



Firms' customer responsiveness: relationships with competition, market growth, and performance

Firms' customer responsiveness

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Abstract

Purpose – The purpose of this paper is to examine important relationships pertaining to customer responsiveness of the industrial firm.

Design/methodology/approach – Drawing on strategy and competitive dynamics literature, a contingency model is developed. Hypotheses were tested on 432 Swedish industrial firms that market to business customers in growing or mature markets. Clean technology markets represented growing markets, while miscellaneous markets represented mature markets.

Findings – The relationship between the attention paid to customer responsiveness by the industrial firm and the attention paid to volume by the main competitor is negatively reinforced if the firm operates in a growing market. The relationship between the attention paid to customer responsiveness by the firm and competition-based customer access obstacles in terms of supplier loyalty is positively reinforced if the firm operates in a growing market. The relationship between the firm's customer responsiveness attention and its financial performance is positively reinforced if the firm operates in a growing market.

Practical implications – The industrial firm may find an efficient customer responsiveness strategy if the firm operates in a growing market. Because customer responsiveness does not improve firms' financial performance in mature markets, competition relationships are only important to examine in growing markets. Thus, customer responsiveness is more complicated than previously thought in the literature.

Originality/value – The paper presents a new model that integrates relationships among industrial firms' attention to customer responsiveness, competition, and performance. By including the market growth contingency, the model explains mixed findings in the literature regarding relationships between customer responsiveness and performance.

Keywords Strategy, Customer orientation, Responsiveness, Barriers to competition, Performance, Market growth, Corporate strategy, Buyer-seller relationships, Sweden, Industrial marketing

Paper type Research paper

Introduction

Firm strategy comprises major initiatives to enhance competitiveness in the firm's market (Nag *et al.*, 2007). Therefore, strategy's impact on performance is an ultimate issue in contemporary strategy research. A dominating view is that a business strategy

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of customer orientation and value creation based on customer responsiveness may be effective (e.g. Lindgren and Wynstra, 2005; Norman *et al.*, 2007; Sorensen, 2009; Ulaga and Eggert, 2006). Customer responsiveness is the action taken in response to market intelligence concerning individual needs of target customers (Kohli and Jaworski, 1990; Kohli *et al.*, 1993).

The contingency approach to business strategy (e.g. Peteraf and Reed, 2007) suggests a fit between customer responsiveness and the market context. However, the literature reports mixed findings not only on performance effects of customer orientation (Kirca *et al.*, 2005), but also on the moderating effects of a firm's market context (Kirca *et al.*, 2005; Matsuno and Mentzer, 2000). Furthermore, Soberman and Gatignon (2005) suggest that market growth is an important manifestation of market context. The scholars present a comprehensive literature review and conclude that there is very limited knowledge about interactions between market evolution and competitive dynamics.

Besides a deeper understanding of customer responsiveness and performance relationships, linkages between competition and customer responsiveness and the moderating role of market context need to be systematically scrutinized. In particular, perceived competition needs to be captured as a business strategy incorporates and articulates management's perceived environment (Matsuno and Mentzer, 2000; Porac and Thomas, 1990). Earlier studies investigating competition assume equal perceptions among competing firms (Schnell, 2004) and do not acknowledge that markets are ambiguous realities and that management perceptions vary.

Thus, there is a need to explore how firms' customer responsiveness is related with competition and firm performance, and the moderating role of market context. In an attempt to fill the research gap, this study draws on the strategy and competitive dynamics literature and the purpose is to examine important relationships pertaining to customer responsiveness of the industrial firm. The study explores the influence of the main competitor and competition-based obstacles to access customers, and relationships between customer responsiveness and performance. Also, the study captures market growth moderations.

The study treats two contingencies that reflect competitive dynamics (Soberman and Gatignon, 2005), namely, competitive strategy of the main competitor, and competition-based customer access obstacles. The main competitor is a key referent (e.g. Porac and Thomas, 1990) that caters to the same customers as the firm (Chen, 1996). Besides paying attention to customer responsiveness and becoming less vulnerable to price competition (e.g. Matthyssens and Vandenbempt, 2008), the main competitor may also aim to sell large volumes in an attempt to achieve low costs and low prices (Porter, 1980). An industrial firm may follow or imitate the strategy of the key referent along individual strategy attributes, or try to differentiate all attributes from those of the rival (Greve, 1998; Peteraf and Shanley, 1997; Porac and Thomas, 1990).

A competition-based obstacle to access customers manifests an ultimate exogenous competition barrier that is embedded in the market context and prevents the firm from expanding (Bain, 1956). For example, in order to expand its customer base a firm that offers renewable energy needs to break through existing loyalties and adapt to product requirements of customers. Thus, the obstacles essentially originate from loyalties

between suppliers and customers, and from specific needs of customers such as requirements pertaining to product adaptation (Han *et al.*, 2001; Pehrsson, 2008).

This study assumes that market growth is a central moderator of the focused relationships. The rationale is that a growing market has less established competition standards and patterns than a mature market (Bowman and Gatignon, 1995; Porter, 1980; Ramaswamy *et al.*, 1994; Robinson, 1988; Soberman and Gatignon, 2005) and firms in growing markets have to face general environmental uncertainty.

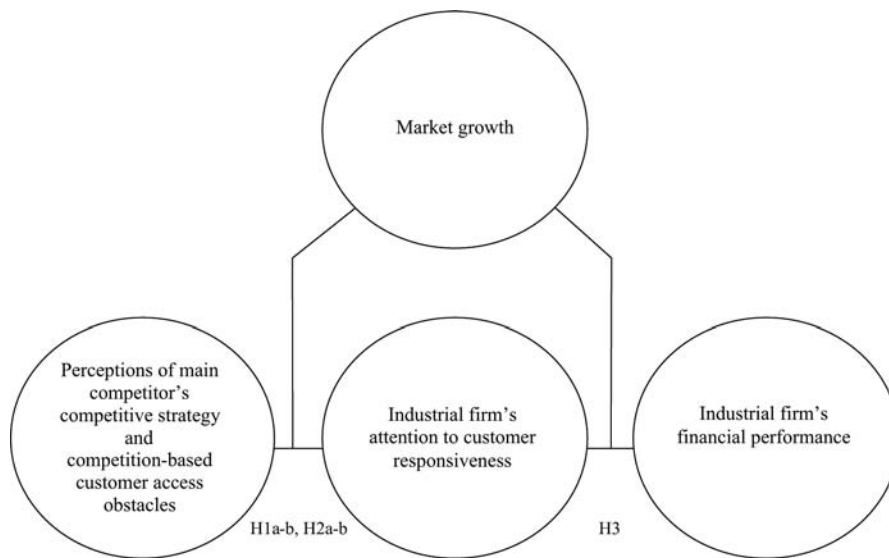
The study presented here seeks answers to two questions:

- (1) How does market growth affect relationships between perceived competition and customer responsiveness of industrial firms?
- (2) How does market growth affect relationships between customer responsiveness of industrial firms and firm performance?

Theory and hypotheses

Theoretical model

Customer responsiveness includes value-adding activities such as customized services (e.g. Schlegelmilch and Ambos, 2004), customer solutions (e.g. Matthyssens and Vandenbempt, 2008), and customer relationships (e.g. Storbacka and Nenonen, 2009). The theoretical model (Figure 1) proposes that the industrial firm's attention to the value-adding activities is related to the competitive strategy of the main competitor and competition-based obstacles to access customers. By emphasizing customer responsiveness, the firm may achieve a competitive advantage and high performance levels owing to its greater knowledge of customer needs and to the reputation it builds (Kohli and Jaworski, 1990; Narver and Slater, 1990). However, it is proposed that the relationships of the model are moderated by market growth.



Note: H1-H3 indicate hypotheses

Figure 1.
Theoretical model for
the study

The model suggests that managers' perceptions of competition impact on the firms' attention to customer responsiveness. Perceived environmental uncertainty and simplification by means of bounded rationality (Simon, 1955) imply that managers do not pay attention to all competitors but focus on key referents (e.g. Pegels *et al.*, 2000). Management's focus on key referents is, thus, due to individuals' limited capacities for paying attention and processing information (Miller, 1956). For a firm's customer responsiveness to be influenced by competition, it must be observable and relevant to the firm. Management, therefore, reacts only to stimuli they are aware of and pay attention to.

Impact of the main competitor's competitive strategy

To varying degrees the main competitor pays attention to differentiation and large market volumes (Porter, 1980), and both strategy alternatives may be related to individual attributes of the industrial firm's customer responsiveness (Porac and Thomas, 1990). A key issue is determining the degree to which the firm should try to imitate the referent along some attributes or be different (Abell, 1980; Fiegenbaum and Thomas, 1995).

Regarding the main competitor's differentiation strategy, adoptive imitation may include conscious copying of parts of the competitor's strategy or adoption without reflection on the suitability of the strategy (Greve, 1998; Peteraf and Shanley, 1997). In fact, Greve (1998) found that strategy convergence occurs since firms frequently imitate the behaviour of closely related competitors. Lee (2003) suggests that risk avoidance may drive strategy convergence as any firm that avoids the standard industry behaviour takes risks.

A growing market tends to have less established competition standards than a mature market and this causes general uncertainty (e.g. Soberman and Gatignon, 2005). Greve (1998) continues to say that adoptive imitation of the key referent's strategy, whether as a whole or in part, is particularly important when the firm perceives high levels of general environmental uncertainty since it allows for strategy development with less risk and effort than developing a strategy from the beginning. For a mature market, there is generally less uncertainty (e.g. Soberman and Gatignon, 2005), but the main competitor's customer responsiveness may still affect the firm's responsiveness positively.

The first hypothesis predicts that the association between the main competitor's attention to customer responsiveness and the industrial firm's attention to customer responsiveness is positively reinforced if the firm operates in a growing market:

H1a. The relationship between the attention paid to customer responsiveness by the main competitor and the attention paid to customer responsiveness by the industrial firm is positively reinforced if the firm operates in a growing market.

A volume strategy of the main competitor would be associated with individual attributes of the industrial firm's customer responsiveness (Porac and Thomas, 1990). As one alternative, the firm may differentiate from the referent's volume strategy (Peteraf and Shanley, 1997; Ulaga and Eggert, 2006) in order to become less vulnerable to price competition (Gable *et al.*, 1995; Han *et al.*, 2001; Matthyssens and Vandenbempt, 2008). If successful, the firm may create sustainable relationships

with customers (Ulaga and Eggert, 2006; Karakaya and Stahl, 1989) and the firm's cost structure becomes less decisive for profitability.

However, in accordance with the argument of Soberman and Gatignon (2005) a firm that operates in a growing market has to face great general uncertainty. In this market context, the firm most likely relies on the key referent and adopts the competitor's volume strategy to a high degree. The firm's alternative of extending customer responsiveness and avoiding industry behaviour would bring greater risks (Lee, 2003) in the changing market. Therefore, it is hypothesized that the relationship between the main competitor's volume attention and the attention paid to customer responsiveness by the industrial firm is negatively reinforced if the firm operates in a growing market:

H1b. The relationship between the attention paid to volume by the main competitor and the attention paid to customer responsiveness by the industrial firm is negatively reinforced if the firm operates in a growing market.

Impact of competition-based customer access obstacles

As the industrial firm tries to expand it may face competition-based obstacles to access customers that are embedded in the market context, including loyalties between suppliers and customers, and specific needs of customers such as requirements pertaining to product adaptation. Competitors' differentiation creates, for example, brand loyalty (Krouse, 1984) and long-term relationships (Johansson and Elg, 2002) that the firm needs to breakthrough in order to access customers and expand. Furthermore, customers' switching costs (Gruca and Sudharshan, 1995; Han *et al.*, 2001; Karakaya and Stahl, 1989) may be viewed as loyalty manifestations as any customer faces costs trying to switch from one supplier to another. For example, costs may have to be allocated to employee retraining. Finally, customers' need for product adaptation, in principle, creates costs independent of scale (Karakaya and Kerin, 2007; Porter, 1980) as the firm may have to adapt to local technology standards or customize the product (Schmalensee, 1983).

Pehrsson (2008) found that the greater the competitive uncertainty an industrial firm perceives, the more extensive the strategy impacts of customer access obstacles are. A major reason for the contingency effect may be that the need for strategy change is extensive when competitive patterns and supplier/customer relationships change. Also, King and Tucci (2002) underscore that the need to be able to adjust a firm's strategy is decisive in uncertain environments.

It is, thus, logical to expect that an industrial firm that operates in a growing market accompanied by less established competition standards and great general uncertainty (e.g. Bowman and Gatignon, 1995; Soberman and Gatignon, 2005) pays extensive attention to customer access obstacles. Such obstacles may be caused by early efforts of competitors to establish customer loyalties that may become sustainable barriers to competition (Karakaya and Stahl, 1989). In fact, firms that establish themselves early generally have extensive opportunities to access potential customers, develop relationships with them and meet their product adaptation requirements originating from competition standards (Makadok, 1998).

It is hypothesized that the positive relationship between competition-based obstacles to access customers and firm's attention to customer responsiveness is

reinforced by market growth. The following hypotheses concern obstacles in terms of supplier loyalty and product adaptation requirements:

- H2a.* The relationship between competition-based customer access obstacles in terms of supplier loyalty and the attention paid to customer responsiveness by the industrial firm is positively reinforced if the firm operates in a growing market.
- H2b.* The relationship between competition-based customer access obstacles in terms of product adaptation requirements and the attention paid to customer responsiveness by the industrial firm is positively reinforced if the firm operates in a growing market.

Performance impact of the firm's customer responsiveness

Several authors argue that customer orientation, including customer responsiveness, yields positive performance (e.g. Langerak, 2003; Norman *et al.*, 2007; Sorensen, 2009). However, meta-analysis reports mixed results on the effectiveness of customer orientation (Kirca *et al.*, 2005) and the analysis provides different reasons for the lack of consistent findings.

For example, Greenley (1995), Narver and Slater (1990), and Sin *et al.* (2000) suggest that a firm may experience different performance effects of customer orientation depending on market context and dynamics of the competitive environment. For commodity businesses, Narver and Slater found that market change appears to moderate performance effects negatively as it is generally more difficult to adapt such businesses to changing market conditions. Conversely, it was found that market change reinforces performance effects of customer orientation for non-commodity businesses.

Jaworski and Kohli (1993) and Slater and Narver (1994) investigated the moderating role of the market context and found a robust positive relationship between a firm's customer orientation and its financial performance. Thus, the literature reports mixed findings not only on performance effects of customer orientation, but also on moderating effects of a firm's market context (Kirca *et al.*, 2005; Matsuno and Mentzer, 2000).

Sorensen (2009) articulates the rationale for the hypothesis in this study. He argues that it is generally easier and less costly to expand and acquire customers without much competition and rigid competition structures in a growing market. Also, Makadok (1998) found that firms operating in growing markets have extensive opportunities to access potential customers and develop profitable relationships with them.

The hypothesis for this study builds on the notion that the effectiveness of customer responsiveness is contingent on market growth. It is proposed that market growth positively reinforces the relationship between the industrial firm's attention to customer responsiveness and the firm's financial performance:

- H3.* The relationship between the industrial firm's attention to customer responsiveness and the firm's financial performance is positively reinforced if it operates in a growing market.

Method

The hypotheses were tested on Swedish firms that market to business customers. This section presents the sample, the method of collecting data, the measures, and the analysis procedure.

Sample and data collection

One part of the sample consisted of Swedish firms primarily offering clean technology products to business customers. The European Union's definition (Swedish Environmental Technology Council, 2009) says that clean technology is designed to protect the environment in various ways, and comprises products and services that result in advantages compared to other solutions. Examples of clean technology include processes for generating heat and electricity based on renewable energy sources, renewable fuels for vehicles, wind power and solar energy equipment, systems for energy efficient buildings, renewable materials, techniques for waste management, water treatment, and air purification. Table I shows that total sales of Swedish clean technology firms grew by 57 per cent from 2006 to 2008. Furthermore, the number of firms increased by 83 per cent. The high growth rates mean that the firms operate in growing markets.

The other part of the sample consisted of Swedish firms offering miscellaneous industrial products other than clean technology products. Total sales in this category grew by 7 per cent and the total number of firms grew by 3 per cent from 2006 to 2008, which indicates market maturity. An Anova-test showed that the growth differences between the two categories of firms are statistically significant ($p < 0.001$).

The convenience sample comprised the 571 clean technology firms that were listed by Swedish Environmental Technology Council in 2009 and 617 firms offering miscellaneous industrial products. Statistics regarding sales and financial performance were collected from the firms' annual reports, and this information was supplemented by responses to a mail-in questionnaire administered in 2009. Although several individuals within a firm may participate in the processing of information, it was assumed that individual executives are central informants in accordance with the strategic choice view (Child, 1972). Given the number of firms and that executives are generally very busy, it seemed suitable to collect the data by mail.

The questionnaire enabled contact with executives responsible for firm operations (86 per cent of the answering respondents were presidents of the firms, 3 per cent were sales managers, and the others had different job titles). The outcome after two reminding questionnaires were sent out was 432 completed questionnaires, an overall response rate of 36 per cent. For the clean technology sub-sample with firms in

Indicators	Growth from 2006 to 2008	
	Firms primarily offering clean technology products (%)	Firms offering misc. industrial products (%)
Total sales	57	7
No. of firms	83	3

Sources: Statistics Sweden (2006, 2008) and Swedish Environmental Technology Council (2006, 2008)

Table I.
Total sales and number of Swedish firms in two categories

growing markets, there were 262 completed questionnaires (46 per cent), and for the sub-sample of miscellaneous industrial products with firms in mature markets there were 170 answers (28 per cent).

A comparison of sales statistics revealed no significant difference of mean values in the responding and non-responding firm groups. This indicates that the questionnaire responses were representative.

Development of scales

First, we conducted a focus group discussion to test the face validity of the perceptual survey items. A group of eight managers representing firms similar to those in the study sample tested a draft questionnaire. The ensuing discussion revealed that what is meant by a “main competitor” could be expressed more clearly. It was decided to focus on the main direct rival (Chen, 1996) that competes for a firm’s customers. Also, as it is difficult to evaluate too many customers it was decided to capture obstacles to access main customers of the firms.

The quality of the answers would depend on respondents’ understanding of competitive issues. To gauge this, questionnaire respondents’ market experience was measured. The mean value was 16.56 years, and this indicates that respondents did not lack competitive experience. The survey items had relevance to the respondents, and this further secured face validity of the items. Also, each respondent described the firm’s main products and main customers and this enabled interpretation of the relevance of the answers.

Variables

The dependent variable of the firm’s financial performance was measured by return on assets, average 2006-2008, percentage. The reason for a three-year average was that strategy performance needs to be evaluated over a longer period of time than just one year.

In accordance with the model, the perceptual variable firm’s attention to customer responsiveness was used as a dependent and an independent variable. Ratings for three items (“we pay attention to after-sales services”, “we pay attention to solutions to customers’ problems”, and “we pay attention to relationships with customers”) were made on five-point Likert scales ranging from 1 = “strongly disagree” to 5 = “strongly agree” (Cronbach’s alpha = 0.63). The mean value of a respondent’s scores given to the items represented a score of the variable.

The items of a firm’s customer responsiveness are integral parts of the latent variable and jointly determine the conceptual meaning of the construct. The items indicate actions taken in response to market intelligence concerning individual needs of target customers that defines the responsiveness of the firm (Kohli and Jaworski, 1990; Kohli *et al.*, 1993). Although physical products may be included in customer solutions, the formative items essentially indicate value-creation beyond physical dimensions as non-physical dimensions is essential to customer responsiveness (Ulaga and Eggert, 2006).

Also, four other perceptual independent variables were created and the mean value of a respondent’s scores given to the formative items of each perceptual variable represented a score of the particular variable. Ratings were made on five-point Likert scales (scale point 1 = “strongly disagree” and scale point 5 = “strongly agree”). The

main competitor's attention to customer responsiveness was captured by the three responsiveness items ("we pay attention to after-sales services", "we pay attention to solutions to customers' problems", and "we pay attention to relationships with customers"; $\alpha = 0.74$).

Two items indicated the main competitor's attention to volume ($\alpha = 0.65$). The construct follows strategy theory (Porter, 1980) but the indicators ("the competitor tries to achieve large volumes" and "the competitor tries to dominate the market") do not have the same contents. The former item does not include any ambition to achieve a relative market position which is the case for the second item.

Competition-based items were used as indicators of customer access obstacles. In accordance with bounded rationality, it was assumed that firms are well informed about the main customers. Thus, customer access obstacles: supplier loyalty was captured by three items: "the main customers are loyal to their suppliers", "the main customers prefer local suppliers", and "it is costly for the main customers to switch suppliers" ($\alpha = 0.60$), while two items indicated customer access obstacles: product adaptation ("the main customers require products that are adapted to specific needs", and "product adaptation is common in the market", $\alpha = 0.60$). The indicators constitute customer access obstacles and exogenous competition barriers that are embedded in the market context (Bain, 1956).

The market growth of the firms was measured by a dummy variable, market growth. The firms offering miscellaneous industrial products other than clean technology products operate on mature markets and were represented by 0. The firms primarily offering clean technology products to business customers operate on growing markets and these firms were represented by 1.

Firm size was controlled for in the study. For example, Dean and Meyer (1996) show that small and large firms possess different resources and capabilities that make them well suited to cope with competition. Sales were used as an indicator of the control variable of firm sales. Average sales data in 2006-2008 were transformed into logarithmic values.

Furthermore, a control was made for product complexity as this is a central element of a differentiation strategy (Slater and Olson, 2000). More complex products would be expected to provide buyers with additional value, and differentiation issues may vary along the value chain (Pehrsson, 2008). Essentially, differentiation issues of firms that offer individual products tend to differ from those of firms that offer systems composed of individual products. A dummy variable, product complexity, was included in the analysis where 0 represented firms that primarily offer individual products and 1 represented firms that primarily offer systems of products. The questionnaire asked respondents whether their firms primarily focus on individual products or systems composed of individual products.

Analysis procedure

Linear regressions (Cohen *et al.*, 2003) were used to test the hypothesized relationships on the full sample. Separate regression analyses were conducted for *H1*, *H2*, and *H3*. The first block of variables in each analysis consisted of control variables and independent variables, while interactions were entered in the second blocks. Furthermore, tests for violations in the model assumptions were conducted and

variance inflation factors (VIFs) were calculated for each of the regression equations to detect any multi-collinearity problems among the predictors.

The interactions were residual-centered and orthogonalized (Little *et al.*, 2006) in order to eliminate nonessential multi-collinearity. For each interaction, the product term was regressed onto the first-ordered effects and the residual was then used to represent the interaction effect. The variance of this new orthogonalized interaction term contained the unique variance that fully represented the interaction effect, independent of the first-order effect variance as well as general error or unreliability.

As the perceptual data regarding a certain firm came from the same executive, the problem of common method variance (Podsakoff and Organ, 1986) may occur. Podsakoff and Organ suggest Harman's single-factor test to control for common method variance. Here, all relevant variables are entered into a factor analysis and the unrotated factor solution is examined. If there is substantial common method variance, the solution consists of either a single factor or a general factor. In this study the Harman test resulted in three factors and no general factor appeared, therefore common method variance was not a serious problem.

Results

Tables II provides descriptive statistics and Pearson correlations coefficients of the variables. The table shows that there are underlying relationships that need to be further explored. Particularly, significant correlations appeared for financial performance and firm's attention to customer responsiveness.

Table III provides the regression analysis regarding the dependent variable of firms' attention to customer responsiveness. Table IV shows the results of the regression with the firm's financial performance as the dependent variable. No model violations were found in the normal probability plots of standardized residuals as compared with predicted values. The VIFs ranged from 1.00 to 1.16, which is far from 10, an indication of potential multi-collinearity problems (Neter *et al.*, 1996).

H1a predicts that the relationship between the main competitor's attention to customer responsiveness and the industrial firm's attention to customer responsiveness is positively strengthened if the firm operates in a growing market. The results (Table III) reject the hypothesis as the coefficient estimate for the interaction between market growth and competitor's attention to customer responsiveness was not significant. However, the coefficient estimate for the market growth interaction pertaining to the main competitor's attention to volume was negative and significant ($t = -2.22$, $p < 0.05$). This result supports *H1b*, which predicts that the relationship between the attention paid to volume by the main competitor and the attention paid to customer responsiveness by the industrial firm is negatively reinforced if the firm operates in a growing market.

H2a predicts a positive impact of the interaction between market growth and competition-based customer access obstacles in terms of supplier loyalty. The results support the hypothesis as the obstacles had a significant positive impact in a growing market ($t = 2.23$, $p < 0.05$). However, the interaction regarding obstacles due to customers' product adaptation requirements was not significant rejecting *H2b*.

The results of Table IV support *H3* as market growth positively reinforced the relationship between the firm's attention to customer responsiveness and its financial performance ($t = 2.06$, $p < 0.05$). However, there was no significant relationship

Variables	Mean	SD	1	2	3	4	5	6	7	8
1. Financial performance	0.03	0.18	-							
2. Firm's attention to customer responsiveness	4.34	0.53	0.09	-						
3. Firm sales, lg SEK mill.	1.43	0.88	0.19**	0.00						
4. Product complexity (dummy)	0.54	0.54	0.10*	0.10*	-					
5. Market growth (dummy)	0.61	0.49	-0.08	0.03	-0.08**	0.00				
6. Competitor's attention to customer responsiveness	3.89	0.69	0.03	0.34**	-0.08	0.13*	0.07			
7. Competitor's attention to volume	3.44	0.88	-0.08	0.05	-0.01	-0.01	0.00	0.12*		
8. Customer access obstacles: supplier loyalty	3.01	0.64	-0.02	0.02	-0.18**	0.01	0.17**	0.13**	0.04	
9. Customer access obstacles: product adaptation	4.21	0.63	-0.01	0.38**	-0.06	0.07	0.23**	0.26**	0.04	0.08

Notes: * $p < 0.05$; ** $p < 0.01$ (two-tailed); $n = 432$

Table II.
Descriptive statistics and Pearson correlation coefficients

Variables	Model 1	Model 2	Model 3
Intercept	2.46** (0.24)	2.46** (0.24)	2.45** (0.24)
<i>Control variables</i>			
Firm sales, lg SEK million	0.01 (0.03)	0.02 (0.04)	0.02 (0.04)
Product complexity	0.03 (0.05)	0.04 (0.05)	0.04 (0.04)
<i>Independent variables</i>			
Market growth	-0.09 (0.05)	-0.09 (0.05)	-0.08 (0.05)
Competitor's attention to customer responsiveness	0.19** (0.03)	0.19** (0.04)	0.19** (0.04)
Competitor's attention to volume	0.00 (0.03)	0.00 (0.03)	0.00 (0.03)
Customer access obstacles: supplier loyalty	-0.01 (0.04)	-0.01 (0.04)	-0.01 (0.04)
Customer access obstacles: product adaptation	0.28** (0.04)	0.28** (0.04)	0.28** (0.04)
<i>Interactions</i>			
H1a. Market growth × Competitor's attention to customer responsiveness		-0.05 (0.07)	
H1b. Market growth × Competitor's attention to volume		-0.13* (0.06)	
H2a. Market growth × Customer access obstacles: supplier loyalty			0.18* (0.08)
H2b. Market growth × Customer access obstacles: product adaptation			-0.03 (0.08)
R^2	0.22	0.23	0.23
Adjusted R^2	0.20	0.21	0.21
Change in R^2		0.01*	0.01*

Table III. Ordinary least squares regression of firm's attention to customer responsiveness

Notes: * $p < 0.05$; ** $p < 0.001$; $n=432$; Change in R^2 in comparison with model 1

between a firm's customer responsiveness attention and financial performance if the firm operates in a mature market. Regarding the controls, firm sales and product complexity were positively associated with the firm's financial performance ($t = 3.75$, $p < 0.001$, and $t = 2.07$, $p < 0.05$).

Results of the regressions analyses were compared with the correlations in order to control for robustness of the results. As the regression results suggest (Table III), firm's customer responsiveness correlated significantly and positively with the main competitor's customer responsiveness in the full sample (Table II, $r = 0.34$, $p < 0.01$), while there was a significant and positive correlation with customer access obstacles in terms of product adaptation requirements ($r = 0.38$, $p < 0.01$). Furthermore, financial

Variables	Model 1	Model 2
Intercept	-0.16* (0.08)	-0.15* (0.08)
<i>Control variables</i>		
Firm sales, lg SEK million	0.05** (0.01)	0.05** (0.01)
Product complexity	0.03* (0.02)	0.03* (0.02)
<i>Independent variables</i>		
Market growth	-0.02 (0.02)	-0.02 (0.02)
Firm's attention to customer responsiveness	0.02 (0.02)	0.03 (0.02)
<i>Interaction</i>		
H3. Market growth × Firm's attention to customer responsiveness		0.07* (0.03)
R ²	0.06	0.07
Adjusted R ²	0.05	0.06
Change in R ²		0.01*

Table IV.
Ordinary least squares regression of firm's financial performance

Notes: $p < 0.05$; ** $p < 0.001$; $n=432$

performance correlated significantly and positively with firm sales ($r = 0.19, p < 0.01$) and product complexity ($r = 0.10, p < 0.05$) in the full sample, and this coincides with the regression results of Table IV.

Discussion

Discussion of the findings

The results show that the competitive strategy of the industrial firm's main competitor is associated with customer responsiveness of the firm. To varying degrees, the responsiveness comprises after-sales services, solutions to customers' problems, and relationships with customers. In general, there is a positive relationship between the firm's attention to customer responsiveness and the key referent's attention. The linkage exists in growing and mature markets and indicates that there is adoptive imitation of the competitor's responsiveness strategy in accordance with the argument of Greve (1998) and Peteraf and Shanley (1997). However, the relationship is not reinforced if the firm operates in a growing market.

On the other hand, a growing market context negatively reinforces the relationship between the attention paid to volume by the main competitor and the attention paid to customer responsiveness by the industrial firm. As there is great general uncertainty and changing competition patterns in a growing market (Soberman and Gatignon, 2005), the firm relies on the key referent to a large extent and it is likely that the firm adopts attributes of the competitor's volume strategy instead of extending customer responsiveness. The firm would then benefit from alignment with industry behaviour and less risks as the firm does not have to follow its own path (Lee, 2003).



Furthermore, the study found that the relationship between competition-based customer access obstacles in terms of supplier loyalty and the attention paid to customer responsiveness by the industrial firm is positively reinforced if the firm operates in a growing market. A logical interpretation would be that there is extensive customer responsiveness in an uncertainty environment characterized by changing competitive patterns and supplier/customer relationships. In trying to expand, the firm encounters changing loyalties such as brand loyalties (Krouse, 1984) and customers' switching costs (Gruca and Sudharshan, 1995; Han *et al.*, 2001; Karakaya and Stahl, 1989) created by competitors of the firm, and the firm tries overcome the obstacles by means of customer responsiveness. The finding supports the view that firms establishing themselves early generally have extensive opportunities to access potential customers and develop customer relationships (Makadok, 1998), and access in a growing market is achieved by means of customer responsiveness.

It was found in the study that market growth does not moderate the impact of competition-based customer access obstacles regarding product adaptation. Rather, there is a general linkage between the obstacles and the firm's customer responsiveness. Thus, the greater the requirements on product adaptation, the greater the firm's customer responsiveness no matter if the firm operates in a growing or a mature market.

In accordance with the study findings, market growth reinforces the relationship between the firm's attention to customer responsiveness and its financial performance. It was, thus, found that a responsiveness strategy strengthens performance positively provided that the firm operates in a growing market, while there was no significant linkage between customer responsiveness and performance in a mature market. These findings contradict the common view that customer orientation is, in principle, always associated with positive performance (Langerak, 2003; Norman *et al.*, 2007; Sorensen, 2009). Rather, the finding supports the opposing view that environmental factors influence the relationship (Greenley, 1995; Narver and Slater, 1990; Sin *et al.*, 2000) and the study establishes that the relationship between a firm's customer responsiveness and its financial performance is contingent on market growth.

Limitations, conclusions, and theoretical contributions

There are limitations to generalizing the results of this study. First, the study only captures the impact of the main competitor and the impact of the main customers and this limits the potential of generalizing the results of the tests of the first and second hypotheses. Second, as the study uses cross-sectional data it is difficult to provide conclusive causality evidence. Third, the missing cases in the collection of data together with the impossibility of collecting information from those firms later restrict the possibility of generalizing the findings. Fourth, the responses rate of firms in growing and mature markets differ and this constitutes a limitation. Fifth, the choice of indicators may have restricted the strength of the regression models and there may be other indicators that have a potential of contributing to the models.

Despite the limitations, the study results support the conclusion that business strategy in terms of customer responsiveness is more complicated than previously thought in literature. The results contribute theoretically to our understanding of important relationships pertaining to the industrial firm's customer responsiveness. In

particular, the study establishes relationships with competition, market growth, and performance.

The study indicates that perceived competition matters and relationships regarding the main competitor's competitive strategy and competition-based obstacles to access customers are contingent on market growth. Regarding customer responsiveness, the firm and its main competitor tend to follow similar strategies although configurations of individual strategy attributes may differ. In addition, the firm's attention to customer responsiveness is negatively associated with the main competitor's attention to volume in growing markets and positively related to customer access obstacles due to customer/supplier loyalties in growing markets. Also, the study demonstrates that the importance of customers' requirements on product adaptation is robust across the market contexts. Finally, the study shows that the effectiveness of customer responsiveness is contingent on the market context as the strategy is effective only in growing markets.

Implications for management and further research

In a growing market, industrial management is advised to carefully evaluate a business strategy of customer responsiveness as the study shows its effectiveness. Major environmental factors that need to be assessed include the main competitor's competitive strategy, and competition-based obstacles to access customers. However, the firm needs to decide on the extent to which it should follow the competitor's strategy or differentiate along relevant strategy attributes such as after-sales services, solutions to customers' problems, and the building of customer relations. As the indicators of customer responsiveness are formative, management may manipulate them to achieve financial performance in a growing market context. Moreover, the study did not establish any performance associations with customer responsiveness in a mature market and, therefore, customer responsiveness may not have the highest priority if the firm operates in this context.

The study requires repetition in order to test the stability of the results. Such efforts may use the same sample or extended samples covering firms in several market contexts. Furthermore, it would be interesting to explore whether a firm's attention to customer responsiveness should be a mediator in the model. Another suggestion for further research is to incorporate the impact of more competitors' attention to strategies, and not just the main competitor's attention.

Overall, additional data and research are needed, in which confirmatory techniques and structural equation modelling are deployed to further validate the conceptual model developed herein. The study also indicates a need for in-depth studies of customer responsiveness in individual firms in order to explore the issues in more detail. A detailed exploration could, for example, include an evaluation of the objective reality inherent in managerial perceptions.

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