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## Market-based capabilities, perceived quality and firm performance

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## Chapter 2

# The Effect of Market-Based Business Capabilities on Business Performance: Extension of Theory and an Empirical Investigation

**Abstract** Marketing researchers have been observing for more than two decades that business performance is affected by both outside-in and inside-out resources (often denoted as market-based capabilities). Yet to date there has been no valid measure of market-based capabilities. In line with the configurational model of market-based competition, this study develops an integrated classification of market-based capabilities using concepts from strategic marketing, service management, human resource management, supply chain management and relationship marketing. We propose four dimensions for our market-based capabilities construct: (1) market-driven, (2) relationship-driven, (3) supply chain, and (4) human resource capabilities. This study also argues that the four market-based capabilities are particularly relevant for describing and explaining the creation of sustainable competitive advantage. We examine firm performance using managers' reports of firm performance. Results broadly support the proposed market-based capabilities construct. The regression analysis indicates that only supply chain and human resource capabilities are significantly related to business performance. The findings of this study contribute to theory in marketing strategy and have important implications for firms that are developing market-based capabilities. Study limitations and directions for future research are also discussed.

## 2.1 Introduction

Being 'market-driven' is considered as an essential strategy for success and survival in today's competitive environment (Day 1999). During the last two decades, the primary emphasis focused on the concept of market orientation and its antecedents and consequences. Looking broadly to the marketing strategy literature, it appears that during the past years the 'market-driven' agenda has shifted and reconfigured to include other market-based resources.

Market-based resources are playing an increasing role in the economy, and often it is suggested that they have significant implications for firms' market performances. In general, (marketing) strategy researchers propose three theories that are useful for describing and explaining the process of market-based competition:

(1) the resource-based view (RBV), (2) the marketing-based view (MBV), and (3) the configurational-based view. The RBV theorists argue that a firm's sustainable advantage lies in its resource position (Wernerfelt 1984; Barney 1991). Day and Wensley (2002, p. 85) state that "This is predominantly an inside-out perspective, which starts with the capabilities and assets of the firm before considering the competitive context." The MBV identifies an orientation toward the market as the primary source of advantage (Kohli and Jaworski 1990; Narver and Slater 1990). The primary goal of this outside-in perspective is to create superior value for customers through the processes of market information acquisition, information dissemination, and coordinated action. An inside-out (RBV) or outside-in (MBV) focus alone, however, is insufficient to achieve superior financial performance. Therefore, some marketing strategy researchers suggest a balanced perspective of inside-out and outside-in capabilities (Day 1994; Mizik and Jacobson 2003; Noble, Sinha and Kumar 2002; Slack and Lewis 2003; Srivastava, Fahey and Christensen 2001; Vargo and Lusch 2004). This configurational perspective is more realistic, in that it considers both the firm's heterogeneous bundles of resources (RBV) and the issue of heterogeneous demand (MBV).

In strategic marketing management, several marketing models, linking (marketing) resources to business performance (c.f., Bharadwaj, Varadarajan and Fahy 1993; Day 1994; Day and Wensley 1988; Hunt and Morgan 1996), have been developed by strategic marketing scholars. These researchers take a configurational perspective when addressing the most fundamental question at the heart of organizational survival: how to develop and sustain a competitive advantage? These models are, however, very general and therefore a stream of researchers have concentrated on the classification of these (market-based) resources (see for example, Day 1994; Hooley, Möller and Broderick 1998; Hoekstra, Leeflang and Wittink 1999; Hooley et al. 1999; Noble, Sinha and Kumar 2002; Srivastava, Shervani and Fahey 1998, 1999; Srivastava et al. 2001; Vargo and Lusch 2004). This stream of research identifies resources that are marketing-related and potentially manifest at least some of the desired RBV attributes (i.e., appear to be difficult to imitate, are rare, etc.). However, this stream of research is highly conceptual and gives no strong direction for both academics and practitioners on how to implement this configurational-based model. Therefore, our purpose is to develop a synthesized classification of market-based capabilities. Also, we report an exploratory study in which we develop a valid measure of market-based capabilities. Furthermore, we investigate the degree to which the dimensions of this market-based capabilities model are viable and potentially lucrative business approaches by relating them simultaneously to business performance.

In this chapter, we explore the configurational perspective of market-based competition and its effect on company performance in a single business-to-business industry, the wholesale sector in the Netherlands. This research is part of a larger project that is designed to evaluate the market-based capabilities of business-to-business firms. The purpose is to better advise business-to-business firms in developing their marketing strategies (and activities).

This study extends previous research by: (a) developing a synthesized classifi-

cation of market-based capabilities, (b) developing valid measures of these market-based capabilities, using concepts from strategic marketing, service management, human resource management, supply chain management and relationship marketing, (c) investigating this market-based capabilities construct using factor-analytical methods, and (d) relate the dimensions of this construct simultaneously to business performance. This chapter is organized as follows. First, we briefly review the classifications of market-based capabilities proposed in the literature. Next, we combine the strengths of each classification to develop our classification of market-based business capabilities. Then, we present our conceptual framework and formulate hypotheses. After this, the data collection approach and methods of analysis are described. Finally, we present the results and discuss the consequences of these findings for both marketing science and practice.

## 2.2 Market-Based Business Concept

As noted earlier, several scholars propose a configurational theory of marketing. To further develop this perspective, several researchers propose classifications incorporating both the marketing-based view and resource-based view. Hereafter, we discuss these classifications found in the literature and next we propose a new classification through combining the strengths of each classification resulting in our market-based capabilities construct.

### 2.2.1 Market-Based Classifications in the Literature

Several concepts of market-based capabilities have been proposed (Table 2.1). We distinguish the following concepts: (1) the information approach, (2) the cultural approach, (3) the capabilities approach, (4) market-based assets, (5) marketing assets and capabilities, (6) core market-based processes, (7) the operant resource-based perspective, and (8) the resource advantage perspective. This summation is not intended to be exhaustive. We only review the concepts that have gained some acceptance in strategic marketing.

*The information approach.* In 1990, Kohli and Jaworski articulate a theory of market orientation, which they describe as the implementation of the marketing concept, with the following activities: (1) intelligence generation, (2) intelligence dissemination, and (3) organizationwide responsiveness. This theory has been refined and built upon, and valid measures of the market orientation construct have been developed (e.g., Kohli, Jaworski and Kumar 1993).

*The cultural approach.* Narver and Slater (1990, p. 21) define a market orientation as an “organizational culture that most effectively and efficiently creates the necessary behaviors for the creation of superior value for buyers and, thus, continuous superior performance for the business.” Their research suggests three behavioral components of market orientation: customer orientation, competitor orientation and interfunctional coordination. Narver and Slater (1990) also develop measures for their construct.

<b>1. Information Approach (Kohli and Jaworski 1990)</b>	<b>2. Cultural Approach (Narver and Slater 1990)</b>	<b>3. Capabilities Approach (Day 1994)</b>
Intelligence Generation Intelligence Dissemination Responsiveness	Customer Orientation Competitor Orientation Interfunctional Coordination	Market-Sensing Capabilities Customer-Linking Capabilities Channel-Bonding Capabilities Technology Monitoring Capabilities
<b>4. Market-Based Assets (Srivastava et al. 1998)</b>	<b>5. Marketing Assets and Capabilities (Hooley et al. 1998)</b>	<b>6. Core Market-Based Processes (Srivastava et al. 1999)</b>
Relational Assets Intellectual Assets	Strategic Marketing Capabilities Functional Marketing Capabilities Operational Marketing Capabilities	Customer Relationship Management Supply Chain Management Product Development Management
<b>7. Operant Resources (Vargo and Lusch 2004)</b>		<b>8. Resource Advantage Perspective (Hunt 2004)</b>
Market Orientation Processes Services Marketing Processes Relationship Marketing Processes Resource Management Processes	Quality Management Processes Supply Management Processes Network Management Processes	Informational Resources Relationship Resources Human Resources Organizational Resources

Table 2.1: Market-Based Classifications in the Literature

*The capabilities approach.* George Day (1994) proposes an approach, which explicitly emphasizes the concept of capabilities. His vision is that market-driven organizations have superior market-sensing, customer-linking, channel-bonding and technology-monitoring capabilities. He (p. 38) defines capabilities as a set of “complex bundle of skills and accumulated knowledge, exercised through organizational processes, that enable firms to coordinate activities and make use of their assets.” He classifies capabilities, depending on the orientation and focus of the defining processes, into inside-out, outside-in and spanning capabilities. Outside-in capabilities refer to the firm’s capability to sense and respond to changes taking place in its markets (market-sensing capabilities) and to develop and build relationships with the market (customer-linking capabilities). Inside-out capabilities, by contrast, refer to the firm’s internal resources and capabilities such as human resource management, technology development and integrated logistics.

*Market-Based Assets.* Srivastava et al. (1998) introduce a conceptual framework that links market-based assets to shareholder value. These researchers distinguish two related types of market-based assets: (1) relational market-based assets, and (2) intellectual market-based assets. According to these scholars, relational assets refer to outcomes of the relationship between a firm and key external stakeholders; and intellectual assets are defined as the types of knowledge a firm possesses about its environment. Their main thesis is that market-based assets, such as customer relationships, channel relationships and partner relationships, increase shareholder value by enhancing cash flows, lowering the volatility and/or increasing the residual value of cash flows.

*Marketing Assets and Capabilities.* Hooley et al. (1998) distinguish market-based capabilities into: (1) strategic, (2) functional, and (3) operational. Strategic capabilities refer to variables related to the management's ability to identify and interpret relevant market information, such as market-sensing and market positioning capabilities. Functional capabilities are related to functions or processes within the firm. These researchers argue that Day's (1994) classification of inside-out, outside-in and spanning capabilities fit their concept of functional capabilities well. Operational capabilities relate to the skills that enable individual managers and employees to function in order to serve the market.

*Core Market-Based Business Processes.* Srivastava et al. (1999) provide a framework in which firm resources are linked with market-based assets, processes, capabilities and customer value. They contend that a company has three core business processes: (1) customer relationship management, such as generating information and the efficiency and effectiveness of transforming market information into customer solutions, (2) supply chain management, such as identifying and qualifying (potential) vendors and logistics capability, and (3) market-driven product development management. Their central proposition is that market-based core business processes create a solution that enables customers to experience the maximum value and benefit from its use.

*Operant Resources.* Vargo and Lusch (2004) propose a service-centered view of marketing. In their paper, they emphasize the concept of operant resources, resources that produce effects, especially higher-order capabilities, as the key to obtaining competitive advantage. They actually propose an integrative model incorporating: (1) market orientation, (2) services marketing, (3) relationship marketing, (4) quality management, (5) value and supply chain management, (6) resource management, and (7) network management processes.

*Resource Advantage Perspective.* Hunt and Morgan (1995) introduce a theory of competition that explicitly recognizes marketing as a resource of advantage (because of imperfect and costly market information). In their discussion of this theory, they argue that market orientation forms a (potential) source of advantage. In a recent article, Hunt (2004) classifies (operant) resources into (a) human (e.g., the skills of individual employees), (b) organizational (e.g., competences), (c) informational (e.g., knowledge about market segments), and (d) relational resources (e.g., relationships with suppliers and customers).

## 2.2.2 Proposed Classification of Market-Based Capabilities

Building on the previously discussed market-based classifications, we now outline our synthetic classification of market-based capabilities. Thereafter, we discuss very briefly the dimensions of these capabilities.

### Classifying Capabilities

In an attempt to develop an integrative classification of market-based business capabilities, we follow Day's (1994) inside-out and outside-in perspective. We

do this mainly because other researchers (e.g., Hooley et al. 1998; Srivastava et al. 1999) have strongly built on this pioneering work. Basically, Hunt's (2004) and Vargo and Lusch's (2004) operant resources may be viewed as a summary and extension of Day's (1994) proposed outside-in and inside-out capabilities model. Although Day (1994) classifies four market-related capabilities, he argues that especially two outside-in capabilities are essential in explaining market-based performance: (1) market-sensing, and (2) relationship-linking capabilities. He defines market-sensing capabilities as the generation of market intelligence, dissemination of this intelligence and organizationwide responsiveness. Actually, this component integrates the previously mentioned information and cultural approaches. Concerning relationship-linking capabilities, such as the ability to cooperate and share information in a collaborative manner with stakeholders, these are also recognized as essential market-based capabilities, especially in services marketing (Srivastava et al. 1998; Webster 1992; Vargo and Lusch 2004). Recently, Vargo and Lusch (2004), even suggest that relationships-driven capabilities, which are necessary in the service-driven economy, form the core of marketing.

Day's (1994) inside-out capabilities, in general, may be divided into two dimensions of market-based capabilities: (1) supply-chain, and (2) human resource capabilities. Concerning supply chain capabilities, these are often recognized in the supply chain management literature as important sources of sustained advantage. Furthermore, both Srivastava et al. (1999) and Vargo and Lusch (2004) classify these capabilities as belonging to the category of market-based capabilities. Consistent with this stream of research, we recognize this capability as essential in delivering value for the market. Besides supply-chain capabilities, Day (1994) also proposes human resources as a dimension of market-based capabilities. Incorporating human resources into the configurational model is also recently proposed by both marketing (e.g., Hunt 2004) and human resources management researchers (Colbert 2004). Hence, we argue that human resources are important market-based capabilities if they are managed with the point of departure of satisfying customer needs (see also Vargo and Lusch 2004).

In summary, our proposed classification is basically an integration of the previously discussed concepts (see Figure 2.1). We distinguish four types of company's rent producing resources, each representing a dimension in our market-based capabilities construct: (1) market-driven, (2) relationship-driven, (3) supply-chain, and (4) human resource capabilities.

## Market-Based Capabilities Construct

After introducing our classification of market-based capabilities, we now briefly discuss these capabilities. In line with the broad conceptualizations found in the literature we develop our model.

*Market-Driven Capabilities.* We define market-driven capabilities as the firm's competencies to create deep and insightful market knowledge, disseminate this knowledge to relevant employees and implement a strategy based on this knowledge. According to this stream of research, a market-driven capability is the ability

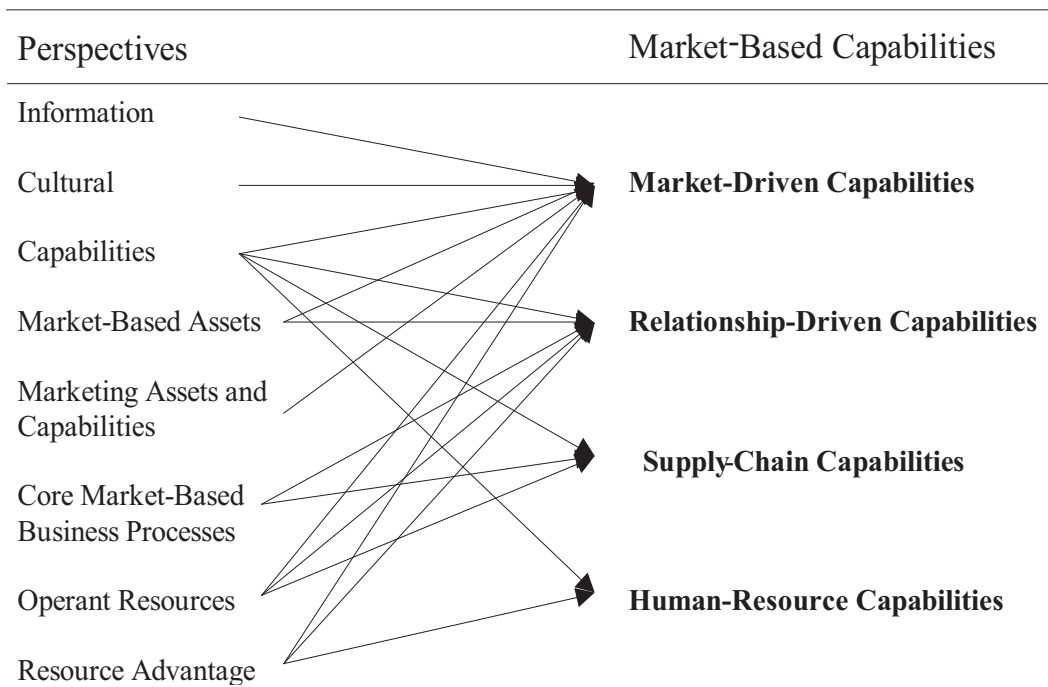


Figure 2.1: Proposed Classification of Market-Based Capabilities

of the firm to learn about customers and (the influence of) competitors to continuously act on trends in present and prospective markets (e.g., Day and Nedungadi’s 1994; Moorman 1995; Narver and Slater 1990). Therefore, the following dimensions of market-driven capabilities are proposed: (1) customer-driven and (2) competitor-driven capabilities.

*Relationship-Driven Capabilities.* Relationship-driven capabilities refer to the firm’s capability in building and maintaining relationships with the market. Generally, this is done by sharing relevant information and cooperating collaboratively with stakeholders (i.e., customers and suppliers). Following the relationship marketing literature (see for example, e.g., Butaney and Wortzel 1988; Day 2000; Day and Montgomery 1999) we consider two dimensions of relationship-driven capabilities: (1) customer-linking, and (2) supplier-linking capabilities.

*Supply Chain Capabilities.* Essentially, supply chain researchers refer to supply-chain capabilities as the firm’s capability in linking supply chain members together through physical flows and information flows (Simchi-Levi, Kaminsky and Simich-Levi 2000). This definition implies the following: (1) linking supply chain members through physical flows relate to the firm’s ‘logistics capabilities,’ and (2) information flows relate to the firm’s ‘information technology’. This is in line with Day’s (1994) following components of inside-out processes, which basically summarize the supply-chain capabilities dimension: (1) logistics integration, (2) transformation processes and (3) information technology. Hence, we divide supply chain



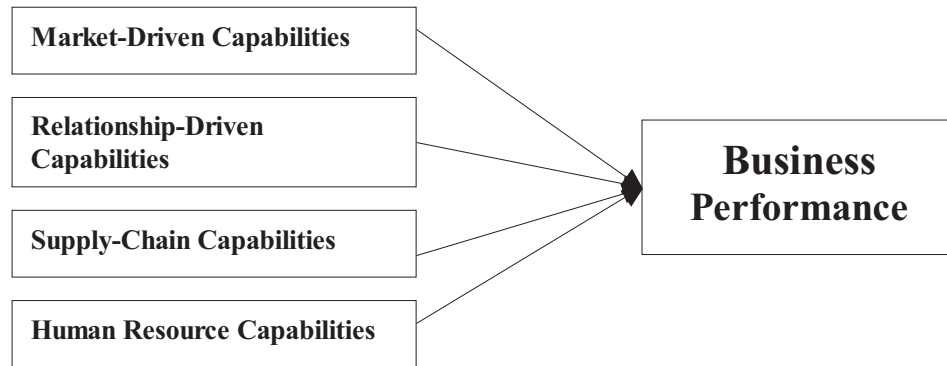


Figure 2.2: Conceptual Framework

capabilities into: (1) logistics capabilities and (2) information-technology capabilities.

*Human Resource Capabilities.* Human resource capabilities have been neglected in the market-based oriented literature. Only recently the market-based literature began to consider the concept of human resources as a market-based component (Hunt 2000, 2004; Srivastava et al. 2001). As mentioned earlier, we believe, in line with the emerging literature, that human resources are important market-based capabilities (c.f., Day 1994; Hunt 2004; Moorman and Rust 1999). In line with previous work in this field (e.g., Bharadwaj 2000), we argue that human resource capabilities are reflected in (1) the skills of front line employees, and (2) the skills of management to manage these human resources. The former is referred to as ‘people capabilities’, and the latter as ‘human-related capabilities.’

### 2.3 Conceptual Framework

As mentioned before, we take a configurational perspective, by incorporating both outside-in capabilities and inside-out capabilities, to explain market-based performance (Figure 2.2). Although Day and Wensley (1983, 1988) originally articulate this way of modeling market performance, it is only recently that researchers begin to explicitly defend this integrative interdisciplinary way of describing market-based competition (Gummesson 2004; Hunt 2004; Slack and Lewis 2003; Vagro and Lusch 2004).

Reviewing the literature, research from several domains points to the main effects of market-driven, relationship-driven, supply chain and human resource capabilities on business performance. Concerning market-driven capabilities, many researchers find a positive effect of market orientation on business performance (e.g., Jaworski and Kohli 1993; Kirca, Jayachandran and Bearden, 2005; Narver and Slater 1990). However, no consensus exists indicating that market-driven capabilities have, under all conditions, a significant effect on business performance (Moorman and

Rust 1999). The effect of relationship-driven capabilities on business performance is also frequently studied by marketing scientists. For example, Kalwani and Narayandas' (1995) results indicate that these capabilities have a positive effect on business performance (see also, Frohlich and Westbrook 2001; Granovetter, 1985). The relationship between supply-chain capabilities and business performance is frequently studied by (operations) management scientists (e.g., Cachon and Fisher 2000). Researchers in this field largely suggest the existence of a positive link (e.g., McDonald et al. 2001; Simchi-Levi et al. 2000). Concerning human resource capabilities, several researchers suggest a significant relationship between (strategic) human resource capabilities and business performance (e.g., Huselid 1995; Roth and Jackson 1995). Although no consensus exists with regard to the sign of this relationship, proposing a positive relationship between human resource capabilities and business performance is compelling.

In short, our conceptual model specifies the relationships between the four building blocks of market-based capabilities and business performance. This model is in line with Noble et al.'s (2002) and Treacy and Wiersema's (1993) vision that it is myopic to assume that only one strategic resource or orientation is the only legitimate guiding model for business success.

**Hypothesis 1** *The firm's performance is positively affected by (a) market-driven capabilities, (b) relationship-driven capabilities, (c) supply-chain capabilities, and (d) human resource capabilities.*

## 2.4 Method

### 2.4.1 Research Setting and Sample

As mentioned before, this study is part of a larger project that is designed to evaluate the market-based capabilities business-to-business firms. The sampling frame is a list of 843 technical wholesalers in the Netherlands. The method used is a survey among 'key informant' decision makers within electrotechnical wholesale companies. We presume that the manager or owner is the most knowledgeable person concerning market strategy, the firm's relationships with both customers and suppliers, and the internal resources (HRM, Logistics, and IT). We sent questionnaires to these wholesalers, including a cover letter explaining the study goal, and a stamped return envelope to the owner or manager of each firm. Of these 843 surveys, 137 are returned, a response rate of 16.3 percent.

### 2.4.2 Measurement Scales

Scales of the constructs we examine are available in the literature or could be easily derived from previous work. All item constructs are modified to suit the wholesale environment (Coughlan, et al. 2001; Rosenbloom 1999) and are measured on a seven-point scale ranging from 1 (strongly disagree) to 7 (strongly agree). The criterion to incorporate an item is based on expert opinions.

## Market-Driven Capabilities

We integrate and modify Kohli and Jaworski's (1990) and Narver and Slater's (1990) conceptualizations to develop the market-driven capabilities measure. We measure customer-driven and competitor-driven capabilities using a modified version of Jaworski and Kohli's (1993) scales.

## Relationship-Driven Capabilities

We define relationship-driven capabilities as the firm's capability in sharing relevant information and cooperating collaboratively with both customers and suppliers. As mentioned before, we divide relationship-driven capabilities into two components: (1) customer-linking, and (2) supplier-linking capabilities. For these scales, items are gathered from different sources. Both components are second-order factors with each having two first-order factors, namely collaborative information sharing and cooperation. The first dimension of both constructs, information sharing, is derived from Cannon and Homburg's (2001) and Lusch and Brown's (1996) research. Measures for the second dimension, collaborative cooperation, are derived from Buvik and John's (2000) and Rosenzweig, et al.'s (2003) studies.

## Supply Chain Capabilities

We specify two building blocks of supply chain capabilities: (1) information-technology capabilities and (2) logistics capabilities. Using the resource-based approach, Bharadwaj (2000) develops the concept of information technology (IT) as an organizational capability encompassing the following firm specific IT resources (1) IT infrastructure, (2) human IT resources, and (3) IT-enabled intangibles. We study two dimensions (IT infrastructure, and human IT resources) and develop measures, based on Bharadwaj's (2000) study, for these first-order factors. Based on the logistics management literature (e.g., Tracey 1998), we consider three dimensions of logistics capabilities: (1) physical supply, (2) order fulfillment, and (3) physical distribution. We derive the 'physical supply scale', inbound transportation, warehousing and inventory control, and 'physical distribution scale', outbound logistics from Tracey's (1998) work. Furthermore, we develop indicators for the order-fulfillment scale using Day's (1994) 'order fulfillment process' model.

## Human Resource Capabilities

As mentioned before, we construct human resource capabilities as two components: (1) human-related, and (2) people capabilities. We derive the indicators of human-related capabilities from studies in human resources management (Huselid 1995) and marketing (Hartline and Ferrell 1996; Cravens et al. 1993). People capabilities measures are derived from Roth and Jackson's (1995) study.

## Business Performance

Following Lusch and Brown (1996), we measure wholesale business performance on five aspects of efficiency and productivity: sales growth, profit growth, overall profitability, labor productivity and cash flow. The items are measured on a seven-point scale ranging from 1 (significantly worse performance) to 7 (significantly better performance than others in the industry). Lusch and Brown (1996) provide strong arguments for using these items as indicators of wholesale business performance. In their confirmatory factor analysis, they validated this scale.

## Control Variables

Two variables are included as control variables as they may reflect alternative explanations of organizational performance. These two variables are: (1) current organizational size, and (2) firm's age. These control variables are self-reported measures.

### 2.4.3 Methods of Analysis

In this section, we outline our methods of analysis. To investigate the proposed market-based capabilities construct, we first employ exploratory and thereafter confirmatory factor analysis. Thereafter, to estimate the proposed models, we apply multiple hierarchical linear regression analysis. This analysis is briefly described next.

To investigate the proposed relationships between market-based capabilities dimensions and business performance, we use a hierarchical approach of regression analysis. We enter the predictors in the following sequence: (1) covariates, and (2) main effects. Specifically, the following main effect models are estimated: (1) covariates model, which only incorporates the covariates AGE and SIZE (model 1.1), (2) bivariate main effects (model 1.2-1.5),<sup>1</sup> (3) outside-in capabilities model, which incorporates the marketing-based capabilities (model 1.6), (4) inside-out capabilities model, which includes both supply chain and human resource capabilities (model 1.7),<sup>2</sup> and (5) main effects simultaneously (model 1.8).

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<sup>1</sup>To benchmark a capability-only model, where each capability in isolation is related to business performance, with a full main effects model, we conduct this analysis. This enables us to investigate the relative strength of previous research, which largely, as noted before, examines a single capability-business performance relationship. For example, Jaworski and Kohli (1993) relate only market orientation to business performance.

<sup>2</sup>The examination of model 1.6 and 1.7 enables us to investigate the relative contribution of either the outside-in and inside-out capabilities to business performance.

## 2.5 Findings

### 2.5.1 The Factor Model

The market-based business capabilities model represents a multi-level construct (Figure 2.3). In investigating this hierarchical model, as in market orientation measurement, multicollinearity is an issue that needs to be addressed. For this reason, exploratory factor analysis is used with oblique rotation in order to select suitable items for each component. Only items that load higher than .60 on the hypothesized component and lower than .20 on other components are selected. Using an eigenvalue greater than one, this analysis indicates an eight-factor solution.

The market-based capabilities model (Figure 2.3) is further purified and refined with confirmatory factor analysis until further improvements are not possible (without changing the structure). The Appendix B contains all of the purified measures as well as their factor scores, variance extracted and reliability scores, for both the first- and second-order factors.

### Proposed Market-Based Capabilities Construct

The  $\chi^2$  for this model is 543.54 (d.f. = 363) and is significant at the .01 level. The value of NNFI, CFI and IFI is .94, .95 and .95, respectively. Furthermore, the value of the RMSEA and SRMR is .06 and .08, respectively. The composite reliability for the first-order factors exceed .70. In all cases, except for the human-related capabilities dimension, the AVE exceeds the recommended cut point .50. The composite reliability for the second-order factors also exceeds the recommended cutoff points; market-driven, relationship-driven, supply-chain and human resource capabilities have a reliability coefficient of .73, .73, .69 and .67, respectively. The AVE for market-driven, relationship-driven, supply-chain and human resource capabilities is .57, .58, .52 and .50, respectively. Taken together, the results indicate that the hypothesized market-based capabilities model fits the data reasonably good; the solution is proper, no negative variance estimates, low error variances and high loadings and the fit statistics broadly indicate that the model adequately fits the data.

### Business Performance

This measurement model produces the following fit statistics:  $\chi^2 = 3.40$ , d.f. = 2,  $p = .18$ ; RMSEA = .072; NNFI = .99; CFI = 1.00; IFI = 1.00; SRMR = .021. Here, both the nonsignificant  $\chi^2$  as well as other goodness-of-fit measures indicate an almost excellent overall fit of the measurement model to the data. The composite reliability coefficient for the business performance measure exceeds .90. Furthermore, AVE exceeds the value .70.

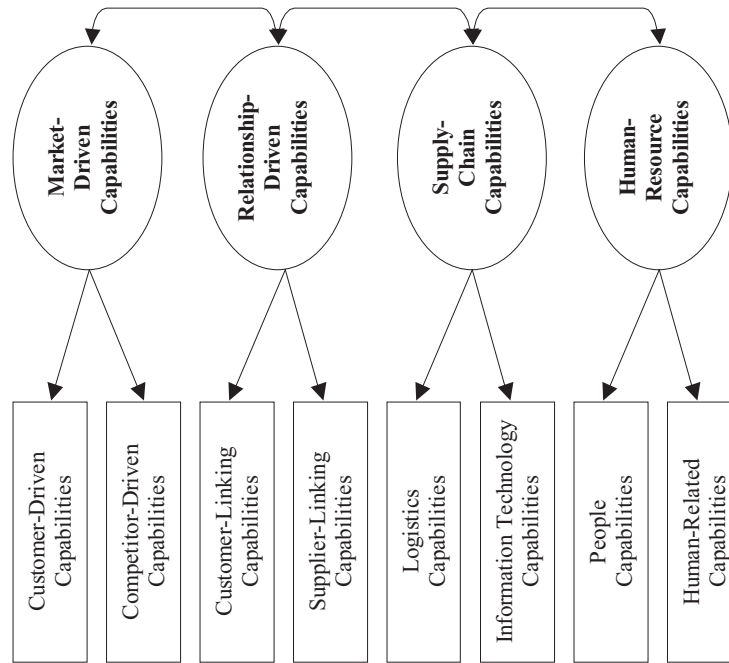


Figure 2.3: Proposed Market-Based Capabilities Construct

## 2.5.2 The Regression Model

In table 2.2, we provide the means, standard deviation, and a correlation matrix of the variables under study. Inspection of table 2.2 shows that the correlations between the four market-based capabilities are positive and significant. Furthermore, these correlations range from .35 to .60, indicating a strong convergence between them. Also, the correlations between the four market-based capabilities measures and business performance are positive and significant and range between .34 and .43. Using a hierarchical approach by entering the independent variables in a hierarchical sequence, we examine models discussed earlier.

The results from our hierarchical multiple regression analysis are reported in table 2.3 (Model 1.1 to 1.8). In Model 1.1 we regress business performance (BP) on the two control variables (AGE and SIZE). The results indicate a nonsignificant F-value for the model and nonsignificant values for the control variables. Remaining models do not incorporate the control variables, since model 1.1 indicates that their absence have no influence. Models 1.2 to 1.5 investigate the effect of each market-

	Mean	SD	X1	X2	X3	X4	X5	X6	X7
<b>AGE (X1)</b>	<b>1,965</b>	<b>32.2</b>							
<b>SIZE (X2)</b>	<b>51.32</b>	<b>92.1</b>	<b>-.19</b>						
<b>MDC (X3)</b>	<b>4.83</b>	<b>.94</b>	<b>-.11</b>	<b>-.02</b>					
<b>RDC (X4)</b>	<b>5.46</b>	<b>.73</b>	<b>-.05</b>	<b>.05</b>	<b>.60**</b>				
<b>SCC (X5)</b>	<b>5.41</b>	<b>.81</b>	<b>-.09</b>	<b>.13</b>	<b>.31**</b>	<b>.41**</b>			
<b>HRC (X6)</b>	<b>5.61</b>	<b>.65</b>	<b>-.07</b>	<b>-.09</b>	<b>.42**</b>	<b>.59**</b>	<b>.37**</b>		
<b>BP (X7)</b>	<b>5.15</b>	<b>1.07</b>	<b>-.12</b>	<b>-.04</b>	<b>.22**</b>	<b>.37**</b>	<b>.31**</b>	<b>.42**</b>	

\*\*  $p < 0.01$

\*  $p < 0.05$ .

$N = 137$

Note: MDC is market-driven capabilities, RDC is relationship-driven capabilities, SCC is supply chain capabilities, HRC is human resource capabilities and BP is business performance.

Table 2.2: Descriptive Statistics and Correlations

based capability in isolation to BP. Consistent with theory, each variable has a positive significant effect on BP. The results in table 2.3 (model 1.2-1.5) denote that BP is associated with higher (levels for) market-driven capabilities (MDC) ( $B = .25$ ,  $p = .01$ ), relationship-driven capabilities (RDC) ( $B = .54$ ,  $p = .00$ ), supply-chain capabilities (SCC) ( $B = .43$ ,  $p = .00$ ), and human resource capabilities (HRC) ( $B = .71$ ,  $p = .00$ ). In Model 1.6 we examine the effect of outside-in capabilities (MDC and RDC) on BP; the analysis only reveals a significant effect of RDC on business performance ( $B = .55$ ,  $p = .00$ ). To investigate the effect of inside-out capabilities, we estimate Model 1.7. The data support this model, indicating that SCC ( $B = .26$ ,  $p = .03$ ) and HRC ( $B = .57$ ,  $p = .00$ ) significantly and positively influence BP. The findings of the overall model (model 1.8) indicate that BP is only significantly associated with HRC ( $B = .45$ ,  $p = .01$ ); SCC have a slightly nonsignificant relationship with BP ( $B = .24$ ,  $p = .06$ ). Concerning MDC and RDC, our analysis reveals no significant effect of these marketing-based capabilities on BP (MDC:  $B = .00$ ,  $p = .93$ ; RDC:  $B = .20$ ,  $p = .27$ ). These outcomes lead to the rejection of hypotheses 1a and 1b and support of hypotheses 1c and 1d.

Table 2.2 reveals a moderate correlation between the market-based business capabilities. Therefore, it is necessary to assess the degree to which these correlations could influence the outcomes. To identify the degree of collinearity between independent variables we use ‘variance inflation factor’ (VIF) as the diagnosis tool. This measure estimates the degree to which each independent variable is explained by the remaining independent variables, when regressed against these variables. Generally, a common cutoff threshold is a VIF value of around 10. The calculated VIF values are less than 2.5. This indicates the absence of serious multicollinearity problems (Mason and Perreault 1991).<sup>3</sup>

<sup>3</sup>In addition to the main effects model, we estimated an interaction effects model. The results indicate that none of the combinations of market-based capabilities have an effect on the financial performance of the firm.

Dependent Variable: Business Performance								
	Model 1.1	Model 1.2	Model 1.3	Model 1.4	Model 1.5	Model 1.6	Model 1.7	Model 1.8
	Coefficient <sup>a</sup> (s.e.) <sup>b</sup>	Coefficient (s.e.)	Coefficient (s.e.)	Coefficient (s.e.)	Coefficient (s.e.)	Coefficient (s.e.)	Coefficient (s.e.)	Coefficient (s.e.)
<b>Independent Variables</b>								
<b>Intercept</b>	5.16 (.101)***	3.94 (.478)***	2.15 (.664)***	2.83 (.657)***	1.15 (.766)	2.15 (.667)***	.52 (.872)	.31 (.888)
<b>AGE</b>	-.00 (.003)							
<b>SIZE</b>	.00 (.001)							
<b>MDC</b>		<b>.25</b> (.097)**				.00 (.118)		.00 (.123)
<b>RDC</b>			<b>.54</b> (.120)***			<b>.55</b> (.155)***		.19 (.179)
<b>SCC</b>				<b>.43</b> (.119)***			<b>.26</b> (.112)**	<b>.24</b> (.125)*
<b>HRC</b>					<b>.71</b> (.135)***		<b>.57</b> (.151)***	<b>.45</b> (.174)**
F- value	.729	6.727**	20.6***	13.21***	27.68***	10.22***	14.53***	7.617***
Df	112	129	128	120	128	127	118	115
R <sup>2</sup>	.01	.05	.14	.10	.18	.14	.20	.21

\* p < .10; \*\* p < .05; \*\*\* p < .01.  
<sup>a</sup> unstandardized regression coefficient.  
<sup>b</sup> standard error.

Table 2.3: Regression Outcomes

## 2.6 Discussion

Drawing on the emerging configurational perspective, we develop a model incorporating both inside-out and outside-in capabilities. The literature on both market orientation and relationship marketing provides considerable support for the effectiveness of the outside-in perspective, whereas the literature on both supply chain and human resource management provides equally impressive support for the effectiveness of the inside-out perspective. There is, however, little evidence for the effectiveness of attempting both outside-in and inside-out simultaneously. This study addresses the issue of which perspective is most effective. The results described in the previous section highlight some of the unique insights that emerge from this approach. This section discusses the results more in depth. The section provides some possible explanations for these findings and concludes with a summary of the results.

### 2.6.1 The Market-Based Capabilities Construct

Besides proposing a synthetic classification of market-based capabilities we report an exploratory study in which we develop valid measures of market-based capabilities. The results are very encouraging in that they provide support for our proposed construct. These findings indicate the appropriateness of the recent, highly conceptual, stream of research discussing the concept of market-based capabilities (Peteraf and Bergen 2003). Although it is generally accepted that Day's (1994)



seminal research have significantly contributed to the marketing literature, his main thesis remained unexplored. This study provides additional evidence indicating the strength of a broad conceptualization of the marketing concept.

## 2.6.2 Inside-Out Capabilities

Resource-based theorists claim that a firm's internal resources are the primary source of sustained advantage (Wernerfelt, 1984).<sup>4</sup> In this study, we examine two dimensions of inside-out capabilities: (1) supply chain, and (2) human resource capabilities. Our findings indicate that these variables have a strong (direct) positive and significant effect on business performance. These results provide support for the importance of inside-out capabilities in the wholesale setting. They indicate that a firm's emphasis and development of strong inside-out market-based capabilities is a value-creating strategy, which is less likely to be simultaneously developed by competing firms. One may argue that the fact that the firms in our dataset are situated firmly in the middle of the supply chain could bias the study in favor of the supply chain capability as a predictor of performance. Previous work rejects this assertion (e.g., Porter, 1996; Treacy and Wiersma, 1994). For example, Cannon and Perreault's (1999, p. 457) results indicate that "some buyer firms do not want or need close ties with all of their suppliers. They are satisfied with the effective performance of suppliers who simply meet their needs without extensive entanglements."

### Supply Chain Capabilities

Our results suggest a strong relationship between supply chain capabilities and business performance. These findings are consistent in all estimated models. This suggests the value of developing strong capabilities to efficiently integrate channel members in order to distribute the right quantities to the right locations at the right time. The rationale behind this is that supply-chain capabilities lead to a minimization of systemwide costs (Gaverneni, Kapuscinski and Tayur 1999; Lee, So and Tang 2000; Simchi-Levi, et al. 2000), which, in turn, leads to higher business performance.

### Human Resource Capabilities

Human resource capabilities relate to the firm's competence in managing human resources and the competence of human resources to manage the service encounter. Our factor analysis suggests that these two components are indeed part of one underlying factor, human resource capabilities. Our findings indicate that these capabilities indeed ensure the fulfillment of organizational financial goals and support the proposition that an organization has to focus internally on employees as well as externally on the market (e.g., Lings 2004). These results are in line with research in both services marketing (e.g., Roth and Jackson 1995) and human

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<sup>4</sup>See for example, Bijmolt and Zwart (1994).

resource management (e.g., Becker and Gerhart 1996; Delaney and Huselid 1996). These findings suggest that human resource capabilities is a source for generating competitive advantage in wholesaling. Concerning the strength of the relationships in our models, our outcomes even indicate that human resource capabilities is the most influential capability. The rationale behind this is that human resource capabilities are not easily imitated by competitors (Becker and Gerhart 1996). Furthermore, these results suggest that a strong combination of the management of human resources and the competence of human resources to manage the service encounter adds value to business-to-business firms.

### 2.6.3 Outside-In Capabilities

Contrary to our expectations, outside-in capabilities do not explain much variation in business performance. First, we discuss the relationship-driven capabilities-business performance link. Thereafter, we discuss the relationship between market-driven capabilities and business performance.

#### Relationship-Driven Capabilities

Relationship marketing researchers consider building and maintaining relationships a valuable source of sustained advantage. Initially, our findings confirm the contribution of relationship-driven capabilities to business performance (see model 1.3 and 1.6, table 2.3). Further analysis, however, demonstrates that this relationship is not strong, given the nonsignificant parameter in the full model (model 1.8, table 2.3). A nonsignificant relationship between relationship marketing variables and business performance is not rare (e.g., Lusch and Brown 1996; Uzzi, 1996). For example, Lusch and Brown's (1996) results suggest a negative but nonsignificant relationship between relational behavior and wholesale-distributor performance.

#### Market-Driven Capabilities

Marketing strategists argue that organizations that adapt to the conditions in the environment will have better performance than less market-driven organizations (Day and Nedungadi 1994). Initially, we find some support for this proposition (model 1.2, table 2.3). Further analysis, however, reveals a nonsignificant association between business performance and market-driven capabilities. When investigating the relationship between market-driven capabilities and business performance in isolation, as is often the case in market orientation studies, our results support a positive relationship (this is in line with the vast majority of published findings, for example, Narver and Slater (1990), Reukert (1992), Jaworski and Kohli (1993)). When controlling for other variables (model 1.6 and 1.8, table 2.3), this relationship becomes nonsignificant. This suggests that previous research has underestimated the relevance of other variables or overestimated the relevance of market orientation when relating market-driven capabilities to business performance. These outcomes are in line with that of Noble, Sinha and Kumar (2002) and Moorman and Rust

(1999). Others even find a negative impact of customer orientation on firm performance (Voss and Voss 2000; Grewal and Tansuhaj 2001). A plausible suggestion is that this relationship may be mediated (Roth and Jackson, 1995) or moderated (Rindfleisch and Moorman, 2003) by other variables. In short, it appears that the relationship between market-driven capabilities and business performance has not yet been fully explained.

## Summary

Initially, we find strong support for the outside-in capabilities model. However, when investigating the effect of all market-based capabilities dimensions simultaneously on business performance, the effect of the two outside-in capabilities dimensions on business performance disappears. These outcomes indeed indicate that the management of marketing capabilities is rather difficult and a complex task. The complexity of managing market-based capabilities leads us to believe that the development of these capabilities is a top management concern. This is also in line with former research suggesting the support of top management in developing a market orientation (McNamara 1972; Webster 1988).

## 2.7 Implications for Marketing

The results obtained in this study have implications for marketing, specifically for marketing theory and marketing practice. Next, we discuss the implications of our study for these areas.

### 2.7.1 Implications for Marketing Theory

We contribute to marketing theory by putting the configurational perspective of market-based competition to test. In this study, we develop a (synthesized) classification of market-based capabilities, develop measurement scales for this construct, and relate it to business performance.

We develop a classification and measurement scales for market-based business capabilities from the configurational-based view. To a large extent, Day (Day 1994; Day and Wensley 1998), Hunt (Hunt 2000; Hunt and Morgan 1995) and Srivastava and colleagues (Srivastava et al. 1998, 1999; Srivastava et al. 2001) have conceptually developed this view. We combine the outside-in and inside-out perspective, thereby proposing that a market orientation cannot exist when there is no alignment between market-driven capabilities and other relevant capabilities (e.g., Srivastava, Shervani and Fahey 1999). We therewith provide a theoretical framework for making the firm truly market-oriented. Furthermore, we empirically validate the configurational-based view by relating the market-based business capabilities to firm performance. So far, research in the field of market orientation has largely focused on market-driven capabilities, neglecting other relevant outside-in and inside-out capabilities. Previous research in marketing mostly investigates the

model: business performance =  $f(\text{market-driven capabilities})$ . Overall, this stream of research finds significant relationships. Our study confirms this. However, when taking the configurational-based view as a starting point, market-driven capabilities can no longer be studied in isolation. Both outside-in and inside-out capabilities have to be taken into consideration. In our study we control for relationship-driven capabilities, supply chain capabilities and human resource capabilities. In this case, market-driven capabilities do not predict firm performance. Studying market orientation in isolation from other market-driven capabilities thus gives incomplete and therefore possibly incorrect results.

In summary, the results suggest the value of performing interdisciplinary research to better understand marketing phenomena and outcomes. This opens the door to further look into Vargo and Lusch's (2004) service-centered perspective, and to empirically validate the customer concept (Hoekstra, et al. 1999). These researchers believe that it is time for a new dominant logic for marketing; a paradigm shift that accounts for social and economic processes.

### 2.7.2 Implications for Marketing Practice

In a management context, several of our findings are germane to the business-to-business firm in achieving higher levels of performance. An implication based on our factor analysis is that wholesalers have to develop several market-based capabilities to excel. Furthermore, a strong collaborative cooperation strategy, with customers as well as suppliers, is evident in winning the heart of these stakeholders. Also, the focus on both customers and suppliers is important and strong relationships have to be built with both; ignoring one of the two stakeholders is incorrect and may have a negative influence on business performance.

Finally, our findings suggest that a wholesale firm has to develop all market-based capabilities to high levels. However, if this strategy is too costly to implement, it is wise to put a great deal of attention on the inside-out capabilities (supply-chain and human resource capabilities); low levels of market-driven and relationship-driven capabilities are then preferable, especially when a low-cost strategy is followed. However, when a market differentiation strategy is implemented we recommend a balanced utilization of the four market-based capabilities, e.g., high levels of supply-chain and human resource capabilities, and mediocre levels of market-driven and relationship-driven capabilities.

## 2.8 Limitations and Directions for Further Research

### 2.8.1 Limitations

The findings in this study are encouraging in suggesting the (potential) value of an integrative model of market-based capabilities. However, as with any study, this study has several limitations. A limitation is the national character of our sample; the empirical part of the study focuses on Dutch wholesale companies only. Further research should test the framework in other countries as well. This future

research should consider international aspects of measurement equivalence. Furthermore, although the general framework of market-based capabilities is argued to be relevant in both service and non service settings, it is unclear whether the specific elements are all relevant in other research settings. However, we speculate that our classification could be relatively robust in classifying market-based capabilities in different settings, such as retailing and banking. For example, Roth and Jackson's (1995) study suggest that the four proposed market-based capabilities in this chapter are relevant in a banking setting. To fill in the specific resources it is necessary to use Frei et al.'s (1999) model since these researchers provide a more detailed examination of the supply chain capabilities.

## 2.8.2 Research Agenda

Several opportunities for further research may be identified. We divide these into: (1) antecedents, (2) moderators, and (3) consequences of market-based capabilities. We also argue in favor of the development of more complex models.

### Antecedents

Concerning the antecedents of market-based capabilities, we suggest the following: (a) innovative culture, (b) interdepartmental dynamics, and (c) organizational structure.

*Innovative Culture.* Studying the impact of innovative culture on market-based capabilities is needed. Deshpandé, Farley and Webster (1993), in their study of Japanese firms, find that 'adhocracy' and 'market' firms outperformed 'clans' and 'hierarchies'. Their results indicate that companies with corporate cultures stressing competitiveness and entrepreneurship outperform those dominated by internal cohesiveness or by rules. Based on this research, we propose that investigating the degree to which innovative culture influences market-based capabilities is a fruitful area of research.

*Organizational Structure.* An interesting avenue of research is the relationship of an organization structure (formalization and centralization) to market-based capabilities. Past research (Jaworski and Kohli 1993) already relates both formalization and centralization to market orientation. However, the findings suggest mixed results. We propose that both formalization and centralization could impede the development of market-based capabilities.

*Interdepartmental Dynamics.* Several researchers suggest that interdepartmental dynamics (interfunctional conflict and connectedness) are important antecedents of market orientation (e.g., Day 1994; Kohli and Jaworski 1990; Webster 1988). An interesting question is to what extent and in which direction interfunctional conflict and interfunctional connectedness influence the four market-based capabilities.

## Moderators

An interesting avenue of research is to investigate whether the relationship between market-driven capabilities and business performance is moderated by other variables. Based on past research, we suggest a moderator role for both 'industry environment' and 'strategy' on the market-based capabilities-business performance relationship.

*Industry Environment.* Contingency theory suggests that 'industry (competitive) environment' could moderate the relationship between market-based capabilities and business performance (Kohli and Jaworski 1990; McKee, Varadarajan and Pride 1989); however, some strategic marketing literature indicates that this interaction effect is very weak (Jaworski and Kohli 1993; Slater and Narver 1994). Because our classification differs from Narver and Slater's (1990) conceptualization of market orientation, further research on this issue is necessary.

*Organization Strategy.* Another very interesting avenue of research is the effect of strategy type on the market-based capabilities-business performance relationship. The question becomes: can we find evidence that supports the moderating effects of business strategy type on the strength of the relationship between market-based capabilities and business performance as is found in the market orientation context (Matsuno and Mentzer 2000)?

## Consequences

The study of possible consequences of market-based capabilities is yet another avenue for interesting research. We suggest four particularly interesting consequences of market-based capabilities: (1) customer perceptions, e.g. customer value and satisfaction, (2) positional advantage, (3) innovativeness, and (4) customer equity.

*Customer Perceptions.* Concerning customer perceptions, such as service quality, customer satisfaction and customer value, as a possible consequence of market-based capabilities, both marketing (e.g., Day and Wensley 1988; Sigauw, Simpson and Baker 1998; Srivastava et al. 1998) and operations management (e.g., Roth and Jackson 1995; Soteriou and Chase 2000; Soteriou and Zenios 1999) literature suggest the existence of a positive relationship. For example, Srivastava et al. (2001, p. 796) call for future research in this field by stating that "both the RBV and marketing researchers must commit to carefully and systematically identifying and documenting how particular market-based assets and capabilities contribute to generating and sustaining specific forms of customer value." Recently, Peteraf and Bergen (2003, p. 1039) suggest that competition is primarily driven by similarities in resource functionality and argue that "Firms compete not on the basis of similar resources, but on the basis of whether their resources can be employed to meet similar customer needs."

*Positional Advantage.* Positional advantage (lower costs and/or higher value) may mediate the relationship between market-based capabilities and business performance (Day and Wensley 1988). For example, Morgan, Kaleka and Katsikeas (2004)

results indicate that positional advantage mediates the relationship between available capabilities (informational, relationship building, and product development) and business performance.

*Innovativeness.* A very interesting consequence is innovativeness. Research indicates a direct relationship of market orientation and innovativeness (Deshpandé, Farley and Webster 1993; Han, Kim and Srivastava 1998). However, is this relationship also present when controlling for other variables, e.g. relationship-driven, supply-chain and human resource capabilities?

*Customer Equity.* The shift from product-centered thinking to customer-centered thinking has raised attention for the concept of customer equity, i.e. the value of the firm's current and potential customers. A market-based perspective justifies the view that "a firm's strategic opportunities might best be viewed in terms of the firm's opportunities to improve the drivers of its customer equity" (Rust, Lemon and Zeithaml 2004, p. 110). In this respect, studying the relationship between market-based capabilities and customer equity may be very promising.

### 2.8.3 Integrative and Interdisciplinary Approach of Model Building

The configurational perspective makes an integrative approach of model building necessary. Based on our findings, we call for further research incorporating interdisciplinary research and more integrative marketing models of a higher level of abstraction. Particularly, we stimulate research investigating the market-based capabilities construct as a higher-order factor model, where market-based capabilities may represent the higher-order factor. Here, we agree with Gummesson (2004, p. 21), who comments on Vagro and Lusch's (2004) paper, and argues that "The more marketers dare to recognize the complexity and ambiguity of marketing phenomena in this theory, the more useful it will be."

## 2.9 Conclusion

Recently, some literature, although highly conceptual, has emerged discussing the advantage of relating the resource-based view to marketing, especially to the concept of market orientation. The main thesis is that a configurational approach is more likely to provide a stronger basis for (the development of) competitive advantage. Our study provides support for this configurational perspective. Furthermore, based on our findings, we conclude that an integrative and interdisciplinary approach could lead to a better understanding of market-based competition and distinctiveness of market-driven organizations. Although advances in practice and theory have contributed to enhanced knowledge of the rent-producing market-based resources, the integration of these disciplines is in its beginning and far from mature. Therefore, we believe that further research has to become wide in incorporating variables from related disciplines. We hope that we have contributed to this, and hope that our study will serve as a motivator for those integrating several streams of research in marketing to investigate market-based competition.