

A strategy implementation perspective of market orientation

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Abstract

The authors conceptually and empirically explore the role of market orientation in the context of strategy implementation. Specifically, market orientation plays a key role for the successful implementation of a premium product differentiation (PPD) strategy. This result is based on the empirical findings from an international study that shows the performance effect of a PPD strategy is to a significant extent mediated through the construct of market orientation. Implications for future research and managerial practice are discussed.

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1. Introduction

Since the classic statement by Chandler (1962) that “structure follows strategy,” there has been interest in the relationship between strategy and organizational dimensions such as structure. The relationship between the strategy and organizational dimensions has typically been explained in a sequential model where firms decide on a strategy and then put in place appropriate organizational choices such as structure, systems, rewards, and processes that support this strategy (Galbraith and Nathanson, 1978; Govindarajan, 1988; Govindarajan and Gupta, 1985). This research stream is generally referred to as “strategy implementation” (Ginsberg and Venkatraman, 1985), which Varadarajan (1999) defines as “the actions initiated within the organization and in its relationships with external constituencies to realize the strategy.” Varadarajan (1999) points out that “much of the research in marketing strategy has focused on strategy content issues with a much more limited amount of research attention devoted to implementation and formulation process issues.”

The strategy implementation research done in the strategy and management fields has historically focused on the “harder” dimensions of structure and systems. However, with the growing interest in resource-based theories of the firm (Barney, 1991), there has been increased interest in the role of intangible factors such as skills, capabilities, leadership style, and culture in strategy implementation. At the core of the strategy implementation approach is the recognition that different types of capabilities, organizational processes, and systems need to be adjusted in order to implement the selected strategy.

Within marketing, there has been great interest in market orientation as an intangible factor that has an effect on organizational performance, with prior research addressing topics such as conceptualization of the construct (Kohli and Jaworski, 1990), measurement of the construct (Kohli et al., 1993; Narver and Slater, 1990), antecedents of market orientation (Day, 1994; Jaworski and Kohli, 1993), and consequences of market orientation (Jaworski and Kohli, 1993; Slater and Narver, 1994). One issue not addressed by prior research is the role of market orientation in the implementation of certain types of strategy.

The purpose of this paper is to examine the role of market orientation in the implementation of a premium product differentiation (PPD) strategy. Implementation means to adapt organizational variables to a strategy, which then leads to increased performance. These organizational variables take a facilitating role in the relationship between strategy and performance. Market orientation as such an organiza-

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tional variable facilitates strategy implementation if it intervenes between strategy and performance. If it does, it is a mediator in the link between strategy and performance where strategy leads to performance via market orientation. More specifically, we study the strategy → market orientation → performance causal chain, and examine both direct and indirect (through market orientation) effects of strategy on performance. If a significant part of the effect of strategy on performance is mediated via market orientation, then it plays an important role in strategy implementation.

2. Relationship between strategy and organizational variables

There are two perspectives on how strategic and organizational factors are related: a strategy formulation perspective, where organizational variables influence the formulation of strategy, and a strategy implementation perspective, where the strategy has an impact on organizational variables.

By taking a *strategy formulation perspective* of the relationship between organizational variables and strategy, it is assumed that organizational variables influence the formulation of strategy. A number of researchers have assumed such a link between intangible organizational variables such as market orientation and strategy, where the underlying beliefs and behaviors have an important impact on strategy. They argue that cognitive maps and related constructs such as world views, schemata, dominant logics, and knowledge structures provide the foundation for managerial action (e.g., Huff, 1982; Kiesler and Sproull, 1982; Prahalad and Bettis, 1986).

The *strategy implementation perspective* looks at the influence of strategy variables on organizational variables. Knowledge about strategy implementation is dispersed over several fields of organizational and management theory (Hrebiniak and Joyce, 1984). Common to that research is an instrumental view of strategy implementation. Traditionally, researchers have focused on organizational structure as well as planning, control, reward, and information systems (e.g., Chandler, 1962; Galbraith and Nathanson, 1978; Govindarajan, 1988; Govindarajan and Gupta, 1985; White, 1986). The notion that strategy is hierarchically related to structure is widespread and occurs in very disparate theories (e.g., Chandler, 1962; Mintzberg, 1990).

Since the 1980s, intangible variables that may play a role in strategy implementation have gained interest. The intangible variables are related to conduct and values and include leadership style and culture on the corporate and SBU levels, cross-functional interaction on the functional level within SBU's, and abilities, characteristics, and conduct on an individual level (Davis, 1983; Govindarajan, 1988; Gupta and Govindarajan, 1984; Pelham, 1999; Schwartz and Davis, 1981; Woodside et al., 1999). One of these intangible variables is market orientation, which is

defined as “the organizationwide generation of market intelligence pertaining to current and future customer needs, dissemination of the intelligence across departments, and organizationwide responsiveness to it” (Kohli and Jaworski, 1990, p. 6). Market orientation has not been investigated from a strategy implementation perspective.

The importance of a strategy implementation perspective of intangible organizational variables like market orientation is illustrated by Porter (1985, p. 24), who discusses the relationship between a generic strategy (which reflects the long-term strategic orientation of the firm) and culture as a specific intangible organizational variable:

Culture ... has come to be viewed as an important element of a successful firm. However, different cultures are implied by different generic strategies. ... Culture can powerfully reinforce the competitive advantage a generic strategy seeks to achieve, if the culture is an appropriate one. There is no such thing as a good or bad culture per se. Culture is a means of achieving competitive advantage, not an end in itself.

The question whether the strategy formulation or strategy implementation perspective is appropriate refers to the classic issue of direction of causality in the relationship between strategy and organizational variables. In a systematic empirical study of the relationship between strategy and structure, Amburgey and Dacin (1994, p. 1427) note that “The bulk of the work on the strategy–structure relationship has presumed a hierarchical link, with strategy determining structure.” However, several researchers have claimed that strategy and organizational variables are interrelated (e.g., Mintzberg, 1990, p. 183). In their longitudinal study, Amburgey and Dacin (1994) found that the strategy implementation and strategy formulation perspective may coexist; however, strategy has a stronger impact on structure than vice versa. We acknowledge that strategy and market orientation affect each other. However, given our research question and empirical evidence that the effect of strategy on organizational variables may be the stronger one, we focus on the strategy implementation perspective of market orientation.

3. Framework and hypotheses

3.1. The framework

Fig. 1 presents the framework used in our analysis. We focus on PPD strategy as a variable that leads to increased performance indirectly through market orientation. As research in strategic management has found significant positive impacts of competitive strategy on performance (Dess and Davis, 1984; Hambrick, 1983a; Miller and Friesen, 1986), we also analyze direct performance impacts of a PPD strategy (as indicated by the dotted line in Fig. 1).



Fig. 1. Framework of the study.

By using such a research design, we can empirically investigate the role of market orientation for a successful strategy implementation.

Competitive strategy is generally viewed as determining how a business should compete in a given industry or product market, and several typologies for characterizing strategy have been developed (Miles and Snow, 1978; Porter, 1980, 1985). Specifically, we focus on the degree of emphasis placed on PPD at the business unit level (Hagel and Singer, 1999; Porter, 1980; Treacy and Wiersema, 1995).

There are several conceptualizations of market orientation in the literature. We focus on the one developed by Kohli and Jaworski (1990), which resulted in the Market Orientation Scale (MARKOR) scale (Kohli et al., 1993). This scale is frequently used in the literature and has undergone sound psychometric validation efforts. The MARKOR scale is represented by three factors: (1) intelligence generation, (2) intelligence dissemination, and (3) responsiveness. Intelligence generation “refers to the collection and assessment of both customer needs/preferences and the forces (i.e., task and macro environments) that influence the development and refinement of those needs. ... Intelligence dissemination refers to the process and extent of market information exchange within a given organization. ... Responsiveness is action taken in response to intelligence that is generated and disseminated” (Kohli et al., 1993, p. 468).

Concerning the outcome dimensions of our framework, we focus on marketing-related performance outcomes since a differentiation strategy emphasizes marketing activities. Specifically, we focus on the two performance dimensions, effectiveness and efficiency, which are commonly accepted in the literature (Ruekert et al., 1985):

Effectiveness involves the degree to which organizational goals are reached, efficiency considers the relationship between organizational outputs and the inputs required to reach those outputs (Ruekert et al., 1985, p. 15).

3.2. Hypothesis development

Our first set of hypotheses pertains to the effects of a PPD strategy on the components of market orientation. On an

overall basis, we hypothesize positive effects of a PPD strategy on each of the market orientation components. Consistent with prior research, we argue that market orientation has a strong link with a differentiation strategy. Narver and Slater (1990) found the market orientation/differentiation strategy correlation to be significantly stronger than the market orientation/low-cost strategy correlation. Pelham and Wilson (1996, p. 31) argue that “increases in use of innovation/differentiation strategy in small firms positively influence the level of market orientation.” Market orientation is important for an organization that wants to emphasize a differentiation strategy because it can enhance the successful implementation of such a strategy. According to Porter (1985, p. 14):

In a differentiation strategy, a firm seeks to be unique in its industry along some dimensions that are widely valued by buyers. It selects one or more attributes that many buyers in an industry perceive as important, and uniquely positions itself to meet those needs.

To implement such a unique position, specific organizational capabilities are needed. Unlike a low-cost strategy, which is more internally oriented, differentiation requires tracking and understanding the changes in customer needs and changes in the market in order to be able to develop products, which customers perceive as different from competitors’ products (Hambrick, 1983a; McDaniel and Kolari, 1987; McKee et al., 1989). Therefore, a PPD strategy causes firms to develop capabilities and perform activities related to intelligence generation. Thus, we hypothesize:

H1: Emphasis on a PPD strategy has a positive impact on the intelligence generation component of market orientation.

Intelligence dissemination is important for an SBU using a differentiation strategy because the knowledge collected in different organizational units of the SBU must be made available to everyone involved in implementing the strategy. Managers may disseminate market-related information across hierarchical levels and functional group boundaries through such means as workshops, project reviews, newsletters, reports distributed by E-mail or intranets, and periodic meetings with groups of employees. Porter (1980) contends that differentiation strategies need strong coordi-

nation among functions. It has been argued that to achieve differentiation, business units need a dominant theme or logic (Prahalad and Bettis, 1986) that is understood by all functional groups. Additionally, White (1986, p. 224) has commented that “it would seem strong functional coordination ... would be needed to develop and maintain these cross-functional themes.”

Such functional coordination plays a crucial role in new product development, which is an important strategic activity in the context of a differentiation strategy. The introduction of new products “creates the need for more scanning of markets to discern customer requirements, the analysis and discussion of this information in group decision-making sessions which bring to bear marketing, R&D, engineering, production and finance perspectives” (Miller, 1987, p. 60). This coordination could be achieved through cross-functional teams (Maltz and Kohli, 1996) and vertical and horizontal communication (Miller, 1987). Hence:

H2: Emphasis on a PPD strategy has a positive effect on the intelligence dissemination component of market orientation.

Organizations following a differentiation strategy have been shown to have relatively low levels of asset intensity (Hambrick, 1983b). While a higher level of asset intensity would decrease organizational adaptability and flexibility, differentiation strategy with its low asset intensity would allow more adaptation and quicker responses to market changes.

H3: Emphasis on a PPD strategy has a positive effect on the responsiveness component of market orientation.

Our second set of hypotheses is related to the relationship between the components of market orientation. Kohli et al. (1993, p. 473) raise the issue of a potential causal ordering among those components:

Consistent with emerging work on the use of market information ..., one could argue that there is an ordering among the various types of intelligence, with generation naturally occurring to a greater degree than what is disseminated. In turn, on the basis of this disseminated information, the business unit might or might not act on the intelligence.

Since intelligence generation is costly, managers who decided to collect information on customers and competitors could be under pressure to not hold back this information but to rather disseminate it in the organization. Once the information is disseminated across different departments and employees, there will be pressure to respond to the knowledge. We therefore hypothesize a causal chain from intelligence generation through intelligence dissemination to responsiveness.

H4: The intelligence generation component of market orientation has a positive effect on the intelligence dissemination component.

H5: The intelligence dissemination component of market orientation has a positive effect on the responsiveness component.

Our third set of hypotheses pertains to the performance implications of market orientation. Our model assumes that among the three dimensions of market orientation, only responsiveness directly leads to performance outcomes. Unless an organization responds to information, neither the acquisition nor the dissemination of information will result in externally oriented actions that will lead to success. Intelligence generation and dissemination are internal processes of the organization rather than market-related activities that are visible to customers and do not improve service for customers. Hence, the intelligence generation and dissemination components of market orientation are related to performance in an indirect way through their effect on responsiveness. We therefore do not hypothesize any direct effects of intelligence generation and dissemination on performance.

With respect to the effect of responsiveness on performance, the following considerations are relevant. Effectiveness relates to the degree of goal achievement with respect to customer satisfaction, customer loyalty, attraction of new customers, and securing the desired market share (Ruekert et al., 1985). Successfully responding to customer preferences in the context of market orientation can lead to competitive advantage and additional value for customers (Kohli and Jaworski, 1990). By creating this value, market orientation can lead to increased customer satisfaction, customer loyalty, and attraction of new customers (Jaworski and Kohli, 1993; Narver and Slater, 1990). Hence, we hypothesize:

H6: The responsiveness component of market orientation has a positive effect on the effectiveness of the SBU.

Efficiency relates to the ratio between organizational outputs and the required inputs (Ruekert et al., 1985) and reflects profitability (Irving, 1995). Market orientation can lead to higher value for the customer (Kohli and Jaworski, 1990), which enables the business unit to achieve higher prices for its products and services (Slater and Narver, 1996, p. 161). This improved profitability might be maintained in the long term since a market-oriented culture is difficult to imitate (Barney, 1986; Day, 1994). Empirically, prior research has shown that market orientation leads to increased profitability (e.g., Diamantopoulos and Hart, 1993; Narver and Slater, 1990):

H7: The responsiveness component of market orientation has a positive effect on the efficiency of the SBU.

By testing H1 through H7 simultaneously in a causal model, we use an integrative method and analyze the mediating effect of market orientation between differentiation strategy and performance; thus, investigating the role of market orientation in the implementation of a PPD strategy. Through the direction of H1 through H7,

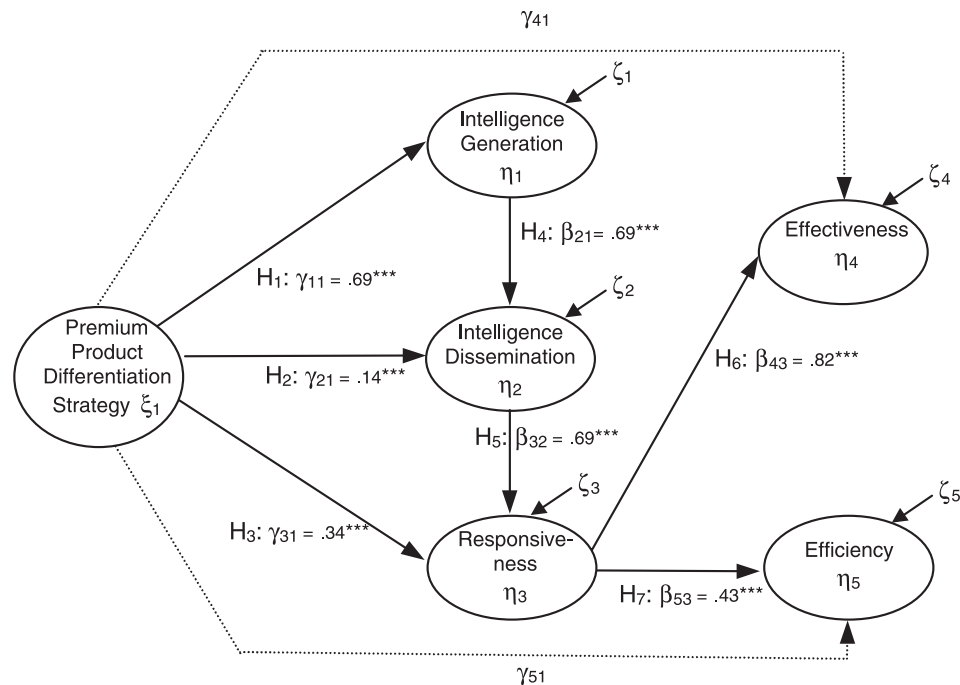


Fig. 2. Model of role of market orientation in implementation of a differentiation strategy: hypotheses and empirical results.

we hypothesize a crucial role of market orientation in that context. Fig. 2 is a causal model developed on the basis of the seven hypotheses.

4. Method

4.1. Sample and data collection procedure

Data for the study were obtained from the managers responsible for marketing in SBU's in three industry sectors in the United States and Germany: consumer packaged goods, electrical equipment and components, and mechanical machinery. We defined an SBU as a relatively autonomous unit with the SBU manager having control of at least three of the following functions: marketing, sales, manufacturing, R&D, finance, and human resources. The names of the SBU's in our sample were derived from firm names obtained from Dun and Bradstreet in both the United States and Germany. The name of the person responsible for marketing in a specific SBU within the firm was identified from industry directories and telephone calls to the SBU. Thus, the names of 1500 U.S. and 1284 German managers responsible for the marketing in 2784 SBUs were obtained. The surveys were mailed to those individuals and a second survey was sent to nonrespondents 4 weeks after the first survey. As 94 of the U.S. and 80 of the German surveys were undeliverable, 2610 were delivered. Usable responses were received from 280 U.S. and 234 German managers, a response rate of 19.9% in the United States and 19.4% in Germany and a total response rate of 19.7%.

We believe we were successful in reaching persons high enough in the organizations to comment on the strategy, market orientation, and performance of the SBU. Specifically, 87% of our sample indicated their job titles as being marketing manager, marketing director, marketing VP, or representing a level higher within the firm. Additionally, 65% of our respondents had at least 5 years of work experience within marketing.

To detect possible problems with nonresponse error, we used two methods. First, according to the test for non-response bias by Armstrong and Overton (1977), country-specific *t* tests between early and late respondents indicated no statistically significant differences. Second, in a random sample, special efforts were made to increase the response rate from that group (45% vs. 18.5% for the firms not in the random sample). We then did a *t* test comparing the means of all variables for the random sample versus all other respondents and found no statistically significant differences. Hence, on an overall basis, nonresponse bias did not appear to be a problem in our study.

4.2. General measurement approach

Scales for the study consisted of newly generated items and items that had been used previously. Where a new scale was developed, we were guided by construct definitions and scales used in prior research. The individual items are listed in Appendix A. The questionnaire was designed in English and was modified after comments were provided by five academics and six marketing managers. To enhance translation equivalence, the translation–backtranslation method was used (Douglas and Craig, 1983). The resulting English

and German version of the questionnaire were pretested and modified in the United States and Germany on the basis of comments from 20 marketing and sales managers in those countries who completed the entire survey.

The scales' psychometric properties were assessed by means of criteria based on confirmatory factor analysis (Anderson and Gerbing, 1988; Fornell and Larcker, 1981). If necessary, the item pools were purified by dropping items with low reliabilities. We furthermore performed confirmatory factor analyses to test for metric equivalence in order to determine whether we can combine U.S. and German samples for subsequent assessment procedures (Steenkamp and Baumgartner, 1998). Metric invariance implies that the respondents in the United States and German respond to the items in the same way, i.e., the scale intervals are equal in both countries. We followed the procedures suggested by Steenkamp and Baumgartner (1998) and found that partial metric invariance was supported. This allows us to combine the U.S. and German samples for subsequent assessment procedures (Steenkamp and Baumgartner, 1998, p. 81).

4.3. Measures

4.3.1. PPD strategy

The items used to measure the strategic emphasis on a PPD strategy were based on the items used by Kim and Lim (1988) and Dess and Davis (1984). Specifically, we selected items that showed relatively high factor loadings on differentiation in both studies (new product development, image building/brand image, high prices) and added services accompanying the product because the provision of product-related services has become more important for differentiation from competitive products (Anderson and Narus, 1995).

4.3.2. Market orientation

To measure the degree of market orientation of the SBU, we used the MARKOR scale developed and validated by Kohli et al. (1993).

4.3.3. Performance

We used perceptual measures of marketing-related outcomes that assessed effectiveness and efficiency to measure performance (Ruekert et al., 1985). Specific items were adapted from Irving (1995). To provide an appropriate frame of reference, we asked the respondents to rate the performance of their business unit in relation to that of its competitors. We decided to use perceptual measures of performance rather than objective financial performance measures for several reasons. First, financial performance measures such as ROI or ROA are typically not available at the business unit level because a balance sheet is needed to compute them. Most multidivisional firms do not have balance sheets at the business unit level. Second, objective financial performance measures computed at the business

unit level are usually highly firm specific. They may be influenced by, for example, internal transfer prices, the way firms allocate headquarters' costs, or tax considerations. Therefore, cross-company (and especially cross-national) comparison is difficult. The third argument against objective financial performance measures is that respondents may be reluctant to give the figures. German managers, for example, emphasize privacy of information to a greater extent than managers in other cultures. Also, the proportion of small companies that are publicly traded is smaller in Germany than in the United States, and secondary data on such companies are less readily available. Finally, perceptual performance measures have been shown to have a high correlation with objective financial performance measures that supports their validity (e.g., Dess and Robinson, 1984; Hart and Banbury, 1994; Naman and Slevin, 1993; Venkatraman and Ramanujam, 1987).

4.4. Measure reliability and validity

We assessed measure reliability and validity by using confirmatory factor analysis with all six factors combined in a single model. Composite reliability represents the shared variance among a set of observed variables measuring an underlying construct (Fornell and Larcker, 1981). In general, a composite reliability of at least .6 is considered desirable (Bagozzi and Yi, 1988, p. 82). As shown in Appendix A, each construct met that criterion. Additionally, all of the coefficient alpha values exceeded the threshold value of .7 recommended by Nunnally (1978) suggesting for each of the constructs a reasonable degree of internal consistency between the corresponding indicators. That conclusion is supported by the fact that all the factor loadings were significant ($P < .001$), which has been suggested as a criterion of convergent validity by Bagozzi et al. (1991).

Discriminant validity between all constructs used was examined by performing, one at a time, chi-square difference tests between a model in which a factor correlation parameter was fixed at 1.0 and the original (unrestricted) confirmatory factor analysis model. As every restricted model had a significantly poorer fit than the unrestricted model, we concluded that the degree of discriminant validity was sufficient.

The chi-square statistic associated with the confirmatory factor analysis (measurement) model is significant [$\chi^2(363) = 757.21$, $P < .01$]. However, that test has been argued to have major limitations (Baumgartner and Homburg, 1996; Bentler, 1990). Other overall fit measures suggested that the measurement model fits the data well (GFI=.97, AGFI=.97, CFI=.98, RMSEA=.05).

4.5. Evaluation of performance by R&D managers

To validate our performance measures, we collected a validation sample consisting of informants outside market-

ing. Specifically, we sent a shortened version of the survey to R&D managers (or production managers if R&D did not exist) who belonged to the same SBU as the respondents in the first survey. Names of managers addressed in the second survey were identified by the respondents in the first survey or through telephone calls if the first respondent did not designate a specific person. We sent 505 surveys (275 in the United States and 230 in Germany) and obtained 101 usable responses (53 in the United States and 48 in Germany), a response rate of 20.0%. We compared our two performance measures as calculated from the responses in the main sample (managers responsible for marketing) with those calculated from the responses in the validation sample (R&D managers). The corresponding measures were all correlated significantly at the .01 level. The correlation coefficients were .45 for effectiveness and .33 for efficiency. For the subsequent analyses, we used the mean of the performance evaluation by marketing and R&D managers in those cases where we had evaluations by both managers. With the other cases, we used the performance evaluations by the marketing managers.

5. Results

5.1. Fit of the overall model

After establishing the structure of the measurement model, we analyzed the overall causal model consisting of the structural relations among latent variables shown in Fig. 2 and 29 indicator variables, excluding the direct effects of differentiation strategy on the two performance measures. Although the significant chi-square statistic [$\chi^2(371)=900.97$, $P<.01$] suggests discrepancies between the data and the proposed overall model in Fig. 2, other indicators suggest an adequate fit of that model: (1) GFI was .97, AGFI was .96, and CFI was .97, (2) RMSEA was .05, and (3) the Q -plot was approximately linear with a slope near 1 suggesting the absence of major model misspecifications (Bagozzi and Yi, 1988; Bentler, 1990; Jöreskog and Sörbom, 1993). Finally, we calculated the explained variances for the endogenous variables (intelligence generation=.47; intelligence dissemination=.62; responsiveness=.88; effectiveness=.67; efficiency=.19). The relatively low explained variance for efficiency (which in our study primarily reflects profitability) can be explained by the consideration that profitability depends on so many other factors such as industry structure and competitive pressures, which are not integrated in our model.

5.2. Hypothesis testing

In Fig. 2, we report standardized parameter estimates corresponding to the hypotheses in our model. For all hypotheses, the corresponding parameter is significant at

the .01 level. All hypotheses are clearly supported. Emphasis on a differentiation strategy positively affects intelligence generation ($\gamma_{11}=.69$), intelligence dissemination ($\gamma_{21}=.14$), and responsiveness ($\gamma_{31}=.34$). The impact of a PPD strategy is strongest on intelligence generation and weakest on intelligence dissemination. Between the components of market orientation, we find a causal chain with intelligence generation positively influencing intelligence dissemination ($\beta_{21}=.69$), which leads to higher responsiveness ($\beta_{32}=.69$). Responsiveness shows strong positive effects on effectiveness ($\beta_{43}=.82$) and efficiency ($\beta_{53}=.43$), the two dimensions of business performance in our study. Because intelligence generation and intelligence dissemination, the two other components of market orientation, increase responsiveness, it follows that market orientation as a whole has a positive impact on business performance. Overall, our findings indicate that a PPD strategy has strong indirect effects on business performance through the construct of market orientation.

Furthermore, in order to find out to which extent our findings generalize across countries, we conducted a multiple group causal analysis (Jöreskog and Sörbom, 1993) with two groups corresponding to the two countries in our study. The parameter estimates in both groups were nearly identical, which indicates that our theoretical reasoning is supported not only in the pooled sample but also in the two subsamples. This result offers support for the generalizability of our findings.

5.3. Examination of direct versus indirect strategy-performance effects

Analyzing the indirect effects of a PPD strategy on performance via market orientation represents an empirical test of mediation: Market orientation mediates between strategy and performance, i.e., market orientation intervenes in the relationship between strategy and performance helping to explain why an association between strategy and performance exists. This test of the mediating role of market orientation is the empirical equivalent of the concept of strategy implementation via market orientation (see also Venkatraman, 1989).

Given these considerations, we can empirically show the important role of market orientation in the implementation of a PPD strategy, if the indirect effects of a PPD strategy on the two performance dimensions via market orientation (mediation effects) are important compared to the direct effects of strategy on performance. To compare the direct and indirect (via market orientation) effects of a PPD strategy on performance, we analyzed two additional models. Each model contained a direct effect of a PPD strategy on one performance dimension. This was achieved by freeing the corresponding parameter and obtaining an estimate of it. We compared the chi-square values of the more general models with the chi-square value of the more restrictive model. That test is based on a chi-square distri-

bution with one degree of freedom (Bagozzi and Yi, 1988). For both of the alternative models, the improvement in fit achieved through the generalization was significant. Therefore, a PPD strategy had direct effects both on effectiveness and on efficiency.

Further insight is provided by looking at the comparative strength of the indirect and direct effects of a PPD strategy on effectiveness and on efficiency. The total effect of a PPD strategy on efficiency is .47 with an indirect effect of .10 ($\gamma_{11}\beta_{21}\beta_{32}\beta_{53} + \gamma_{21}\beta_{32}\beta_{63} + \gamma_{31}\beta_{53}$) and a direct effect of .37 (γ_{51}). For efficiency, the direct effect of a PPD strategy is more important than the indirect effect through market orientation. The total effect of a PPD strategy on effectiveness is .73 with an indirect effect of .39 ($\gamma_{11}\beta_{21}\beta_{32}\beta_{43} + \gamma_{21}\beta_{32}\beta_{43} + \gamma_{31}\beta_{43}$) and a direct effect of .34 (γ_{41}). On an overall basis, our findings provide clear support for the importance of market orientation as a partial mediator in the differentiation strategy–performance relationship.

6. Implications

6.1. Theoretical implications

Our research fits into a broader stream of empirical research on strategy implementation. We analyzed the role of market orientation as an important intangible organizational variable for the successful implementation of the long-term strategic orientation of the business unit. In order to do so, we constructed a causal sequence from PPD strategy through market orientation to performance.

On an overall basis, our conceptual considerations are partially supported. The causal model, with market orientation as a mediator between a PPD strategy and performance, has strong local and overall fit properties. Specifically, we found that the performance effects of a differentiation strategy are partially indirect via market orientation. This underlines the important role of market orientation as an instrument of strategy implementation.

One theoretical implication of our study is the evidence we provide for the important role of intangible organizational variables such as market orientation in strategy implementation. We introduce the concept of market orientation as an important intangible organizational variable in the context of strategy implementation. We therefore contribute to the strategy implementation literature where we find a lack of empirical studies investigating the role of intangible organizational variables in the implementation of strategies.

Our study achieves this contribution by distinguishing between direct and indirect effects of business strategy on performance via intangible variables such as market orientation. Several hundred empirical studies have examined *direct links* between different dimensions of strategy and performance (see Capon et al., 1990). However, few

researchers have empirically addressed the issue to which extent the relationship between strategy and performance is direct or *indirect* (i.e., through some mediating organizational variables such as market orientation). Since our study indicates that the performance implications of a PPD strategy are to a significant extent indirect through market orientation, we show the important role of market orientation in the implementation of a PPD strategy, and more generally the importance of intangible organizational variables in strategy implementation. That is in line with conceptual considerations, which emphasize the important role of intangible variables in strategy implementation (Davis, 1983; Lorsch, 1986; Schwartz and Davis, 1981). We found only partial mediation—a PPD strategy also has some direct effects on performance. This finding supports the idea that market orientation will not be the only mediator between a PPD strategy and performance. There might be other mediators, such as an innovative culture, which were not included in our model. Future research could investigate such possible other mediators.

6.2. Managerial implications

The importance of intangible organizational variables in strategy implementation has been discussed conceptually (Lorsch, 1986; Schwartz and Davis, 1981), but there is a lack of empirical evidence. Although accepting that intangible factors are crucial in managing organizations, managers sometimes question whether they can be measured. The MARKOR scale, which we validated in a cross-cultural context, obviously is a suitable tool for measuring market orientation.

Second, our study provides further insight that strategy implementation is critical for success. In our study, we can show that there are important indirect effects of strategy on performance via market orientation, which underlines the important (mediating) role of market orientation in the relationship between strategy and performance. Managers should not emphasize strategy formulation over implementation, as strategy formulation does not guarantee successful strategy implementation. Strategy formulation is a more intellectual process at a relatively higher hierarchical level. In contrast, strategy implementation is more operational, requiring the coordination and involvement of the whole organization. Although managers must be careful to develop the appropriate strategy, they should assign a large part of their resources to activities and tasks related to strategy implementation. Our study shows that market orientation plays an important role in a differentiation context and warrants the special attention of managers.

6.3. Directions for future research

We analyzed only one dimension of strategy and only restricted aspects of performance. Future studies could also

examine other dimensions of strategy and performance. Specifically, prior work found stronger associations between market orientation and a differentiation strategy than between market orientation and a cost leadership strategy (Slater and Narver, 1996). However, the mediating role of market orientation in the relationship between more complex business strategies and performance warrants attention. Assessing the importance of market orientation for the implementation of a competitive strategy that tries to achieve differentiation and cost leadership at the same time could be worthwhile. Furthermore, it would be useful to explore the mediating role of market orientation between a market focus strategy and performance and between product development innovativeness and performance (Slater and Narver, 1996). Finally, with respect to performance, we focused on effectiveness and efficiency. While our efficiency measure mainly reflected profitability, future studies could be more specific about the different facets of profitability (such as return on investment, return on sales).

We focused on market orientation as an intangible factor that occurs among differentiating firms. Future research might take other intangible factors into consideration such as interdepartmental conflict, organizational commitment, satisfaction of employees, or specific organizational capabilities like market sensing or customer linking (Day, 1994). Those intangible factors could be added to our model, either as consequences of market orientation or as additional mediators between a differentiation strategy and performance.

Finally, our research shows the usefulness of investigating several links in a single causal model with the relationships among strategy, market orientation, and performance. That procedure led to new insights about the interdependencies between the constructs considered. Integrative studies in the strategy literature have also shown the usefulness of using causal analysis in order to gain new insights in the area of interests (e.g., Hitt et al., 1996; Stimpert and Duhaime, 1997). Therefore, future research should consider using integrative approaches to create new insights to the complex relationships between strategy and other organizational constructs.

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Appendix A. Scales, items, scale means, standard deviations, coefficient alphas, and composite reliabilities for measures

Scale name, response cue, and individual items (Items, which were dropped in the item purification process, are indicated in parentheses.)	Scale mean/ S.D.
PPD strategy (respondents scored on seven-point Likert scale with anchors 1 = <i>not at all</i> and 7 = <i>a great deal</i>)	5.30/1.03
To what extent does your business unit emphasize the following activities? Competitive advantage through superior products. Creating superior customer value through services accompanying the products. New product development. Building up a premium product or brand image. Obtaining high prices from the market. (Development of customer-specific solutions and products.) (Coefficient alpha=.75; composite reliability=.79)	
Market Orientation (The items indicated in the Kohli et al. (1993) scale were used; respondents scored on seven-point Likert scale with anchors 1 = <i>strongly disagree</i> and 7 = <i>strongly agree</i>)	
Intelligence generation (Coefficient alpha=.71; composite reliability=.76)	4.82/1.12
Intelligence dissemination (Coefficient alpha=.74; composite reliability=.77)	4.71/1.25
Responsiveness (Coefficient alpha=.82; composite reliability=.84)	4.95/1.01
Business performance (respondents scored on seven-point Likert scale with anchors 1 = <i>very poor</i> and 7 = <i>excellent</i>)	
While answering the following questions, please relate to the situation in your business unit over the last three years. Relative to your competitors, how has your business unit performed with respect to the following: Effectiveness achieving customer satisfaction? securing desired market share? attracting new customers? (Coefficient alpha=.73; composite reliability=.76)	4.95/1.09
Efficiency earning profits.	4.86/1.64

References

- Amburgey TL, Dacin T. As the left foot follows the right? The dynamics of strategic and structural change. *Acad Manage J* 1994;37(6):1427–52.
- Anderson JC, Gerbing DW. Structural equation modeling in practice: a review and recommended two-step approach. *Psychol Bull* 1988; 103:411–23.
- Anderson JC, Narus JA. Capturing the value of supplementary services. *Harvard Bus Rev* 1995;73(1):75–83.
- Armstrong JS, Overton T. Estimating nonresponse bias in mail surveys. *J Mark Res* 1977;14(August):396–402.
- Bagozzi RP, Yi Y. On the evaluation of structural equation models. *J Acad Mark Sci* 1988;16(Spring):74–94.
- Bagozzi RP, Yi Y, Phillips LW. Assessing construct validity in organizational research. *Adm Sci Q* 1991;36(September):421–58.
- Barney JB. Organizational culture: can it be a source of sustained competitive advantage? *Acad Manage Rev* 1986;11(March):656–65.

- Barney JB. Firm resources and sustained competitive advantage. *J Manage* 1991;17(March):99–120.
- Baumgartner H, Homburg C. Applications of structural equation modeling in marketing and consumer research: a review. *Int J Res Mark* 1996;13(April):139–61.
- Bentler PM. Comparative fit indexes in structural models. *Psychol Bull* 1990;107:238–46.
- Capon N, Farley JU, Hoenig S. Determinants of financial performance: a meta-analysis. *Manage Sci* 1990;36(10):1143–59.
- Chandler AD. *Strategy and structure*. Cambridge (MA): MIT Press; 1962.
- Davis SM. Corporate culture and human resource management: two keys to implementing strategy. *Hum Resour Plann* 1983;6(3):159–67.
- Day GS. The capabilities of market-driven organizations. *J Mark* 1994;58(October):37–52.
- Dess GG, Davis PS. Generic strategies as determinants of strategic group membership and organizational performance. *Acad Manage J* 1984;27(3):467–88.
- Dess GG, Robinson RB. Measuring organizational performance in the absence of objective measures. *Strateg Manage J* 1984;5:265–73.
- Diamantopoulos A, Hart S. Linking market orientation and company performance: preliminary evidence on Kohli and Jaworski's framework. *J Strat Mark* 1993;1(2):93–121.
- Douglas SP, Craig CS. *International marketing research*. Englewood Cliffs (NJ): Prentice Hall; 1983.
- Fornell C, Larcker DF. Evaluating structural equation models with unobservable variables and measurement error. *J Mark Res* 1981;18(February):39–50.
- Galbraith JR, Nathanson DA. *Strategy implementation: the role of structure and process*. St. Paul: West Pub. Co.; 1978.
- Ginsberg A, Venkatraman N. Contingency perspectives of organizational strategy: a critical review of the empirical research. *Acad Manage Rev* 1985;10(3):421–34.
- Govindarajan V. A contingency approach to strategy implementation at the business-unit level: integrating administrative mechanisms with strategy. *Acad Manage J* 1988;31(4):828–53.
- Govindarajan V, Gupta AK. Linking control systems to business unit strategy. *Account Organ Soc* 1985;10(1):51–66.
- Gupta AK, Govindarajan V. Business unit strategy, managerial characteristics, and business unit effectiveness at strategy implementation. *Acad Manage J* 1984;27(March):25–41.
- Hagel J, Singer M. Unbundling the corporation. *Harvard Bus Rev* 1999;77(2):133–41.
- Hambrick DC. Some tests of the effectiveness and functional attributes of Miles and Snow's strategic types. *Acad Manage J* 1983a;26:5–26.
- Hambrick DC. High profit strategies in mature capital goods industries: a contingency approach. *Acad Manage J* 1983b;26:687–707.
- Hart S, Banbury C. How strategy-making process can make a difference. *Strateg Manage J* 1994;15:251–70.
- Hitt MA, Hoskisson RE, Johnson RA, Moesel DD. The market for corporate control and firm innovation. *Acad Manage J* 1996;39(October):1084–119.
- Hrebiniak LG, Joyce WF. *Implementing strategy*. New York: MacMillan; 1984.
- Huff AS. Industry influences on strategy reformulation. *Strateg Manage J* 1982;3(2):119–31.
- Irving E. *Marketing Quality Practices*. Unpublished Doctoral Dissertation, Chapel Hill, NC: University of North Carolina; 1995.
- Jaworski BJ, Kohli AK. Market orientation: antecedents and consequences. *J Mark* 1993;57(July):53–70.
- Jöreskog KG, Sörbom D. *LISREL 8: a guide to the program and applications*. Chicago: SPSS; 1993.
- Kiesler S, Sproull L. Managerial response to changing environments: perspectives on problem sensing from social cognition. *Adm Sci Q* 1982;27:548–70.
- Kim L, Lim Y. Environment, generic strategies, and performance in a rapidly developing country: a taxonomic approach. *Acad Manage J* 1988;31:802–27.
- Kohli AK, Jaworski BJ. Market orientation: the construct, research propositions, and managerial implications. *J Mark* 1990;54(April):1–18.
- Kohli AK, Jaworski BJ, Kumar A. MARKOR: a measure of market orientation. *J Mark Res* 1993;30(November):467–77.
- Lorsch JW. Managing culture: the invisible barrier to strategic change. *Calif Manage Rev* 1986;28(2):95–109.
- Maltz E, Kohli A. Market intelligence dissemination across functional boundaries. *J Mark Res* 1996;33(February):47–61.
- McDaniel SW, Kolari JW. Marketing strategy implications of the Miles and Snow strategic typology. *J Mark* 1987;51(October):19–30.
- McKee DO, Varadarajan PR, Pride WM. Strategic adaptability and firm performance: a market-contingent perspective. *J Mark* 1989;53(July):21–35.
- Miles RE, Snow CC. *Organizational strategy, structure and process*. New York: McGraw-Hill; 1978.
- Miller D. The structural and environmental correlates of business strategy. *Strateg Manage J* 1987;8:55–76.
- Miller D, Friesen PH. Porter's (1980) generic strategies and performance: an empirical examination with American data: Part 1. Testing porter. *Organ Stud* 1986;7:1–35.
- Mintzberg H. The design school: reconsidering the basic premises of strategic management. *Strateg Manage J* 1990;11:171–95.
- Naman JL, Slevin DP. Entrepreneurship and the concept of fit: a model and empirical tests. *Strateg. Manage. J.* 1993;14:137–54.
- Narver JC, Slater SF. The effect of a market orientation on business profitability. *J Mark* 1990;54(October):20–35.
- Nunnally JC. *Psychometric theory*, 2nd ed. New York: McGraw-Hill; 1978.
- Pelham AM. Influence of environment, strategy, and market orientation on performance in small manufacturing firms. *J Bus Res* 1999;45:33–46.
- Pelham AM, Wilson DT. A longitudinal study of the impact of market structure, firm structure, strategy, and market orientation culture on dimensions of small-firm performance. *J Acad Mark Sci* 1996;24(1):27–43.
- Porter ME. *Competitive strategy*. New York: Free Press; 1980.
- Porter ME. *Competitive advantage: creating and sustaining superior performance*. New York: Free Press; 1985.
- Prahalad CK, Bettis R. The dominant logic: a new linkage between diversity and performance. *Strateg Manage J* 1986;7:485–501.
- Ruekert RW, Walker OC, Roering KJ. The organization of marketing activities: a contingency theory of structure and performance. *J Mark* 1985;49(Winter):13–25.
- Schwartz H, Davis SM. Matching corporate culture and business strategy. *Organ Dyn* 1981;10(1):30–48.
- Slater SF, Narver JC. Does competitive environment moderate the market orientation–performance relationship? *J Mark* 1994;58(January):46–55.
- Slater SF, Narver JC. Competitive strategy in the market-focused business. *Journal of Market Focused Management* 1996;1(1):159–74.
- Steenkamp J-BEM, Baumgartner H. Assessing measurement invariance in cross-national consumer research. *J Consum Res* 1998;25(June):78–90.
- Stimpert JL, Duhaime IM. Seeing the big picture: the influence of industry, diversification, and business strategy on performance. *Acad Manage J* 1997;40(3):560–83.
- Treacy M, Wiersema F. *The discipline of market leaders*. Boston: Addison Wesley; 1995.
- Varadarajan PR. Strategy content and process perspectives revisited. *J Acad Mark Sci* 1999;27:88–100.
- Venkatraman N. The concept of fit in strategy research: toward verbal and statistical correspondence. *Acad Manage Rev* 1989;14:423–44.
- Venkatraman N, Ramanujam V. Measurement of business economic performance: an examination of method convergence. *J Manage* 1987;13(1):109–22.
- White RE. Generic business strategies, organizational context and performance: an empirical investigation. *Strateg Manage J* 1986;7:217–31.
- Woodside AG, Sullivan DP, Trappey RJ. Assessing relationships among strategic types, distinctive marketing competencies, and organizational performance. *J Bus Res* 1999;45(2):135–46.