Market orientation: a promising metaphor for culture and collaboration in industrial networks

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ABSTRACT

Recent research on market orientation and close customer relationships addresses how firms create market intelligence and adapt to their environments. However, our understanding of market-oriented firms is incomplete because it does not fully incorporate with cultural linkages and collaboration in buyer-seller relationships. Actually, it has been neither investigated nor understood well the interplay between market orientation and close customer relationships, and, further, whether the interplay is affected by a firm's internal cultural postures. The authors present a conceptual framework for examining the interplay between the key constructs in industrial context. Our results indicate a strong positive association between market orientation and customer intimacy, and, further, this interplay is influenced by our cultural factors - market focus and industry recipe - adopted.

INTRODUCTION

A number of academics and practitioners have called for organizations to be more responsive to the needs of the markets and focus on the problems inherent in doing so. A key component to be market-oriented is creating an organizational culture that values the customer as a primary stakeholder (Locander et al. 2002). The notions of market-oriented and customer-led are, however, two separate entities and both of them have received increased academic attention in marketing literature during the last decade (for an in-depth discussion see e.g. Slater and Narver 1998). Both the market orientation and customer relationship management 'school of thoughts' have put a lot of emphasis on this field of research. While the former has predominantly focused on the intra-firm domain from cultural and behavioral perspectives, the latter has been centered in the inter-firm linkages from network or relationship marketing point of view. However, juxtaposition of these diverse research traditions does not run through academic discourse due to the fact that previous research has not integratively or simultaneously addressed the two. Hence, this study attempts to lay out what we know about the interrelationships among market orientation and customer intimacy, and, meanwhile to improve our understanding of market orientation as culture and collaboration in industrial networks.

Market orientation emphasizes a business culture that put the customer's interest first (Deshpandé et al. 1993), on one hand, and organizational abilities to generate, disseminate and use information about customers and competitors (Kohli and Jaworski 1990) in conjunction with coordinated application of interfunctional resources to create superior customer value (Narver and Slater 1990), on the other. The point is of strategic intent, distinctive customer competence and development of overall value proposition based on customers` needs (Webster 1992; Lichtenthal and Wilson 1992). Customer intimacy, in turn, means simply the same as tailoring offerings to match exactly the needs of customers (Anderson and Narus 1999). Therefore, companies that excel in this field integrate market and customer knowledge with their own operational flexibility in a superior way (Treacy and Wiersema 1993). This ability to continuously generate intelligence about customers' expressed and latent needs, and about how to satisfy these needs, is essential for companies to continuously create superior customer value (Slater and Narver 2000). Nevertheless, there exists scant prior research explicitly covering the linkages between market orientation and customer intimacy (Homburg 1998). Our purpose is to analyze the efficient use of market orientation in a study covering the existing theoretical foundations and, further, the current managerial practices in industrial context. To this end, our objective is to conceptualize the relationship between the constructs of market orientation and customer intimacy, and to examine the association between these key constructs in industrial context. This aim is guided by our notion of market orientation as a nexus of organizational culture and collaboration.

LITERATURE REVIEW

Before examining the literature that simultaneously deals with market orientation and close customer relationships, we place this topic in the context of related research. To date, market orientation research has touched on it from cultural perspective, on one hand, emphasizing organizational capabilities and strategic postures (Lichtenthal and Wilson 1992; Deshpandé et al. 1993; Day 1994; Homburg et al. 1999; Matsuno and Mentzer 2000), and from behavioral or collaborative point of view, on the other, incorporating with organizational design (Webster 1992), market information processing activities (Kohli and Jaworski 1990; Kohli et al. 1993; Narver and Slater 1990), and organizational learning (Sinkula 1994; Moorman 1995). Respectively, work related to close customer-supplier relationships (intimacy) has been interested in the way companies interact from a network perspective (Anderson et al. 1994; Möller and Wilson 1995), or from a relationship

marketing point of view (Heide and John 1992; Morgan and Hunt 1994). However, very little attention has been given to the concept of customer intimacy, especially, in the context of market orientation (Slater and Narver 1998; Hurley and Hult 1998). Some scholars (e.g. Shapiro 1988; Ruekert 1992; Webster 1992) have even questioned whether a meaningful distinction between market orientation and customer intimacy can be made at all (for an in-depth discussion see e.g. Homburg 1998).

Market Orientation as Culture and Collaboration

Market orientation can be considered as a cornerstone of marketing thought and a central component of the more general notion of the marketing concept. Since the early 1990s there has been a significant amount of research on market orientation. Current discussion of market orientation emphasizes the awareness of and responsiveness to environmental influences, as well as, an ability to learn about customers and competitors in order to continuously sense and act on events and trends in present and prospective markets (Slater and Narver, 1998). Jaworski and Kohli (1993) define market orientation as the organization-wide generation of market intelligence, dissemination of that intelligence across organizational units, and organization-wide responsiveness to it. Although the scholars link organizational values and norms to their market orientation construct, they do not indicate that market orientation is an aspect of culture. Conversely, Deshpandé, Farley and Webster (1993) conceptualize market orientation as an aspect of organizational culture emphasizing the dominant managerial representation. The original assumptions, strategic orientations and managerial recipes have a definite impact on the development of culture in an organization (Deshpandé and Webster 1989). Scholars in the field note that a firm's culture may be resistant to change and that top management plays a critical role in leading the change to a market orientation (Locander et al. 2002). Narver, Slater and Tietje (1998) state that a market orientation must be understood as a firm's culture. It is a strategic focus, and firms with a customer intimacy focus are more likely to practice market-oriented culture (Treacy and Wiersema 1993). Similarly, Narver and Slater (1990) define market orientation as culture that places the highest priority on the profitable creation of customer value. Day (1994), in turn, explicates that a market-oriented culture supports the value of thorough market intelligence at gaining competitive advantage. Recent research in this field suggests that, from a measurement perspective, treating market orientation as a set of behaviors and collaborative processes rather than as an aspect of culture may have some benefit but that both

perspectives are valuable (Hurley and Hult 1998). Thus, market orientation can be embedded in organizational culture affecting market-related behavior and action (Day 1994). A market-oriented organizational culture, as opposed to an internally biased technology orientation culture, places high priority on firm-wide behaviors geared toward understanding customer needs, achieving sustainable strategic competitive postures, and enhancing superior customer value (Pelham 1999).

Despite the growing awareness and use of principles of market-oriented organizations, a significant void exists in current models of market orientation, hence none of the frameworks incorporates simultaneously the key constructs of market orientation and customer intimacy (Homburg 1998). Actually, it has been neither investigated nor understood well whether the market orientation - customer intimacy interplay is affected (predicted or moderated) by a firm's internal strategic postures, i.e., the types of business (industry) recipe and market focus adopted (Matsuno and Mentzer, 2000). As Jaworski, Kohli and Sahay (2000) recently argued, current market orientation literature has an unbalanced focus on keeping the status quo as compared to proactively shaping customers and the market. Furthermore, the scholars explicated that there exists two types of market orientation from the point of view of business culture: 'market-driven' and 'drive markets'. The former refers to reactive industry recipe or business logic adopted indicating the acceptance of the market as given, while the latter, conversely, emphasizes proactive industry recipe by radically changing the composition of market players (Jaworski et al. 2000). Baker and Sinkula (2002) postulated that a proactive attempt to alter the external environment involves discarding the present way of doing something and substituting the theory-in-use with something fundamentally and radically new through generative learning. Respectively, a market-driven reactive industry recipe reflects with incremental adjustments to changes in external environment and with adaptive organizational learning. Market orientation can be seen as a prerequisite to the formulation of effective competitive response. This follows from the fact that effective competitive response necessarily assumes the generation and dissemination of the pertinent market information (Varadarajan and Jayachandran 1999). Day and Nedungadi (1994), in turn, suggested that it is the managerial representation (industry recipe) of the competitive markets that shapes rivalries. It is an adopted worldview of customers, competitors, and markets in a manner that augments the corpus of knowledge retained in organizational memory (Sinkula et al. 1997). This perspective emphasizes learning theories, such as information processing theories, to describe the competitive behavior of the firm (Baker and Sinkula 2002). In this sense, market orientation has a behavioral focus on market information process (MIP) activities regarding

customers and competitors, particularly information acquisition, information distribution, and the ability to behaviorally respond to what is received (Sinkula, 1994; Moorman, 1995). We view market orientation as characteristics of an organization that determinates the priority that is placed on MIP activity and its use in the strategic process (Baker and Sinkula, 1999). Market orientation influences the scope of MIP activities directed at customers, competitors, and marketing channels (Sinkula et al. 1997). MIP activities act as inputs into ongoing procedures of customer relationship management. Collaboration enables the organization to generate market intelligence with and from other organizations about new opportunities or means for creating superior customer value (Slater and Narver 2000).

Customer Relationships: Transactional and Collaborative Perspectives

Customer intimacy[1] refers to what Sheth et al. (2000) express as customer centric marketing where marketing function seeks to fulfill the needs and wants of each individual customer. In more academic terms, customer intimacy implies the design of inter-firm relationships, or governance (Hoekstra et al. 1999). These relationships are traditionally classified either into transactional or collaborative ones (Heide 1994; Parvatiyar and Sheth 1997). Rather than demonstrating a purified form, inter-firm relationships in the industrial context will usually exhibit a mixture of transaction-based and collaboration-based elements emphasizing the so-called value-adding exchanges, where the focus of the selling firm shifts from getting customers to keeping customers (Andersen 2002). In this sense, the inter-firm governance can be seen as a continuum between the two opposite ends of the relationship spectrum (Day 2000). Differently put, inter-firm links can be ranked starting from one-off transactions subjected to near-perfect market conditions over repeated (value-adding) exchanges and ending in collaborative exchange situations (Webster 1992).

The economic efficiency of pursuing relationships and customer partnering strategies may be inferior to other types of inter-firm governance strategy as it presumes to entail considerable asset-specific investments and increased dependence curtailing strategic flexibility (Andersen 2002). Transaction cost approach (TCA) views governance in terms of designing particular mechanism (price vs. unified authority) for supporting transactions, i.e. the choice between a 'market' and a 'hierarchy' by

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[1] When referring to 'customer intimacy', explicated by Möller and Anttila (1987), and Treacy and Wiersema (1993) the terms 'closeness to customer', close 'inter-firm links', close 'inter-organizational relationships', and close 'business relationships' are used synonymously in extant literature.

emphasizing efficiency implications (Williamson 1975). TCA parallels resource dependence theory (RDT) in that it views inter-firm governance as a strategic response to conditions of uncertainty and dependence (Pfeffer and Salancick 1978). From RDT point of view, however, firms will seek to reduce uncertainty and manage dependence by purposely structuring their exchange relationships by means of establishing formal or semiformal links with other firms. The ongoing maintenance of inter-firm governance requires certain sub-processes to be carried out as follows (Heide 1994): role specification, planning, nature and means of adjustments, monitoring processes, and incentive systems.

From relationship marketing point of view, firms establish relationships with selected individual target customers with whom superior customer value are designed, offered, redefined and realized in close cooperation with other partners in the marketing system, in order to realize long-term profits through customer satisfaction, partner- and employee satisfaction (Hoekstra et al. 1999). Hence, the ability of a firm to create and maintain close relationships with their customers is a durable basis for competitive advantage (Day 2000). Relationships become closer, more selective and may become so familiar that the term intimacy is used (Treacy and Wiersema 1993). Business-to-business marketing research has shown that when there are fewer customers, there are often closer partnerships and joint product development (product customization) with customers (Heide and John 1992). Furthermore, among the dyadic norms identified by Heide and John (1992), flexibility, information exchange, customer-specific investments, and employee involvement are considered to be elements of customer intimacy in buyer-seller relationships. Homburg (1998) explicates that in industrial markets closeness to customers (customer intimacy) refers to supplier's behavior including (1) offering high quality products, i.e. added customer value, (2) exhibiting a high level of flexibility towards the customer, and (3) a high readiness to exchange information with customers openly with customer interaction throughout the hole organization. Indeed, commitment and trust are the key mediating factors in the management of close inter-firm relationships (Morgan and Hunt 1994). Actually, one principle dominates customer intimacy: it is a profit over the lifetime of the relationship with a single customer, not a profit or loss on a single transaction (Treacy and Wiersema 1993).

Briefly, and in line with relationship marketing approach (e.g. Morgan and Hunt 1994) and 'network paradigm' (e.g. Möller and Wilson 1995), we employ in this study a classification of (1) governance of inter-firm links, and (2) business processes alignment in describing the key characteristics of customer intimacy. The former puts emphasis especially on common bonds and formal design, while

the latter considers partnering, respectively. In this respect, a firm has to master three elements related to its market-driven capabilities: (1) a relationship orientation must pervade the values and norms of the organization, (2) the firm must keep deepening its knowledge of the customers and putting it to work through the organization, and (3) the key business processes must be internally integrated and externally aligned with the corresponding processes of the firm's customers (Day 2000). However, several external and internal contingencies will influence how transactional and collaborative exchange regimes mix, and, consequently, what form of a inter-firm relationship will prevail (Andersen 2002).
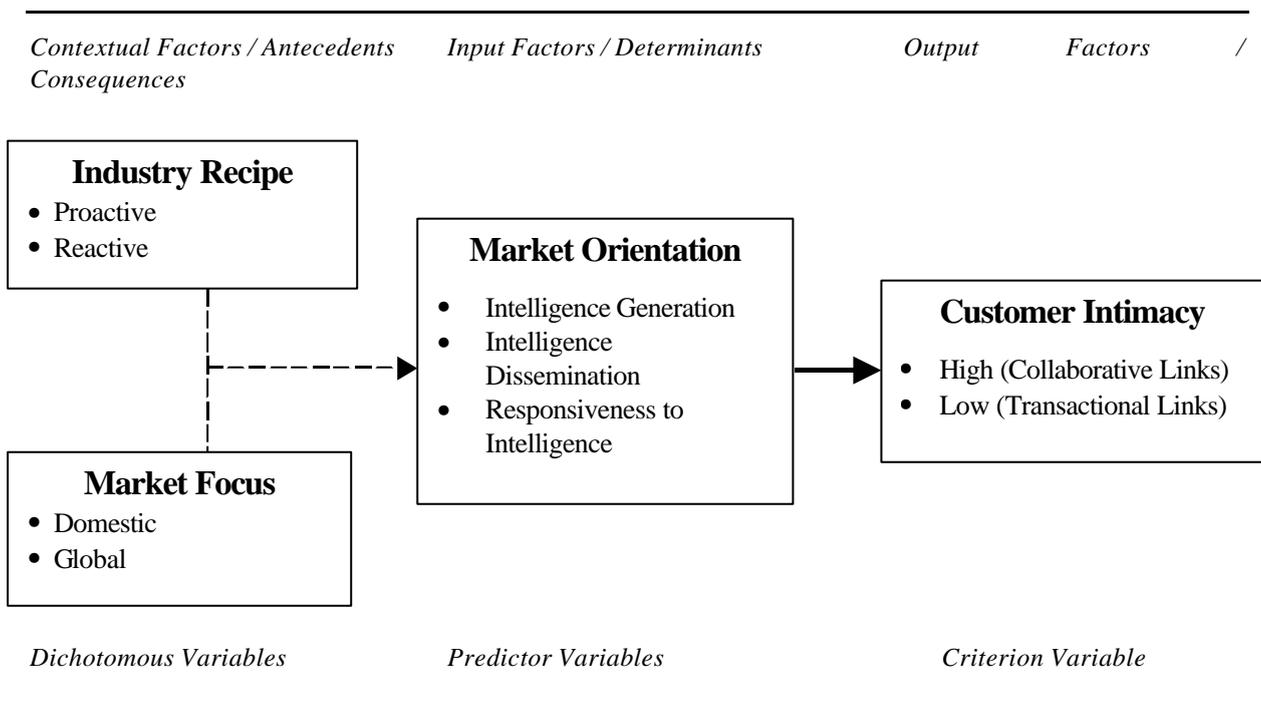
Theoretical Frame of Reference

There exists both theoretical and managerial rationale for conceptual redescription of marketing and market orientation from a more comprehensive resource or capabilities based point of view. In this respect, market orientation should be considered in the context of strategy by integrating structural, contextual, and processual perspectives into an expanded conceptual model ready for empirical verification (Eisenhardt and Martin 2000). We argue that, in the interface of customer relationships, market orientation can be viewed as a 'knowledge conversion process' representing ways in which a firm's existing level of knowledge embedded in these organizational capabilities is 'converted' into a new level of knowledge in terms of customer intimacy (see e.g. Bell et al. 2002; Baker and Sinkula 2002).

Market orientation as organizational behavior, on one hand, and market orientation as organizational culture, on the other, are contradictory. From the behaviorist point of view the marketing behavior or activities represents the market orientation phenomenon itself, while the cultural perspective interprets that behavior as a consequence of market orientation. However, there is scope for reconceptualization of market orientation by integrating both cultural and behavioral perspectives. This integrated view to market orientation is analogous to the notion of the content of knowledge-based organizational learning which consists of cultural associations and behavioral outcomes. The conceptual model describes the content of the market orientation concept as an integrated construct consisting of cultural and behavioral or collaborative aspects of organizational learning. It is a synthesis of those two existing conceptual frameworks of market orientation construct.

A complex set of contextual determinants, both exogenous and endogenous will affect the interplay between market orientation and close customer relationships. These external and internal

contingencies pertain to a range of factors, such as the market focus and industry recipe adopted within an organization. Strategic market focus and industry recipe are cultural manifestations as formerly explicated by Hurley and Hult (1998). Firms that are confronted with uncertainties in internal and external environments must make adaptations in their business recipe and processes to realize customer value and that, in turn, leads to customer intimacy and collaboration (Treacy and Wiersema 1993; Hoekstra et al. 1999). Hence, the interplay between market orientation and customer intimacy is expected to be affected by the type of the *industry recipe* and *market focus* adopted. These internal contingencies are suggested to take a role as cultural antecedents regarding the interplay between the key constructs. Our organizing framework for market orientation as culture and collaboration is presented in Figure 1.

FIGURE 1
Market Orientation: A Metaphor for Culture and Collaboration

Contextual Factors / Antecedents   *Input Factors / Determinants*   *Output   Factors   /*
Consequences

Industry Recipe
- Proactive
- Reactive

Market Orientation
- Intelligence Generation
- Intelligence Dissemination
- Responsiveness to Intelligence

Customer Intimacy
- High (Collaborative Links)
- Low (Transactional Links)

Market Focus
- Domestic
- Global

Dichotomous Variables   *Predictor Variables*   *Criterion Variable*

On the bases of how an organization interacts with its environment, different types of strategies can be derived. Here, we refer to Miles and Snow's (1978) strategy archetypes: defenders, analyzers, prospectors, and reactors. First, defenders are companies with narrow product-market domains and they do not have to make major adjustments in their technology, structure, or methods of operation. They give primary attention to improve the efficiency of their existing operations. Second, prospectors in contrast seek continuously new market opportunities and they are usually the creators

of change (e.g. technology) to which their competitors have to respond. Third, analyzers often operate in two or several types of product-market domains, of which one is relatively stable (basic business) and the other changing. Therefore, they have different strategies and structures for these domains. Fourth, reactors are companies, which are unable to respond effectively to environmental changes. They usually lack a consistent strategy-structure relationship. Several scholars have studied these strategy types, and evidence has been found both for and against this typology (Jaworski et al. 2000). However, we argue that originally the question is about whether companies are trying to adapt to environmental changes – i.e. using a kind of reacting industry recipe, or they may actively strive for changing the market environment – i.e. using a kind of proactive industry recipe. In the former case, Miles and Snow's (1978) defenders and analyzer are the archetypes that pose this kind of market behavior. In the latter case, prospectors are the companies, which try to change their environment, or the whole industry structure, by providing, for example, new technology or introducing totally new business models. By doing this they change radically the existing industry recipe and establish a new value system (Möller et al. 2002). In this sense, prospectors are promoters of competence destroying discontinuities in their industry whereas reactors rely more on competence enhancing discontinuities (Anderson and Thusman 1990).

Our other contingency factor, that of market focus, relates to the company's intension of broad versus narrow capitalization of target markets. We expect that companies operating only in the domestic market do not necessary need to have as high level of market orientation as companies with a global focus. This is consistent with Gray's et al. (1999) notion that an extensive foreign market experience is expected to enhance a company's market adaptation and market orientation. We consider the domestic-global contingency factor (market focus) as a kind of continuum, and, a company's position in this continuum depends on how large share of its business revenues comes from international markets. Thus, the market focus factor is also reflecting the cross-cultural aspect of market orientation because acting in a global context instead of focusing only domestic markets calls for different types of managerial capabilities. Essential in developing these capabilities is to establish a balance between 'thinking global but acting local'. The global perspective relates to a company's ability to develop globally standardized product or service features, which then can be easily adapted to the selected local markets. In this study we state that this localization provides a new 'cultural view' to a company's market orientation.

To summarize, we argue that this new 'cultural view' to market orientation – customer relationships interplay links a firm's strategic intention (industry recipe) and external environment to market information processing capabilities and close customer relationships.

The basic point of our framework is simple; in order to understand the complex character of market orientation in the context of organizational culture in terms of industry recipe and market focus, research should simultaneously address the context, content, and outcome perspectives of market orientation. In our organizing framework, relationships between the two contextual factors (antecedents) and the key input constructs (determinants) are visualized with broken hairlines and the linkages between input factors (determinants) and output factors (consequences) with constant hairlines, respectively. In the framework the arrows indicate the assumed direction of influence.

HYPOTHESES AND RESEARCH DESIGN

Figure 1 outlined the hypothesized relationships between our internal cultural contingency factors (industry recipe and market focus), market orientation as a metaphor for culture and collaboration, and customer intimacy.

Hypotheses

To recapitulate and summarize, market orientation as an aspect of organizational culture and behavior affects the level of the firm's customer intimacy. Furthermore, the type of industry recipe and market focus adopted influences the level of customer intimacy. Formally stated, the hypothesized relationships are as follows:

H_1: The type and level of market orientation differ between firms characterized by low and high level of customer intimacy.

H_2: Reactive industry recipe and domestic market focus emphasize market intelligence generation, which, in turn, affect the level of customer intimacy of the firm.

H_3: Proactive industry recipe and domestic market focus emphasize market intelligence dissemination and organizational responsiveness to that intelligence, which, in turn, affect the level of customer intimacy of the firm.

H_4: Reactive industry recipe and global market focus emphasize market intelligence dissemination and organizational responsiveness to that intelligence, which, in turn, affect the level of customer intimacy of the firm.

H_5: Proactive industry recipe and global market focus emphasize market intelligence generation, which, in turn, affect the level of customer intimacy of the firm.

To approach and understand a multitrait problem area, such as our focal phenomenon, scholars and practitioners are increasingly turning to multivariate methods. As previously discussed, the linkages between our key constructs are displayed in terms of a contingency-specific model. In view of relatively limited *a priori* knowledge about the relationships between our key constructs, we are deploying in our discovery exploratory techniques instead of confirmatory approaches. Based on our theoretical foundations and research setting, we are assessing the extent to which the type and degree of market orientation distinguish between manufacturing firms with high and low levels of customer intimacy. This requires a combination of analysis of variance and multiple two-group discriminant analysis to test our hypotheses and to generate a body of empirical evidence for the existence of significant differences in market orientation across the firms examined.

Research Context and Data Collection

In view of the discovery of the effects of our cultural contingency factors, industry recipe and market focus, as we conducted, manufacturing firms were chosen as the context for examining the interplay between market orientation and customer intimacy. Based on a limited set of interviews of managers we ensured that market orientation in conjunction with customer relationships was highly relevant in many types of firm representing the engineering and electrotechnical industries. A sample was drawn from the member companies of the *Federation of the Finnish Metal, Engineering and Electrotechnical Industries* (FIMET) providing a single industrial sector consisting of multiple sub-industries. The initial sample consisted of 340 single firms or strategic business units (SBUs) with more than 60 employees.

Informants (managing directors) were mailed a copy of the questionnaire together with a personalized instruction letter and a return envelope. A total of 142 firms/SBUs responded, which yielded a usable response of 140 fully completed questionnaires and a response rate of 41%. Non-response bias was assessed indirectly by a multivariate analysis of variance comparing early versus late respondents (Armstrong and Overton 1977). The results indicated no significant differences between the groups, and, thus, we do not expect that non-response bias is a problem here.

Measures

A number of multi-item measures were adopted for generating data. Given the limitations of data availability and accessibility to generating objective performance, i.e., customer intimacy

assessments, we employed perceptual performance judgments. Studies indicate that there is validity in this approach where a high correlation has been found between objective and perceptual indicators (e.g. Venkatraman and Ramanujam 1986; Venkatraman 1990). We utilized both existing scales derived from prior research, and new ones, developed, especially, for this inquiry through reference to the extant literature. All measures deployed in this study used a 5-point Likert-type scale ranging from 'low' (strongly disagree) = 1 to 'high' (strongly agree) = 5.

Although market orientation construct is conceptually well delineated in literature and also structured and validated as a measure by former research (Kohli et al. 1993), the state of affairs with the construct of customer intimacy is opposite (Homburg 1998). More precisely, sophisticated and validated 'proxies' to be adopted in this concern do not exist. Actually, relatively little systematic effort has been devoted to methodological issues in the development of the customer intimacy scale, and, thus, the existing measures are *ad hoc* in nature.

Market orientation was measured by adopting the scale developed by Jaworski and Kohli (1993), emphasizing: market intelligence generation (MARKOR 1), market intelligence dissemination (MARKOR 2), and responsiveness to the market intelligence (MARKOR 3). The parsimonious set of 20 key indicators of market orientation covering the above mentioned three underlying dimensions of market orientation were utilized as the basis for our market orientation measure. The scale construction followed the procedure used by Kohli, Jaworski, and Kumar (1993). We computed mean summated scores for each of the three sub-scales to derive the scale indexes MARKOR 1, 2 and 3.

Customer intimacy was measured unidimensionally by a 6-item scale. The customer intimacy items tapped the extent to which a business has obtained the objectives in: (1) involving in customer's planning process, (2) involving customers in our planning process, (3) partnering and joint planning with customers, (4) aligning each other's operating process, (5) designing operational interface, and (6) formalizing the system of joint decision-making (e.g. Treacy and Wiersema 1993; Sheth and Parvatiyar 1995; Parvatiyar and Sheth 1997; Homburg 1998). Finally, a mean summated score was computed in order to derive the composite scale labeled CUSIN.

Industry recipe and *market focus* - two closely intertwined cultural factors (Hurley and Hult 1998; Homburg et al. 1999) - were operationalized as dichotomous (categorical) variables influencing, as we hypothesized, the interplay between market orientation and customer intimacy. First, in order to specify the dichotomies of the industry recipe mode, we employed a principle component analysis in

conjunction with a disjoint cluster analysis on a set of six original variables describing the types of the business recipe or logic utilized (Miles and Snow 1978; Spender 1989; Jaworski and Kohli 1993). This analysis produced a two-group solution reflecting *proactive* versus *reactive* emphasis on the recipe adopted (RECIPE). Market focus, the other cultural contingency factor, was operationalized by dichotomizing the sample firms into two groups emphasizing international vs. home market focus (MARKET). This was based on the rate of internationalization (proposition of export in sales). Firms with a rate of equal or more than 60% were categorized as having a *global* market focus and the rest were regarded as oriented towards the *domestic* market (e.g. Homburg et al. 1999).

ANALYSIS AND RESULTS

Before submitting the data to the main analyses, basic psychometric tests were deployed to provide evidence of the internal validity and reliability of the two key scales involved.

Scales Construction and Validation

Customer intimacy, as conceptualized in this study, is an unidimensional construct. A mean summated score was computed containing the six customer intimacy items in order to derive the composite scale index labeled CUSIN. As for subsequent statistical analyses, certain tests had to be performed on these data so as to assure the integrity of the measurement scale. The scale validation was accomplished by (1) the analysis of item intercorrelations, and (2) item-to-total scale correlations. These results are reported in Table 1.

TABLE 1
Scale Statistics and Analyses of Internal Validity and Reliability of the Customer Intimacy (CUSIN) Scale (N=139)

Scale	No of items	Mean	Standard deviation	Chronbach alpha	Item-to-total correlations (1)	(2)	(3)	(4)	(5)	(6)
CUSIN*	6	17.35	5.45	0.88	0.61	0.72	0.66	0.68	0.69	0.70

* CUSIN items = (1) involving in customer's planning process, (2) involving customers in our planning process, (3) partnering and joint planning with customers, (4) aligning each other's operating process, (5) designing operational interface, and (6) formalizing the system of joint decision-making.

The scale has an acceptable reliability coefficient (alpha) exceeding the recommended *0.60* threshold (Nunnally 1967) for an exploratory study. Also each item-to-total scale correlation was in the anticipated direction indicating high internal scale validity.

The aim of this study is to compare firms characterized by high and low levels of customer intimacy. Therefore, the CUSIN scale had to be prepared so as to distinguish two firm groups. On the 5-point scale, respondents with an CUSIN measure equal or less than the 6-item score 2.17 (n=36) were treated as firms with a low level of customer intimacy, while those with a measure equal or greater than the score 3.50 (n=46) were considered as firms with high level of customer intimacy. Thus, we deleted the mid-range (n=58) of respondent firms from the analysis in order to enhance the distinctiveness between the two groups involved.

Market orientation is a multidimensional construct. All the three scales have acceptable reliability coefficients (alpha), reported in Table 2, that exceed the standard level. Also each item-to-total scale correlation was in the anticipated direction demonstrating internal consistency of the scale. While no items needed to be deleted, a confirmatory factor analysis was not employed. In general, the evidence of internal validity and reliability indicates that the items included in the sub-scales that measure the three components of market orientation are all related to a common construct, i.e. the degree of market orientation.

TABLE 2
Analyses of Internal Validity and Reliability of the
Market Orientation (MARKOR) Scale (N=139)

Scale	No of items	Chronbach alpha	Item-to-total correlations								
			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
MARKOR 1	6	0.56	0.16	0.23	0.36	0.38	0.28	0.36			
MARKOR 2	5	0.77	0.47	0.56	0.58	0.54	0.55				
MARKOR 3	9	0.67	0.01	0.47	0.40	0.34	0.28	0.52		0.36	0.41
	0.29										

MARKOR1 = market intelligence generation, MARKOR2 = market intelligence dissemination, MARKOR3 = responsiveness to market intelligence.

Market Orientation - Customer Intimacy Linkages: Evaluation of Hypotheses

To recapitulate, we argued that a strong positive association exists between market orientation and customer intimacy. First, a multivariate analysis of variance (MANOVA) was used to investigate the existence of links between the three components of market orientation and the level of customer intimacy. To this end, firms were classified, as discussed previously, into two categories (high vs. low). MANOVA was employed to examine the presence of an overall association between the

dimensions of market orientation (MARKOR) and the groups of high and low level of customer intimacy (CUSIN). As shown in Table 3, the MANOVA findings do not indicate significant differences in dimensional means of MARKOR between the low and high customer intimacy groups (Wilk's lambda = 0.9719; exact F = 1.141, p = 0.325). Thereafter, one-way analysis of variance (ANOVA) was utilized to analyze these relationships in a more detailed manner. The results, displayed in Table 3, indicate that all the three dimensions of market orientation are significantly different between the Low vs. High innovativeness groups.

TABLE 3
Results of MANOVA, ANOVA, and Multiple Discriminant Analysis (N=82)

Market Orientation Scales	CUSIN Means		F-ratio	p-value	Discriminant loadings*
	Low	High			
MARKOR 1 (Market Intelligence Generation)	3.18	3.74	20.02	**0.000**	**0.88**
MARKOR 2 (Market Intelligence Dissemination)	3.39	3.88	9.46	**0.003**	*0.54* [a]
MARKOR 3 (Responsiveness to Market Intelligence)	3.33	3.71	14.29	**0.000**	**0.74**
Multivariate summary:	Wilk's lambda = 0.9719 Exact F-ratio = 1.141				
	Multivariate significance level p = 0.325				

* Pooled within-groups correlations between discriminating variables and standardized discriminant functions.
[a] This variable is not included in the discriminant function.

The ANOVA analysis was supplemented by examining the dimensional impact of market orientation on group differences in customer intimacy through a two-group discriminant analysis. The discriminant loadings, depicted in Table 3, and the group centroids of low and high customer intimacy, displayed in Table 4, provide a summary of the results clearly supporting our hypothesis H_1, i.e., market orientation has a positive association with customer intimacy.

TABLE 4
Statistics of the MARKOR-CUSIN Discriminant Function (N=82)

Scale	Group centroids		Eigenvalue	Canonical correlation	Wilk's lambda*
	Low	High			
CUSIN (customer intimacy)	-0.63	0.50	0.32	0.49	0.76

* Significant at (<0.001)

The discriminant model satisfied the independence assumption as the MARKOR scales were constructed by a principle component analysis with orthogonal rotation, and there is no multicollinearity between the sub-scales. Moreover, the model met the assumption of equality of covariance matrices between the two groups (Box's M=10.059; F with (6; 39567) df =1,6068; $p<$ 0,141), and the discriminant function is robust to this violation as the ratio between larger and smaller groups is less than 1.5 (Hair et al., 1995).

Consistent with the findings of one-way ANOVA, the results of the two-group discriminant analysis confirm that two out of the three components of market orientation, i.e., market intelligence generation (MARKOR 1), and organizational responsiveness to that intelligence (MARKOR 3), are significantly distinguishing collectively between the low vs. high customer intimacy (CUSIN) groups. Furthermore, the excluded component, market intelligence dissemination (MARKOR 2) is very close to the level of significant collective differentiation across the two firm groups. This conservative interpretation is based on using +/-0.30 as an acceptable threshold for the discriminant loadings (Hair et al., 1995). Finally, the directions of the discriminant loadings are all positive, and the group centroid is negative for firms with a low level of customer intimacy, and, respectively, positive for highly customer intimate firms. This is consistent with the main effects hypothesis (H_1) stated.

Contingency Influence on Market Orientation - Customer Intimacy Interplay

As previously discussed, we hypothesized that the industry recipe and market focus (H_2, H_3, H_4 and H_5) influence the ways and practices firms prefer to manage the dimensions of market orientation (MARKOR 1, 2 and 3). In other words, the effectiveness of the type of market orientation is dependent on the types of industry recipe and market focus adopted. The influence of industry recipe (RECIPE) and market focus (MARKET) is examined by employing a two-group discriminant analysis simultaneously in two diverse contextual split-groups: industry recipe (proactive vs. reactive) and market focus (domestic vs. global). We produced a classical 2x2 matrix of the split-group results without violating the rules of a valid small sample discriminant analysis.

The direction and magnitude of the impact of each market orientation dimension on overall group differences was assessed by employing a multiple discriminant analysis within each of those split-groups. Derived discriminant loadings, eigenvalues, canonical correlations, and group centroids for firm groups of low and high customer intimacy are displayed in Table 5. Because the developed MARKOR sub-scales are based on the results of a principle component analysis with orthogonal

rotation, there is no multicollinearity between them, which satisfies the independence assumption of the discriminant analysis. Furthermore, each model also exceeds the threshold regarding the assumption of equality of covariance matrices (Box's M=7.099; F with (6; 795) df =0.8417; $p<$ 0,538) between the two CUSIN groups. Thus, the derived discriminant functions are robust.

TABLE 5
Results of ANOVA, and Split-Group Effects MARKOR-CUSIN Discriminant Analyses

Split-Group Factors:	MARKET:	Domestic		Global	
	RECIPE:	Reactive	Proactive	Reactive	Proactive
Discriminant Loadings*:					
MARKOR 1 (Intelligence generation)		**1.00**	0.29[a]	**1.00**	**1.00**
MARKOR 2 (Intelligence dissemination)		0.37[a]	0.49[a]	0.30[a]	0.47[a]
MARKOR 3 (Responsiveness to intelligence)		0.34[a]	**1.00**	0.26[a]	0.21

Statistics of the Discriminant Functions:	Low	High	Low	High	Low	High	Low	High
Group centroids (Low vs. High CUSIN)	-0.88	0.66	-0.69	0.53	-0.44	0.96	-0.59	0.28
Eigenvalue	0.68		0.40		0.48		0.18	
Canonical correlation	0.64		0.53		0.57		0.39	
Wilk's lambda	0.60		0.72		0.68		0.85	
n (Low vs. High CUSIN)	6	8	10	13	11	5	9	19

ANOVA Summary	F-ratio	p-value	F-ratio	p-value	F-ratio	p-value	F-ratio	p-value
MARKOR 1	8.14	**0.015**	0.51	0.482	6.68	**0.022**	4.66	**0.040**
MARKOR 2	1.37	0.265	0.04	0.847	4.59	**0.050**	0.54	0.471
MARKOR 3	0.57	0.466	8.30	**0.009**	2.91	0.110	1.05	0.315

* Pooled within-groups correlations between discriminating variables and standardized discriminant functions.
[a] This variable is not included in the discriminant function and/or is not a significantly differentiating across the groups.

Individual (dimensional) MARKOR-CUSIN relationships were then assessed by employing a one-way ANOVA procedure. The univariate F-ratios indicate several significant differences between the CUSIN groups across the MARKOR dimensions within each split-group analysis. These findings are reported in Table 5 and discussed below in a more detailed manner.

When considering simultaneously the discriminant loadings and the ANOVA summary, a few remarks can be given. In the case of the *domestic market focus*, market intelligence generation

(MARKOR 1) differentiates significantly between the high and low CUSIN groups if firms are deploying a *reactive industry recipe*, while organizational responsiveness to the market intelligence (MARKOR 3) distinguishes between the two groups if firms are emphasizing a *proactive industry recipe,* respectively. In the case of the *global market focus*, market intelligence generation (MARKOR 1) is the key discriminator between the two firm groups characterized by low and high customer intimacy regardless of the type of industry recipe adopted. In this respect, we must remember that the small sample size of this study is far more likely to reduce the likelihood of finding any significant relationships than to increase it (Speed 1994). Hence, small sample size affects the test power and increases the conservatism of our statistical tests.

However, our findings confirm the claim that the type of industry recipe and market focus adopted influence the type and level of market orientation, and, further, the interplay between market orientation and close customer relationships. Therefore, companies should take into account this interplay when developing capabilities for adapting to changes under specific environmental conditions. Formally, these results provide strong empirical evidence for our hypotheses H_2 , H_3 and H_5 , while hypothesis H_4 is rejected.

Classification Results

In our final analysis we used the established discriminant functions to examine how well the three components of market orientation (MARKOR) can predict the low vs. high customer intimacy group membership among firms under study. When the discriminant function is used for classifying the observations its external validity needs to be examined. However, due to the limited number of cases in this study, we could not follow the conventional split-sample approach (classification vs. estimation subsamples). Instead, the U-method proposed by Lachenbruch (1975) was employed as a technique to validate externally the results of our small sample discriminant analysis. It focuses on assessing unbiased classification accuracy within discriminant analysis.

The classification results (see Table 6) show that the proportion of original cases correctly classified by the main effects model was 72.0 %, and in the case as an estimator (cross-validated) 68.3%. Respectively, when considering the split-group discriminant models, the classification results of the original cases vary between 71.4-78.6%, and, in the case as an estimator, it classifies correctly new observations in the range of 67.9-78.6%. Due to the limited space the split-group classification results are not reported here.

As far as the proportional change and maximum change criteria are concerned (see Table 6), the discriminant models exceed the thresholds computed for this study. Indeed, it can be argued that the main and split-group discriminant functions are valid instruments in the sense of the accuracy with which they can be used to classify firms with a low and high level of customer intimacy in terms of the differences in their type and level of market orientation.

TABLE 6
Classification Results

CUSIN (whole sample)		Predicted group*		
		Low	High	Actual total**
Original group	Low	23	13	36
		(63.9%)	(36.1%)	
	High	10	36	46
		(21.7%)	(78.3%)	
Cross-validated[2]	Low	22	14	36
		(61.1%)	(38.9%)	
	High	12	34	46
		(26.1%)	(73.9%)	

*   72.0% of originally grouped cases correctly classified, and 68.3% of cross-validated grouped cases correctly classified.

** Proportional change criterion $(36/82)^2 + (46/82)^2 = 50.7\%$, and Maximum change criterion $(46/82) = 56.1\%$.

DISCUSSION AND CONCLUSION

This study contributes on our understanding of the interplay between the previously discussed two key constructs in the context of internal and external contingency factors. The management of market oriented organizational culture and behavior in order to sustain close exchange relationships with selected and targeted customers is a prerequisite for a successful business in an environment characterized by market globalization and increasing use of networks and networking activities (Grewal and Tansuhaj 2001). In this process, the realized market focus (global vs. domestic) influences the establishment of mutually beneficial and close customer relationships. Furthermore, a successful adaptation to ever changing environmental conditions needs clear industry recipe or

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[2] In cross-validation, each case is classified by the function derived from all cases other than that case.

business logic, thus, enhancing added value for customers. Therefore, the adopted industry recipe (proactive vs. reactive) acts as a strategic intermediate factor in this concern.

Empirical evidence has been obtained from a small open economy, which has experienced high levels of technology and market changes during the last decade. Manufacturing firms were chosen as the unit of analysis and vehicle for examining the interplay between market orientation and customer intimacy. In this respect, the adopted industrial field consists of companies deploying different types of market focus and industry recipe. We argued that there is a strong positive association between the key constructs involved. Indeed, we assessed the extent to which the type and degree of market orientation distinguish between industrial firms with high and low levels of customer intimacy. To this end, a combination of analysis of variance and two-group discriminant analysis was employed to test our hypotheses stated. We found a strong positive association between market intelligence generation and organizational responsiveness to the market intelligence, and customer intimacy. Moreover, the influence of our contingency factors - market focus and industry recipe - was examined by means of a multiple discriminant analysis with the two diverse split-groups simultaneously to determine the most significant types of market orientation differentiating across the firm groups of low and high customer intimacy within each of the four possible contexts. This process produced a classical 2x2 matrix of the split-group results presented in Figure 2. Also in this case our findings provide strong empirical evidence for the claim that, as contextual factors, market focus and industry recipe influence the interplay between market orientation and customer intimacy. Hence, our results reveal that the focal phenomenon is firm-specific and contingency-bound.

Our results indicate that, from the point of view of business culture adopted, there exist two types of market orientation: market-driven and market-driving. The former emphasizes a reactive industry recipe in close customer relationships reflecting with adaptive learning capabilities in terms of market intelligence generation. Conversely, the latter puts our attention on a proactive industry recipe radically changing the composition of the actors (market players) in industrial networks through generative learning capabilities in the context of market information processing. More precisely, in global or cross-cultural context, firms are forced to relay on a market-driven collaboration in business connections regardless of the type of market orientation adopted. Respectively, in domestic or 'intra-cultural' context, firms with a market-driven orientation rest on market information acquisition to sustain their close customer relationships, while firms realizing a market-driving orientation had to be organizationally more responsive to the generated market intelligence if they are

willing to maintain the closeness to their customers. These findings are consistent with the emerging organizational learning and capabilities based 'cultural view' to market orientation (Jaworski et al. 2000; Baker and Sinkula 2002). Generally, the point is of culture and collaboration, but simultaneously concerned.

FIGURE 2

Effective Means of Market Orientation in Close Customer Relationships

Briefly, our conceptual framework and empirical results extend past theories in this field of research. Research up to this point has not paid much attention to strategic links between market orientation and operational performance, especially, in the form of closeness to the customers (Homburg, 1998; Matsuno and Mentzer 2000). As far as the two key constructs are simultaneously concerned, our major findings verify formerly made statements (e.g. Treacy and Wiersema 1993; Slater and Narver 2000; Jaworski et al. 2000), and replicate prior research results (Webster 1992; Lichtenthal and Wilson 1992; Grewal and Tansuhaj 2001). Besides consistency with the former work in the field of market orientation exploration, our findings reinforce the notions of those scholars who have

postulated that market orientation in terms of market information process activities is a source of a firm's competitive advantage (Sinkula 1994; Baker and Sinkula 2002; Day 1994, 2000; Day and Nedungadi 1994). More generally, this study has contributed to bridging the gap between the research traditions of market orientation and customer relationship marketing, and, meanwhile, it provides a promising metaphor for culture and collaboration in industrial networks.

Based on the reviewed research findings we are briefly summarizing the managerial contributions of the study in terms of some practical advice. More generally, the Finnish engineering and electrotechnical industries surveyed in this research provide an ideal field for studying market orientation - customer intimacy interplay in the context of internal cultural postures. In this respect, there exist certain characteristics typical for this industrial field: globalization and competitive intensity, knowledge and technology dominance, customer sophistication and technological services proliferation, and product and service supply of new technology. Under this kind of market and technology turbulence, drivers for competitive fitness and superior business performance are abilities in customer relationship management in conjunction with market-driven business orientation (Maruca 2000). Hence, the results of our study are of evident practical interest. We crystallize the implication recipe for management as follows: "To survive in turbulent global markets, companies - regardless of the type of industry recipe adopted - need to focus on maintaining close customer relationships by emphasizing, especially, organization wide market intelligence generation. However, in the context of domestic markets, closeness to customers can be achieved, in the case of a proactive industry recipe, by increasing organizational responsiveness to the market intelligence, and, in the case of a reactive industry recipe, market intelligence generation is critical in this concern." Indeed, these are real managerial challenges within our rapidly evolving information era.

As with any single study exploring a multitrait construct like market orientation within large number of firms, the results of the study must be interpreted in the light of the obvious limitations the study possesses. As a consequence of this work, we note some limitations, which in turn offer opportunities for further research. First, we must remember that the findings of our exploratory approaches are necessarily limited in their generalizability. Our results are based on a sample drawn from one industrial sector, and, thus, additional cross-sectional (or cross-industrial) research is needed to insure the generalizability of the associations examined to other industrial fields. Similarly, although our sample extends prior results in this field of research (obtained primarily from medium size and large companies), our findings may not apply to smaller firms. Second, the cross-sectional

nature of the data utilized in our analyses does not allow, on one hand, the determination of causality, and, on the other, the assessments of lagged effects of causes on consequences. Causal ordering of relationships cannot be confirmed through a cross-sectional study design relying on measures of association. Therefore, longitudinal research designs in conjunction with structural equation models (SEM) are needed to confirm the probable causes and effects linkages. Third, the data utilized in this work may be biased in terms of managerial attitudes measured by Likert-type scales reflecting a single informant's perceptions or stated beliefs rather than actual organizational behavior, which can reduce the reliability and validity of the data. In this respect, our noneconomic performance measure, which in more general sense may include also some economic aspects, may not reflect actual levels of financial performance. As business performance is multifaceted, in investigating our key constructs' implications on financial performance criteria (e.g. market share, sales, and ROI) should make an important contribution to the body of knowledge. Fourth, as our market orientation measures seem to feature within the contingency factors examined, but they may not fit with other kinds of internal and external environmental variables, which provide an issue for additional research. Finally, we did not deploy a SEM approach in the present study due to limited *a priori* knowledge about the relationship between the two key constructs involved, and, further, due to our small sample size in conjunction with the number of multivariate measures utilized.

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