I for descriptive indicators of the sample). As the non-participants were very small firms, over 95 percent of the market, in terms of output, was covered by the sample.

### *Operationalizing the research design*

*Business domain definition variables.* The competitive arena in which a firm operates is defined by its business domain definition. Within the electrical wholesale sector business domain definitions are characterized by three distinct dimensions: buyer scope, product scope, and geographical reach. Buyer scope is operationalized using two measures: percentage of sales to business clients and percentage of sales to electricians. Product scope is measured through two measures: the percentage of sales of lighting material and percentage of sales of installation material. Geographical reach is measured using the proxy firm size and operationalized as the log of sales (Martens, 1988). In contrast to studies in other industries (e.g. Day, 1981), the level of integration was deemed an irrelevant dimension, since none of the Belgian electrical wholesalers is vertically integrated (neither forward, nor backward).

All selected variables reflect the average situation during the period 1998-2003. Six-year averages were used as variable-measures throughout this paper in order to:

- (1) cope with variations in accounting practice;
- (2) give long-term measures;
- (3) mitigate the effects of various leads and lags; and
- (4) average the effects of swings in the economy (Barton and Gordon, 1988; Bettis, 1981; Hambrick, 1983; Hambrick and Macmillan, 1985; Souca De Vasconcellos e Sa and Hambrick, 1989; Zeithaml and Fry, 1984).

An overview of the variables used and their operationalization can be found in Tables II and III. Tables IV and V provides non-parametric descriptive statistics of the sample.

	25th	50th (median)	75th
Employment (in units)	14	28	78
Total net profits (in EUR)	2,735.95	130,024.58	348,797.43
Total Assets (in EUR)	2,159,754.25	4,236,412.91	10,646,924.00
Inventories (in EUR)	657,604.72	1,062,911.75	2,422,405.29
Sales (in EUR)	4,537,066.16	8,737,122.75	28,753,382.00

**Table I.**  
Descriptives of the Belgian electrical wholesale sector (Quartiles)

Business domain definition variables	Operational definition
Market scope (buyer types)	% sales business clients % sales electricians (installers)
Product scope (product types)	% sales installation material % sales lighting material
Geographical reach)	size [log (sales)]

**Table II.**  
Operationalization of variables

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*Performance variables.* Four variables are used to measure (financial) performance:

- (1) gross return on business assets (gROBA);
- (2) net return on business assets (nROBA);
- (3) gross profit margin (gPM); and
- (4) net profit margin (nPM).

1002

ROBA is a performance measure calculated before taxes and debt charges. Hence, tax policy considerations and differences in tax rates are excluded. ROBA is computed:

- before debt charges to cope with differences in capital structure;
- before depreciation charges (gROBA); and
- after depreciation charges (nROBA).

Given the research interest in the intrinsic profitability of operating activities (excluding pure financial or exceptional activities), return on business assets (ROBA) was chosen as performance measure above the more common profitability measure return on assets (ROA). Business assets are defined as non-financial assets (used here as an accounting term) and are composed of formation expenses, intangible assets, tangible assets, stocks and contracts in progress, amounts receivable within one year

**Table III.**  
Operationalization of variables

Performance variables	Operational definition
Gross return on business assets (gROBA)	Gross operating profit per business assets
Net return on business assets (nROBA)	Net operating profit per business assets
Gross profit margin (gPM)	Gross operating profit per sales
Net profit margin (nPM)	Net operating profit per sales

**Table IV.**  
Descriptive statistics of the sample on the business definition variables: rank correlations, minimum, maximum and quartiles

Rank correlations	A	B	C	D
% sales to business clients (A)	1			
% sales to electricians (B)	-0.766	1		
% sales of installation material (C)	0.516	-0.462	1	
% sales of lighting material (D)	-0.396	0.201	-0.433	1
size (E)	-0.157	0.298	-0.106	-0.211

**Table V.**  
Descriptive statistics of the sample on the business definition variables: rank correlations, minimum, maximum and quartiles

Minimum, maximum and quartiles	<i>n</i>	Min	25th	50th	75th	Max.
% sales to business clients	20	5	18.88	25.23	35.75	69
% sales to electricians	20	19	45.00	57.00	65.00	95
% sales of installation material	20	35	42.18	53.43	59.74	73
% sales of lighting material	20	8	18.62	21.75	25.66	44
Size	20	52.588	5.883	6.159	6.597	7.389

and deferred charges and accrued income. The larger this measure, the healthier the firm is supposed to be.

Profit margin is the ratio of operating profits to sales and is also calculated before (gPM) and after depreciation charges (nPM).

## Research results

### *Delineating businesses*

The first question is whether specific business domains exist within the industry examined. Therefore, we used cluster analysis to divide our sample of firms into groups based on similarities and differences observed in the business domain variables. However, we have to note that a cluster analysis can be distorted by multicollinearity (i.e. various variables share common information because the algorithm used to construct the groups counts the shared information as many times as the number of variables). In order to avoid this problem, the cluster analysis was not conducted using the original variables but was based on factors extracted by a factor analysis (FA). These factors condense the most relevant part of the original information but are not collinear. We used the common rule of extracting components as long as the eigenvalue exceeded 1 (i.e. the component contains the same amount of information contained in one or more of the original variables). The factor analysis indicated that a 2-factor solution was appropriate (see Table VI). The two factors could be identified as “Product-Market-combination” (factor 1) and “Geographical reach” (factor 2) (see Table VII).

Subsequently, the factor scores obtained for these two components were used as input for the cluster analysis. To contrast the varying levels of appropriateness of the groups formed by the cluster analysis, we tested the significance of the differences in the average values of the components between groups, by means of the Kruskal-Wallis

Component	Total	Initial eigenvalues		Rotation sums of squared loadings		
		% of variance	Cumulative %	Total	% of variance	Cumulative %
1	2.453	49.066	49.066	2.453	49.063	49.063
2	1.257	25.147	74.213	1.257	25.149	74.213
3	0.614	12.277	86.490			
4	0.472	9.439	95.929			
5	0.204	4.071	100.000			

**Table VI.**  
Factor analysis of the business definition variables: eigenvalues and variances explained

	Factor 1 Product market combination	Factor 2 Geographical reach
% sales to business clients	0.891	
% sales to electricians		0.300
% sales of installation material	0.768	
% sales of lighting material	-0.559	-0.657
size		0.842

**Table VII.**  
Factor matrix of the business definition variables

**Notes:** Data shown are factor loadings greater than or equal to 0.3; The matrix is sorted; Blanks for loadings smaller than 0.3 to enhance readability



test. The results show the presence of two significantly different groups of firms and, therefore, two different business domains within the industry.

As reported in Table VIII, the two clusters differ significantly from one another at conventional statistical levels where both components are concerned and also in relation to all of the original variables (with the exception of the percentage of sales of lighting material). These results indicate that twelve firms operate within the first business domain and eight firms within the second business domain.

The two business domains can be described as follows:

- (1) *Business domain 1 (called the "locals")*. Relatively small sized firms with above average sales to business clients, below average sales to electricians, above average sales of installation material and lighting material.
- (2) *Business domain 2 (called the "regional and national firms")*. Relatively large firms with below average sales to business clients, above average sales to electricians, below average sales of installation material and lighting material.

The question now arises as to whether these two business domains differ from one another in terms of average performance. Table VIII indicates that these two clusters of firms do indeed differ significantly in terms of performance. Table IX demonstrates that the "locals" (business domain one) are more profitable on all four measures. More specifically, the median net profit margin in business domain one is 1.3 percent higher, the median gross profit margin is 1.6 percent higher, the median net ROBA is 3.6 percent higher and the median gross ROBA is 5.5 percent higher relative to business domain two.

To recap, the study results suggest that business definition does matter in terms of performance within the industry analyzed. The next question then is: by how much?

#### *Firm effect versus business effect*

Table X shows the results of the sequential analysis of variance. It introduces the year effects first, then the business domain effects and finally the firm effects. The

	Chi-square	df	Asymp. sig.
<i>Business definition measures</i>			
% sales to business clients	6.502	1	0.011 **
% sales to electricians	13.460	1	0.000 ***
% sales of installation material	7.513	1	0.006 ***
% sales of lighting material	.252	1	0.616
size	4.339	1	0.037 **
Factor 1 product-market-combination	9.524	1	0.002 ***
Factor 2 geographical reach	6.095	1	0.014 **
<i>Performance measures</i>			
Average nROBA	3.429	1	0.064 *
Average gROBA	5.006	1	0.025 **
Average nPM	2.881	1	0.090 *
Average gPM	3.429	1	0.064 *

Notes: \* $p < 0.10$ ; \*\* $p < 0.05$ ; \*\*\* $p < 0.01$

**Table VIII.**  
Kruskal-Wallis one-way  
ANOVA between  
businesses

explanatory power of the non-nested effects (i.e. year and business effects) is measured by the  $R^2$  of the corresponding model. We measure the contribution of the nested effect (i.e. the firm effect) by the change in  $R^2$  with respect to the previous model (in which the firm effect is not included). The results show that firm effects explain most of the variance in firm performance. The explanatory power of firm effects varies from 55

Variable	n	Business domain	Min.	Percentiles			max
				25	50	75	
nROBA	12	Business 1	-2.35	3.72	7.37	10.57	13.47
	8	Business 2	-7.65	.12	2.75	4.49	13.93
gROBA	12	Business 1	0.25	7.43	11.09	13.61	16.90
	8	Business 2	-5.11	2.89	5.56	6.99	15.81
nPM	12	Business 1	-2.02	1.67	2.88	5.24	6.79
	8	Business 2	-4.55	.07	1.50	2.16	5.97
gPM	12	Business 1	-0.80	3.08	4.57	6.67	8.78
	8	Business 2	-3.10	1.37	2.93	3.37	6.77

**Table IX.**  
Business domains:  
descriptive statistics of  
performance measures

	DF	$R^2$	$\Delta R^2$	F-test	Ser. corr.
<i>nROBA</i>					
Year	5	0.024	-	0.52	0.83
Business	1	0.072	-	8.52***	0.78
Firm	19	0.621	0.549	7.93***	0.24
Global model (Firm + Business + Year)	24	0.650		6.72***	0.25
Error	87	0.350			
Total	111				
<i>gROBA</i>					
Year	5	0.020	-	0.44	0.83
Business	1	0.097	-	11.77***	0.78
Firm	19	0.646	0.549	8.84***	0.22
Global model (Firm + Business + Year)	24	0.670		7.35***	0.23
Error	87	0.330			
Total	111				
<i>nPM</i>					
Year	5	0.020	-	0.40	0.81
Business	1	0.068	-	8.02***	0.76
Firm	19	0.696	0.628	11.09***	0.03
Global model (Firm + Business + Year)	24	0.718		9.22***	0.05
Error	87	0.282			
Total	111				
<i>gPM</i>					
Year	5	0.016	-	0.34	0.81
Business	1	0.087	-	10.26***	0.76
Firm	19	0.722	0.635	12.27***	0.01
Global model (Firm + Business + Year)	24	0.739		10.02***	0.04
Error	85	0.261			
Total	109				

**Table X.**  
Business domain effect  
versus firm effect (fixed  
effects models)

percent, in explaining nROBA and gROBA, to 63 percent when explaining nPM and gPM. In turn, business domain effects explain between 6.8 percent and 9.7 percent of the variance of the performance variables. In addition, the analysis also shows that all business domain and firm effects are statistically significant at conventional levels. By way of contrast, year effects explain only about 2 percent of the variance and are not statistically significant.

### Discussion and conclusion

It is widely agreed that industry membership has performance implications. The effect of industry membership considers performance variation between industries. This study is, however, one of the first studies to go on to analyze performance heterogeneity *within* an industry by considering the effect of business domain choices. Such choices are really strategic in that they have lasting performance implications and consequences. The very intriguing question from a strategic management viewpoint is: how much of the performance heterogeneity between firms in the same industry can be attributed to differences in business definition and how much of the performance heterogeneity between firms is linked to firm characteristics? It turns out, according to our findings, that differences in business domain explains about 8 percent of the variance in performance between firms within the industry analyzed.

Consequently, it pays for top managers to monitor the business domain definition of the firm. First of all, there are advantages connected with explicitly defining the business itself. By explicitly considering their business domain, firms may improve their competitor and competition analysis and streamline their competitor intelligence. Furthermore, significant threats and opportunities will be detected on a more timely basis, and a better basis for the formulation of appropriate short-term tactics and long-term strategy will be provided (Sidhu, 2004).

Second, there are also indirect effects of business domain definition on performance via the operational and functional consequences of the domain choice. Further analysis of the two identified business domains reveals that the supplier/wholesaler – relationship differs. Two different kinds of configurations or profiles of supplier-wholesaler-buyer relationships appear to emerge. Firms in business domain one (the “locals”) buy a larger part of their products from fewer suppliers. This specialization in brands from a limited number of suppliers not only leads to a larger knowledge of these products, but also helps such firms to maintain a higher degree of service to their clients (with lower inventories and thus costs). Being loyal to fewer suppliers may also help to obtain discount prices, and to obtain more support from these suppliers. The configuration that comes to the fore in the second competitive arena is that of larger firms, targeted more towards electricians, selling more on price and moving large amounts of volume. They are less specialized and have a larger number of suppliers. So they have a larger administrative component (larger back office) and more inventories.

Higher profitability occurs in wholesaling firms in business domain one (see above) with fewer suppliers and close relations with their two largest suppliers. This finding is at odds with the traditional assumption that a wholesaler can shield itself from pressure of suppliers (producers of electrical material in this case) by buying from as many suppliers as possible. In this case, the opposite seems to be true. Fields that study “market power”, e.g. industrial economics, predict that if

sellers (the wholesalers in our case) are fragmented and suppliers (the producers of the electronic material) are concentrated, market power for these sellers will be low, and profits will suffer. Relative concentration goes hand in hand with relative size. If smaller sized sellers are “confronted” by larger sized suppliers, sellers will have to play the game according to the rules of the supplier. That is indeed the general situation of sellers in the wholesale sector. Wholesalers outnumber the number of suppliers and, they are relatively much smaller than the suppliers (certainly the sellers in business domain one). So it seems logical that these sellers do not play the game very hard and establish a more cooperative attitude with suppliers. Low levels of power held by the sellers in general, and especially in business domain one, does not result, however, in low performance. On the contrary, performance in business domain one is high.

While the market power view has strong theoretical underpinnings, there are streams in the strategy literature that argue against the conclusion that the competitive power game must end with low profitability for the “powerless” (the small sellers in business domain one in this case). The above average performance of the “powerless” firms in business domain one may reflect, according to the resource-based view, unique resources, including (dynamic) capabilities. That brings us to the second performance effect studied: the firm effect which comes to about 60 percent in this study. That bears witness to the importance of each firm having idiosyncratic resources. Unique resources and capabilities encompass company image, company loyalty, trust from buyers, but also a dynamic capability like product knowledge, specialized knowledge of the needs of the buyers or efficient service. The dynamic capabilities approach sees competitive advantage as stemming from high-performance routines within the firm rather than from strong market positions shielded by entry barriers or from competitive conflicts raising a rival’s costs (Teece *et al.*, 1997).

To summarize, a categorization of firms in terms of business domain definition, based on three dimensions (buyer groups, product types, geographical reach), may result in a number of business domains. The results of this study indicate that the industry examined consists of two distinct business domains and that business domain membership explains about 8 percent of the variance in performance. The findings should urge managers to carefully (re)consider where (in terms of businesses) they are competing within the industry. Managers should pay (more) attention to business domain dimensions, since business domain definition choices have operational consequences that affect the performance bottom-line. For instance, smaller firms seem to be better off with close relations with a small number of suppliers in the context of wholesaling. Aligning operations with the chosen domain is warranted.

### **Limitations of the study and suggestions for future research**

This study is a single industry study. The empirical findings, therefore, need confirmation from other industries. The sample size, though it nearly equaled the population, was only 20 firms. Small samples are not unusual in strategic management research. Nevertheless, studies of larger industries are warranted. By using a multiple industry study, all four effects (industry, business, firm, year effect) can be dissected.

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