Market orientation and performance: a meta-analysis

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Abstract

Purpose – To assess quantitatively the impact of market orientation on the performance of the firm. While much empirical work has centered on market orientation, the generalizability of its impact on performance has been under-researched.

Design/methodology/approach – A substantive meta-analysis quantitatively summarizes the results of empirical studies of the direct and indirect impact of market orientation on three outcomes. A second, methodological meta-analysis assessed the influence of methodological variables on explained variance in performance.

Findings – The direct, indirect, and total impacts of market orientation on performance were all significant. Additionally, the geographic location of the study and the performance measure used (but not the scale) affected explained variance.

Research limitations/implications – First, across study contexts, market orientation affects performance. Second, its impact might be stronger than previously thought due to the indirect paths not considered in previous research. Third, the strength of its impact depends on the country in which it was implemented; managers should expect higher payoffs in less developed countries.

Originality/value – The findings of this study significantly refine the body of knowledge concerning the impact of market orientation on the performance of the firm, and thereby offer an improved conceptual framework for marketing planners.

Keywords Market orientation, Organizational performance

Paper type Research paper

Introduction

Market orientation (MO) is a central construct in a theory developed to explain firm performance (Jaworski and Kohli, 1993; Kohli and Jaworski, 1990; Kohli *et al.*, 1993; Narver and Slater, 1990; Deshpandé and Farley, 1998). MO was initially studied in the USA where it was linked to performance, organizational commitment, *esprit de corps* (Jaworski and Kohli, 1993), and return on assets (Narver and Slater, 1990). Recent extensions have used other performance measures, such as ROI and new product success (Deshpandé *et al.*, 1997; Greenley, 1995; Pelham and Wilson, 1996) and have focused on additional countries (Diamantopoulos and Hart, 1993; Golden *et al.*, 1995; Rose and Shoham, 2002; Selnes *et al.*, 1996; Shoham and Rose, 2001), which has enriched the disciplinary understanding of MO.

While a positive MO-to-performance link has been established (Cadogan *et al.*, 1999; Jaworski and Kohli, 1993; Narver and Slater, 1990), there are still questions about its

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robustness. For example, in a US and Swedish study, Selnes *et al.* (1996) found a positive correlation between Kohli and Jaworski (1990) and subjective performance, but not with market share. Similarly, in a five-country study, Deshpandé *et al.* (1997) did not find a consistent impact of MO on performance. Likewise, Slater and Narver (1996) found no relationship between MO and profitability or ROI (see Deshpandé and Farley, 1998).

This study employs a substantive meta-analysis to quantitatively aggregate the effects of MO on performance, organizational commitment, and *esprit de corps*. This relationship has been under-researched in the literature. Moreover, it explores the indirect impact of MO on performance, through commitment and *esprit de corps*. To the best of our knowledge, no previous study has examined these mediated influences of MO on performance. To the extent that such indirect paths are identified, the impact of MO on performance might be stronger than previously thought. Furthermore, a second, methodological meta-analysis was conducted as well. Three factors that could potentially affect the strength of the MO-to-performance relationship: study location (USA versus other nations), MO operationalization (Kohli *et al.*, 1993; Narver and Slater, 1990), and the performance measure used (subjective, objective, or both) were included in this meta-analysis. These contextual effects are managerially important as they set boundary conditions for the generalizability of the impact of MO on performance.

In sum, we seek to establish empirical generalizations from previous studies and identify the aggregate effect of MO on performance. In addition, we test the robustness of the MO-to-performance relationship to identify the conditions under which MO is most effective.

Theoretical background

MO involves an implementation of the marketing concept (Deng and Dart, 1994). It facilitates a firms' ability to anticipate, react to, and capitalize on environmental changes, thereby leading to superior performance.

Two approaches to MO have been widely adopted. The first distinguishes three components: organization-wide *generation* of market information about current and future customer needs; *dissemination* of such information across departments and individuals within the market-oriented firm; and an organization-wide *responsiveness* to the disseminated information (Jaworski and Kohli, 1993; Kohli and Jaworski, 1990). The second also uses three components, but conceptualizes MO differently (Narver and Slater, 1990; Slater and Narver, 1995). The first component is *customer orientation*, which reflects the necessary activities for acquiring and disseminating information about customers. The second, a *competitor orientation*, implies an effort to gather and disseminate information about competitors of the MO firm. The third component, *inter-functional coordination*, involves "…the business's coordinated efforts…to create superior value for them continuously" (Narver and Slater, 1990, p. 21).

Cadogan and Diamantopoulos's integrative paper Cadogan and Diamantopoulos (1995) identified many common themes between the two approaches, except for responsiveness and the customer and competitor orientations. While firm performance is central to Jaworski and Kohli (1993) and Narver and Slater (1990), the former also assessed behavioral outcomes: *organizational commitment* and *esprit de corps*. Below, we discuss the three MO outcomes. Since MO's impact on these outcomes has been well argued and documented in the literature, we provide a brief overview only.

Outcomes of an MO

Behavioral outcomes. Previous research has established the positive impact of a firms' MO on employees' *esprit de corps* (Jaworski and Kohli, 1993; Rose and Shoham, 2002; Shoham and Rose, 2001). MO provides employees with a sense of belonging, direction, and feelings of contributing towards satisfying customer needs, thereby leading to greater *esprit de corps*. Kohli and Jaworski (1990) suggested that their use of *esprit de corps* is similar to the teamwork concept in a services marketing context (Zeithaml *et al.*, 1988). MO provides psychological and social benefits to employees and enhances *esprit de corps* and teamwork. Moreover, MO was the strongest predictor of the seven antecedents of *esprit de corps* tested by Jaworski and Kohli (1993). Thus:

H1. MO is related positively to employees' *esprit de corps*.

MO is a positive driver of organizational commitment. By providing team spirit, it can enhance employees' pride, which, in turn, should increase their commitment to the firm. Dubinski *et al.* (1986) emphasized the importance of salespeople's socialization, which can enhance workers' understanding of their role definition and provide an understanding about the tasks to be performed. In combination, these benefits should enhance employees' task-specific self-esteem and help resolve conflicting job demands. Role definition should increase job involvement and organizational commitment (Dubinski *et al.*, 1986). A well-developed MO can serve as initiation and socialization mechanisms for the workforce, thereby enhancing organizational commitment indirectly. Thus:

H2. MO enhances employees' commitment to the firm.

Performance outcomes. MO helps firms track and respond to changing customer needs; hence, high-MO firms should outperform low-MO firms. Three theoretical approaches (an evolutionary perspective, an industrial organization approach, and a resource-based-view of the firm) underlie the expected positive MO-to-performance link. The evolutionary perspective (Lusch and Laczniak, 1987) argues that organizational characteristics that made a firm fit its environment become a part of its *future* evolution only when replicated. MO provides an organization with a *winning philosophy* in the face of intensifying competition. Thus, it will be selected because it increases the probability of an organization's survival. Lusch and Laczniak (1987) found that the link between the marketing concept and organizational performance was positive and significant.

Industrial organization theory provides additional justification for the MO-to-performance link (Knight and Dalgic, 2000). Firms manage their relationship with the environment to maximize performance (Scherer and Ross, 1990). RBV postulates that differential firm resources give rise to superior strategy and performance (Barney, 1991; Porter, 1991; Wernerfelt, 1984). Prahalad and Hamel (1990) described core competencies as the collective learning of an organization. By enhancing MO, it is possible to enhance the core competencies of a firm. Therefore:

H3. MO is related positively to firm performance.

Organizational commitment, esprit de corps, *and performance*. MO might also impact performance indirectly (through its behavioral consequences). Unfortunately, previous MO research has not focused on the potential of its behavioral outcomes (organizational commitment and *esprit de corps*) to affect performance. These links are important because the impact of MO on performance may be direct, as hypothesized and documented previously, but it may also be indirect, through its behavioral outcomes. An advantage of the meta-analysis used here is that it makes it possible to test such indirect impacts.

Organizational commitment. Committed employees are less likely to be absent from work or to resign from their firm (Steers, 1977), are more likely to go beyond required norms to contribute to the attainment of organizational goals (Steers and Porter, 1979), are willing to give of themselves for the general wellbeing of the organization (Mowday *et al.*, 1982), and are more likely to remain members of the organization (Porter *et al.*, 1974; Cohen, 1993; Dunham and Pierce, 1989; Somers, 1995; Tett and Meyer, 1993). Similarly, less committed employees are less willing to share and sacrifice for the organization (Randall *et al.*, 1990). Bloemer *et al.* (1998) hypothesized a relationship between organizational commitment and customer loyalty, enhancing performance. In the context of professional associations, Gruen *et al.* (2000) hypothesized and documented that organizational commitment enhances retention, participation, and co-production.

Organizational commitment may also enhance salesforce performance leading to higher organizational performance (Michaels *et al.*, 1988) since committed employees are likely to identify with their work (O'Reilly and Chatman, 1986). Grant and Cravens (1999) found that high organizational commitment resulted in higher sales, market share, and customer satisfaction. So:

H4. Organizational commitment is related positively to firm performance.

Esprit de corps. Team spirit is commonly discussed in the context of group cohesiveness. Greenberg and Baron (1997, p. 259) state that: "cohesiveness refers to a 'we' feeling, an '*esprit de corps*', a sense of belonging to a group". Members of cohesive groups participate more in the groups' activities, accept group goals more readily, are absent from work less often than members of less cohesive groups (Cartwright, 1968; Dunham and Pierce, 1989), and tend to stay longer with their organization (George and Bettenhausen, 1990). The higher willingness of cohesive groups' members to work together and conform to group norms contributes to the groups' performance (Shaw, 1981).

Dunham and Pierce (1989) and Jewell and Reitz (1981) identified six group development stages: orientation, conflict, cohesion (which pertains to team spirit), delusion, disillusion, and acceptance. They summarized: "Cooperation, low levels of emotionalism, and goal directed activity are common characteristics of highly cohesive groups. Significant increases in group effectiveness are common during the cohesion stage." Thus:

H5. Team spirit is related positively to firm performance.

Methodological considerations

Up to this point, we have discussed substantive/theoretical issues related to MO and its consequences. However, methodological and contextual variables may affect the strength of MO's impact on performance. An examination of the methodological and contextual variables is the focus of a second, methodological meta-analysis. We examine three potential moderators of the MO performance relationship: location (USA versus other nations), MO operationalization (Kohli *et al.*, 1993; Narver and Slater, 1990, and others), and the performance measure used (subjective, objective, or both). These variables were selected based on their potential impact on the MO-to-performance relationship. Additionally, each was included in enough studies to provide a sufficient number of effect sizes to test their impact. Notably, little theoretical contributions are available to guide the hypotheses' formation process for the second meta-analysis. Thus, moderators are discussed using exploratory terminology.

Study location. Study location has the potential to be an important determinant of the strength of relationships in meta-analyses (Farley *et al.*, 1982). MO should have its greatest effect in a nation with a highly dynamic and competitive business environments (Jaworski and Kohli, 1993; Kohli and Jaworski, 1990). While initial conceptualizations of MO were developed in the USA, other nations may provide a less dynamic environment, mitigating the performance consequences of MO. Thus, MO may also have a stronger influence in the USA.

Deshpandé *et al.* (2000) assessed MO in five countries (Japan, the USA, France, England, and Germany) and documented differences across them (see Deshpandé and Farley, 1998 for an exception). Selnes *et al.* (1996) found differences on two MO components between American and Scandinavian samples. Cadogan *et al.* (1999) reported differing MO components – performance relationships for UK and Dutch exporters. Thus, cross-nation studies have yielded differing MO-to-performance relationships.

Notably, Deshpandé and Farley (2000) argued against their own findings (Deshpandé *et al.*, 2000, p. 26). In a study of Chinese firms, they documented that MO was the most important variable in separating high- versus low-performing firms. They concluded: "Market orientation can be especially effective in a transforming economy, although this proposition requires much more testing." In sum, findings about the impact of study location have produced mixed results. Thus (avoiding a null hypothesis):

H6. The MO-to- performance relationship differs between firms in the USA and in other nations.

MO operationalization. MO operationalizations can influence the strength of its impact on performance. Kohli *et al.* (1993) and Narver and Slater (1990) offered two theoretically plausible and widely used measures for studying MO. Other measures have been used, but they are conceptually or empirically similar to those. Additionally, the number of empirical studies based on different operationalizations is too small to be assessed specifically in a meta-analysis. Consequently, all other approaches were combined into an "other" category.

The Kohli and Jaworski and Narver and Slater scales are theoretically sound. Although each measures some different aspects of MO, both have repeatedly proved to be reliable and valid. We draw on Cadogan and Diamantopoulos (1995) and Cadogan *et al.* (1999) to compare these approaches. The former integrated Kohli and Jaworski's and Narver and Slater's conceptualizations, and identified many themes common to both approaches. They suggested that MO can be viewed as a business philosophy or as a behavior-guiding orientation and that the two approaches are philosophically distinct. Kohli and Jaworski emphasized behavior, while Narver and Slater emphasized a combination of the philosophical and behavioral facets of the MO construct.

Cadogan and Diamantopoulos developed a three-by-three matrix to assess the conceptual and empirical overlap between Jaworski and Kohli's dimensions (intelligence generation, intelligence dissemination, and responsiveness) and Narver and Slater's (customer orientation, competitor orientation, and interfunctional coordination). Customer orientation overlaps conceptually with intelligence generation and intelligence dissemination, and operationally with intelligence generation and responsiveness. Competitor orientation overlaps conceptually with intelligence generation and intelligence dissemination and operationally with their intelligence dissemination and responsiveness. Finally, interfunctional coordination overlaps both conceptually and operationally with intelligence generation, intelligence dissemination, and responsiveness.

Cadogan and Diamantopoulos (1995) found that the Narver and Slater conceptualization of MO shares a nomological network with that provided by Kohli and Jaworski (1990), customer orientation, competitor orientation and interfunctional coordination tapping a similar domain to intelligence generation, dissemination and responsiveness. Thus (avoiding a null hypothesis):

H7. The strength of the relationship between MO and business performance differs across scales.

Performance operationalization. Performance has been operationalized in many ways including market share, profitability, return on assets or on investment, change in market share or profitability, new product success, and composite measures of these variables. Such measures can be classified as objective, subjective, or combinations of the two. Subjective measures center on managers' assessment of the performance of their business unit or firm, relative to expectations or competitors. In such cases, managers may account for competitive and environmental conditions when producing subjective measures. For example, managers may rate their firms' profitability relative to major competitors'. Alternatively, managers may be asked to indicate how satisfied they are with their firm's performance, e.g. sales growth. Objective measures, in contrast, assess the actual performance of the firm on absolute scales.

Schlegelmilch and Ram (2000) found that MO affected perceived, but not actual ROI. Jaworski and Kohli (1993) found that MO had a positive impact on subjective performance, which is an assessment of overall performance relative to competitors'. Yet, its impact disappeared when an objective measure of performance (dollar share on the served market) was used. They argued that judgmental performance assessments might be more accurate in MO studies as subjective measures account for the particular strategies of a company. The existence of a time lag between MO and objective performance also may be important (Jaworski and Kohli, 1993; Sargeant and Mohamad, 1999). Thus, cross-sectional research, the norm in MO studies, may not capture the true strength of MO's impact on performance. Thus, Jaworski and Kohli (1993, p. 6) concluded: "Based on these considerations, the authors tend to place more confidence in the results obtained using judgmental measures of performance." To sum up:

H8. The relationship between MO and performance will be strongest when subjective measures are used, followed by combinations of objective and subjective measures, followed by objective measure of performance.

Method

Literature search

The literature was searched for empirical studies that reported at least one relationship between the study's constructs. We identified papers through a computerized search and an issue-by-issue search of nine journals and three conferences over 15 years. They appeared in the *Journal of Marketing*, *Journal of Marketing Research*, *Journal of the Academy of Marketing Science*, *Journal of International Business Studies*, *Journal of International Marketing*, *Journal of Business Research*, *International Journal of Research in Marketing*, *European Journal of Marketing*, and *Journal of Global Marketing*. The proceedings of the *Academy of Marketing Science*, *European Marketing Academy*, and *American Marketing Association* were also searched. When an abstract was included in conference proceedings, we attempted to contact authors and request correlations of the constructs. We also contacted scholars active in this area to identify non-published research. Finally, we identified papers in other journals and proceedings from the references of the papers identified.

Unfortunately, many papers did not report correlation coefficients, t-tests, or F-tests that are necessary for meta-analyses. Whenever possible, we contacted authors with a request for the needed data. When unavailable, these papers were excluded, resulting in 29 papers in the meta-analysis (Table I). As some papers reported on multiple samples (e.g. Selnes *et al.*, 1996) or operationalizations of MO (e.g. Deshpandé and Farley, 1998), the total number of data-points was 35. All relationships included data from 4-34 samples (ns = 517-5,165; average total n per relationship = 1,347).

Procedure

Sample size and correlation coefficients were recorded for each study. Pooled correlation coefficients were calculated for the model's constructs. Z-transformed study correlations were averaged and weighted by an estimate of their variance to increase the weight of more accurate estimates ((n − 3); Hedges and Olkin, 1985). The transformation involved a calculation of z_{ijk}, the z-transformation of the correlation coefficient observed in study k for constructs i and j. The pooled and transformed study effects were reconverted to correlation coefficients using Hedges and Olkin's formulae.

Hypotheses 1 to 5 were tested by OLS regression models, run in LISREL 8.30, with the pooled correlation coefficients used as input (n = 1,347). Hypotheses 6 to 8 were tested by an ANOVA model with the pooled correlations between MO and performance serving as dependent variables.

Results

Substantive meta-analysis

The calculated correlation coefficients appear in Table II. The correlation coefficients for the three outcomes (performance, commitment, and *esprit de corps*) are of medium strength (0.21-0.66), suggesting that the outcomes are related, but not identical.

Table I.
Empirical studies used in the meta-analyses

Study	Country	Sample	Market orientation operationalization	Findings
Athuahene-Gima (1995)	Australia	275 firms	Ruekert	New product performance (+); project performance (+)
Avlonitis and Gounaris (1997)	Greece	Two sample: 161 and 236 firms	Kohli and Jaworski	Performance relative to competitors (+)
Avlonitis *et al.* (1992)	Greece	381	Kohli and Jaworski; Narver and Slater	Profitability (+)
Au and Tse (1995)	Hong Kong and New Zealand	69 (HK) and 250 (NZ) Hotels	Proprietary	Occupancy rates (- HK; + NZ; not significant)
Balakrishnan (1996)	USA	139 firms	Kohli and Jaworski	Repeat business and customer retention (+; not significant)
Becker and Homburg (1999)	Germany	234 firms	Kohli and Jaworski	Market performance (+)
Bhuian (1997)	Saudi Arabia	92 banks	Kohli and Jaworski	ROA; ROE; sales per employee (+; not significant)
Breman and Dalgic (1998)	Holland	105 exporters	Kohli and Jaworski	Performance relative to competitors (+)
Cadogan and Diamantopoulos (1999)	UK	48 exporters	Narver and Slater	Subjective performance (+)
Cadogan, Diamantopoulos, and de Mortanges (1997)	UK and Holland	198 and 103, respectively	Kohli and Jaworski	Satisfaction and overall performance (+)
Caruana *et al.* (1997)	Australia	134 public-sector government departments	Kohli and Jaworski	Organizational commitment (+)
Caruana *et al.* (1998)	Australia and New Zealand	84 university schools	Kohli and Jaworski	Subjective assessment of performance (+)
Deshpandé and Farley (1998)	USA and Europe	82 firms	Kohli and Jaworski; Narver and Slater; Deshpandé *et al.*	Subjective assessment of performance (+)
Diamantopoulos and Hart (1993)	UK	86 firms	Kohli and Jaworski-based; proprietary	Performance relative to industry (mixed)
Gray, Matear, Boshoff, and Matheson (1998)	New Zealand	490 firms	Kohli and Jaworski combined with Narver and Slater	Brand awareness, customer satisfaction and loyalty, and ROI (+)

(*continued*)

Table I.

Study	Country	Sample	Market orientation operationalization	Findings
Homburg and Pflesser (1999)	Germany	160 firms	Kohli and Jaworski	Subjective market performance (+)
Horng and Chen (1998)	Taiwan	76 small/medium-sized firms	Kohli and Jaworski	Subjective performance, commitment, and *esprit de corps* (+)
Hulland (1995)	USA and Canada	55 firms	Narver and Slater	ROI and sales growth (+; not significant)
Kohli, Jaworski, and Kumar (1993)	USA	230 firms	Kohli and Jaworski	Subjective performance (+)
Moorman (1995)	USA	92 firms	Narver and Slater-based; proprietary	New product performance (+; not significant)
Narver and Slater (1990)	USA	365 SBUs	Narver and Slater	ROA relative to competitors (+)
Pelham (1997)	USA	160 small firms	Mostly Narver and Slater	Subjective performance (+; not significant)
Pelham (1999)	USA	229 small firms	Pelham	Multi-item subjective scale (+)
Pelham and Wilson (1996)	USA	78 small firms	Pelham	New product success; sales growth; profitability (+)
Rose and Shoham (2002)	Israel	124 exporters	Kohli and Jaworski	Subjective and objective; commitment; *esprit de corps* (+)
Sandvik and Gronhaug (1998)	Norway	28 firms	Kohli and Jaworski	Subjective performance (+)
Selnes *et al.* (1996)	US and Scandinavia	222 and 70 firms, respectively	Kohli and Jaworski	Market share; commitment; *esprit de corps*; and subjective performance (+)
Shoham and Rose (2001)	Israel	101 firms	Kohli and Jaworski	Subjective and objective; commitment; *esprit de corps* (+)
Siguaw (1994)	USA	278 firms	Narver and Slater	Commitment (+)

Table II. Summary of meta-analytic correlations

	Market orientation	Performance	Organizational commitment	*Esprit de corps*
Market orientation	1.00			
Performance	0.279 340 5,165	1.00		
Organizational commitment	0.511 8.0 1,235	0.283 4.0 517	1.00	
Esprit de corps	0.460 5.0 593	0.206 4.0 517	0.660 4.0 517	1.00

Note: Entries are mean weighted correlation coefficients (r), the number of correlation coefficients per each (k), and the total sample size per each (n)

Additionally, all three outcomes are related positively to MO, which provides initial support to *H1-H5*.

Table III shows the results of the OLS regressions and provides standardized β-coefficients based on aggregated effects over the entire set of papers. In the first, we tested a model with MO directly affecting the three outcomes, but without its indirect impact on performance through the behavioral outcomes. χ^2 of the model was 39.56 (df = 2; $p < 0.01$). Root mean square residual (0.05), standardized root mean square residual (0.05), goodness of fit index (0.99), and adjusted goodness of fit index (0.93) were acceptable, suggesting that the model fits the data well.

Table III. Summary of OLS regression models' results

		OLS beta (standardized) coefficients					
	Hypothesized relationship (expected sign)	Direct model only		Mediated model for commitment		Mediated model for *esprit de corps*	
H1	Market orientation → performance (+)	0.28	(10.66)*	0.18	(6.06)*	0.23	(7.96)*
H2	Market orientation? → organizational commitment (+)	0.51	(21.81)*	0.51	(21.81)*	0.51	(21.81)*
H3	Market orientation? → *esprit de corps* (+)	0.46	(19.01)*	0.46	(19.01)*	0.46	(19.01)*
H4	Organizational commitment? → performance (+)			0.19	(6.33)*		
H5	*Esprit de corps* → performance (+)					0.10	(3.36)
χ^2; root mean square residual; standardized root mean square residual; goodness of fit index; adjusted goodness of fit index		39.54; 0.05; 0.05; 0.99; 0.93		0.27; 0.001; 0.001; 1.00; 1.00		28.35; 0.03; 0.03; 0.99; 0.90	

Notes: * Significant correlation coefficients ($p < 0.05$); ** Marginally significant correlation coefficients ($p < 0.09$)

Consequences of MO: direct impact model

The data provide strong support to the hypotheses dealing with the three outcomes. The impact of MO on performance was positive and significant ($\beta = 0.28$; $t = 10.66$; $p < 0.05$), supporting *H1*. MO had a positive and significant impact on organizational commitment ($\beta = 0.51$; $t = 21.81$; $p < 0.05$) and *esprit de corps* ($\beta = 0.46$; $t = 19.01$; $p < 0.05$), supporting *H2* and *H3*. In short, MO has the hypothesized positive financial and behavioral consequences.

Consequences of MO: direct and indirect impact-model 1

In the second model, MO was allowed to affect performance directly, as well as indirectly, through commitment. As before, MO was also modeled as affecting the two behavioral outcomes. This model served to test *H4*. χ^2 was 0.27 (one df; $p < 0.88$). Root mean square residual (0.001), standardized root mean square residual (0.001), goodness of fit index (1.00), and adjusted goodness of fit index (1.00) were acceptable, suggesting that the model fits the data well. As was the case in the first model, MO significantly affected all outcomes. The standardized impacts on firm performance ($\beta = 0.18$; $t = 6.06$), organizational commitment ($\beta = 0.51$; $t = 21.81$), and *esprit de corps* ($\beta = 0.46$; $t = 19.01$) were all positive and significant ($p < 0.05$).

In support of *H4*, the impact of organizational commitment on firm performance was positive and significant ($\beta = 0.19$; $t = 6.33$; $p < 0.05$). The impact of MO on firm performance may be stronger than indicated in previous research because of its additional positive impact on organizational commitment and the latter's positive impact on firm performance.

Consequences of MO: direct and indirect impact-model 2

In this model, we allowed MO to affect firm performance directly and indirectly, through *esprit de corps*. Here too, MO directly affected the two behavioral outcomes. This model served to test *H5*. The model's χ^2 was 28.35 with one degree of freedom ($p < 0.05$). Root mean square residual (0.03), standardized root mean square residual (0.03), goodness of fit index (0.99), and adjusted goodness of fit index (0.90) were acceptable, suggesting that the model fits the data well.

As was the case in the first two models, MO was a significant predictor of the three outcomes. Its standardized impacts on firm performance ($\beta = 0.23$; $t = 7.96$), organizational commitment ($\beta = 0.51$; $t = 21.81$), and *esprit de corps* ($\beta = 0.46$; $t = 19.01$) were positive and significant ($p < 0.05$). Supporting *H5*, the impact of *esprit de corps* on firm performance was positive and marginally significant ($\beta = 0.10$; $t = 3.36$; $p < 0.09$). This suggests that the total impact of an MO on firm performance may be stronger than indicated in past research because of its added positive impact on *esprit de corps* and, through it, on firm performance.

Methodological meta-analysis

An ANOVA model tested *H6-H8* (Table IV). The pooled MO-to-performance correlations served as dependent variable. Study location (USA versus other countries), scale used and performance (objective, mixed, and subjective) served as independent variables. The ANOVA model was significant (type III sum of squares = 0.51; df = 5; $F = 5.57$; $p < 0.01$) and accounted for 50.8 percent of the variance in explained performance. Consequently, the individual impacts of study location, scales used, and

Source	Type III sum of squares	df	F	Significance	Eta squared
Corrected model	0.507	5	5.571	0.001	0.51
Intercept	0.419	1	23.029	0.001	0.46
Scale used	0.024	2	0.653	0.529	0.05
Performance measure	0.487	2	13.377	0.001	0.50
Study location	0.096	1	5.292	0.029	0.164
Error	0.491	27			
Total	3.752	33			

Notes: [a] Scale: 0 – Jaworski and Kohli (1983); 1 – Narver and Slater (1990); 2 – others. Performance measure: 0 – subjective; 0.5 – subjective and objective; 1 – objective. Location: 0 – USA; 1 – other

Table IV. ANOVA model results[a]

performance measures used on the explained variance in firm performance were examined.

H6 posited that the relationship between MO and performance would differ between the USA and other nations. In support, study location was significant ($F = 5.29$; $p < 0.03$). The correlations averaged 0.276 in the USA and 0.293 in other countries.

Under *H7*, no differences were expected in the strength of the relationship between an MO and performance across the three types of scales. The model supported this hypothesis: the impact of the scale used was not significant ($p > 0.52$). The correlations averaged 0.306 for the Kohli and Jaworski scale, 0.297 for the Narver and Slater scale (1990), and 0.256 for other scales.

Finally, *H8* suggested that the MO-to-performance relationship would be strongest for subjective measure of performance, of medium strength for subjective and objective combinations, and weakest for objective performance measure. This was the case; the type of measure used had a significant impact ($F = 13.38$; $p < 0.01$) on the relationship's strength. The correlation coefficients averaged 0.070 for studies using objective performance measures, 0.248 for studies using both types, and 0.404 for studies using subjective measures.

Discussion and implications

Substantive meta-analysis

The study supports the notion that MO has a positive impact on organizational commitment, *esprit de corps*, and performance. The MO-to-performance link is significant and robust. Comparing a firm's intended strategy to performance measures might be an important consideration in determining the effectiveness of MO (Jaworski and Kohli, 1993). It is important to use performance measures that capture a firm's goals to avoid weakening the MO-to-performance relationship. For example, Sin *et al.* (2000) found that MO affected sales growth, customer retention, and overall performance; however, it had no impact on ROI or market share for the Chinese firms sampled. It is plausible that the firms in their sample might have emphasized strategies designed to enhance sales growth, customer retention, and overall performance, rather than ROI or market share. Future research should ascertain whether the performance measures used fit the firms sampled.

Mediation. The total impact of MO may be stronger than previously thought. We can certainly imagine numerous other potential partial mediators for the MO-to-performance relationship beyond those included here. For example, Fritz

(1996) suggested that overall corporate management might mediate the impact of MO on success. In his study of German firms, he documented that MO affected overall corporate management, which, in turn, affected corporate success. Unfortunately, he did not include a direct path from MO to corporate success. Thus, the partial mediation explanation could not be tested.

Siguaw *et al.* (1994) suggested another mediation possibility. In their study of USA salespeople, they developed a model in which MO and a customer-orientation affect role conflict and role ambiguity. In turn, these role facets affect job satisfaction and organizational commitment. While we included the latter in our study, the former may suggest another variable for inclusion in future research. Job satisfaction (of salespeople or other employees) might be beneficial for firm performance, providing another mediated link between a MO and performance.

Moderation. Future research could examine moderated hypotheses. As noted before, environmental/market characteristics could potentially affect MO outcomes. Jaworski and Kohli (1993) suggested market turbulence, competitive intensity, and technological turbulence as moderators of the MO-to-performance relationship. Similarly, Slater and Narver (1994) identified additional potential moderators, such as supplier and buyer power and seller concentration. However, in his test of market turbulence, technological turbulence, competitive intensity, and market growth as potential moderators, Appriah-Adu (1997) identified only three significant effects out of a total of twelve. Similarly, Jaworski and Kohli (1993) failed to uncover significant moderators in their study and argued that these findings might have been due to insufficient power of their statistical tests resulting from small sub-sample sizes. In addition, Breman and Dalgic (2000) argued convincingly that organizational learning might moderate the relationship between an MO and firm performance. However, the findings failed to support their theoretical arguments for a moderated relationship, perhaps due to insufficient statistical power. Thus, an assessment of the moderating impact of such environmental/market characteristics remains an important topic for future study.

MO antecedents. To the extent that MO drives performance, directly and indirectly, the issue of how to build and maintain MO is of immense managerial importance. While the body of research on consequences of MO is large, relatively little research has investigated its antecedents. Thus, antecedents remain an important task for future research. Although Kohli and Jaworski's framework includes a comprehensive set of antecedents, other frameworks, such as Narver and Slater's, have placed less emphasis on identifying antecedents. Unfortunately, few studies have provided data about the links between Kohli and Jaworski's antecedents and MO. Thus, meta-analyses of these relationships could not be conducted.

Based on their review of the literature, Jaworski and Kohli (1993) included three sets of MO antecedents. The first focuses on top management factors and includes the top managers' emphasis on customer needs. MO is developed when a firm emphasizes the importance for managers to track market changes, share market information with others, and be responsive to market needs. In addition, top management's willingness to take risks drives the firm towards MO. Such willingness is necessary because responding to changing markets often requires the introduction of new products. Thus, top managers need to accept and encourage occasional failures (Kohli and Jaworski, 1990).

The second set of antecedents pertains to interdepartmental dynamics, including interdepartmental conflict and connectedness. Conflict can harm MO by reducing communication flows, thus limiting the coordination and implementation of effective firm-wide responses to gathered and disseminated information. In contrast, constructive interdepartmental connectedness can facilitate the dissemination of information.

The third set of antecedents includes organizational systems: centralization, formalization, and firm reward systems. Centralization involves the participation in and delegation of decision-making responsibilities throughout the firm. Formalization is defined as the degree to which roles, authority, communications, norms, sanctions, and procedures are defined by rules (Jaworski and Kohli, 1993). Centralization and formalization could limit flexibility and the communication and utilization of information across departments, thus inhibiting the development of MO. On the other hand, the more customer-focused the firm's reward system is, the higher its level of MO (Kohli and Jaworski, 1990).

Managers can facilitate the creation of MO firms by stressing a customer orientation and encouraging organizational learning through experimentation (Jaworski and Kohli, 1993; Rose and Shoham, 2002). A sense of commitment should facilitate connectedness and reduce conflict. Top management emphasis, MO rewards (Ruekert, 1992), low interdepartmental conflict, top managers' willingness to take risks, and high interdepartmental connectedness could all be included in the menu of actions designed to foster MO (Shoham and Rose, 2001). However, more research is needed to establish the robustness of these findings in the Jaworski and Kohli and Narver and Slater traditions. Future research could also assess additional organizational factors to facilitate MO such as creating and maintaining a learning organization, a stronger emphasis on MO during recruiting and selection of employees, and a training system.

Harris (2000) and Harris and Ogbonna (1999) studied organizational barriers to developing MO. They were concerned with the "flip side" of MO antecedents, including those enumerated by Jaworski and Kohli (1993). For example, they included connectedness and coordination mechanisms, which could contribute to, rather than hinder MO. However, they too included centralization and formalization as factors detrimental to MO. In short, much remains to be done in addressing the question of how to build and maintain MO.

Methodological meta-analysis

This study used a meta-analysis to establish empirical generalizations about the consequences of MO. In general, as noted, MO positively affects organizational commitment, *esprit de corps,* and, directly and indirectly, performance. While these effects were aggregated across a variety of research contexts in the substantive meta-analysis, we examined the effect of three context variables on the strength of the relationship between MO and performance in a methodological meta-analysis.

Two methodological variables, location and the performance measure employed, affected the strength of this relationship. American samples, as a whole, exhibited a weaker relationship between MO and performance than those drawn elsewhere. This result is intriguing since both major approaches to conceptualizing and measuring MO were developed in the USA. Our findings indicate that, while the MO-to-performance relationship is relatively robust and generalizes across nations, its impact depends on the country setting. MO may have its greatest effect in nations where high standards of consumer service and expectations are still evolving. In such countries, MO may allow firms to create competitive advantage by providing a higher level of service than their competitors.

The impact of MO on subjective measures of performance is stronger than its impact on objective measures, with combinations of the two capturing the middle ground. Subjective measures may provide a better assessment of performance because managers incorporate environmental conditions into their performance assessment. Thus, subjective measures may provide a more contextual and accurate assessment of performance than do objective measures. An innovative approach to examine differences involves using multiple measures of performance. Researchers would then pick the most relevant performance item for each firm according to its strategic thrust.

Finally, the scale employed did not moderate the MO business-performance relationship. Consistent with previous theoretical expositions of the similarity of approaches to measuring MO (Diamantopoulos and Cadogan, 1996), no effect was found for the scale used. This provides support for the generalizability of results across studies, regardless of the specific scale used. As Cadogan *et al.* (1999) argued, behaviors such as intelligence generation, intelligence dissemination, and intelligence responsiveness are common to Kohli and Jaworski's and Narver and Slater's approaches. Deshpandé and Farley (1998) discuss the syntactical similarity of the scales and find high correlations ($0.55 < r < 0.65$) between MO scores across three separate operationalizations in the same sample of firms. Our study further examines these arguments by aggregating effects across studies and suggests that the majority of the explained variance in performance across scales is shared. Thus, MO operationalizations have produced a consistent and empirically robust MO – performance relationship.

This finding notwithstanding, further work is needed to provide a philosophically based operationalization of MO. Kohli and Jaworski's approach is behavioral, whereas Narver and Slater's approach, while conceptually philosophical, leans operationally to behaviorism (Cadogan and Diamantopoulos, 1995). Future research can operationalize MO philosophically and assess its relationship with a behavioral operationalization.

Limitations

Not all constructs that may affect outcomes were included in the meta-analysis (e.g. market power; Narver and Slater, 1990). While this situation is typical for meta-analyses (Geyskens *et al.*, 1999), the constructs studied most frequently in the context of MO were included here. Specifically, the impact of MO may depend on the environmental context of each study. Environmental influences, such as technological turbulence, may affect the MO-to-performance relationship (Jaworski and Kohli, 1993). Establishing the generalizability of moderating variables will become increasingly feasible as the volume of MO research continues to grow. Second, only a limited number of methodological variables were examined. Subsequent primary research should facilitate the examination of additional variables.

Conclusion

The meta-analyses provide an ability to generalize from previous primary research about the consequences of MO. As discussed in the introduction, our potential goals materialized. MO affects firm performance and has behavioral consequences. These impacts survived the test of multiple contexts for studies of MO, enhancing our confidence in the generalizability of its impact on companies' performance. Moreover, managerially important and as yet untested, MO's positive impact on performance might be greater than previously assumed because of its indirect impact on performance through organizational commitment and *esprit de corps*. These positive impacts were established across studies and appear to be relatively robust. Thus, managers should expect more from investing in implementing and strengthening a MO in their organizations.

References

Appriah-Adu, K. (1997), "Market orientation and performance: do the findings established in large firms hold in the small business sector?", *Journal of Euromarketing*, Vol. 6 No. 3, pp. 1-26.

Avlonitis, G.J. and Gounaris, S.P. (1997), "Marketing orientation and company performance", *Industrial Marketing Management*, Vol. 26 No. 1, pp. 385-402.

Avlonitis, G.J., Athanasios, K. and Gounaris, S.P. (1992), "Company performance: does marketing orientation matter?", in Grunerk, K.G. (Ed.), *Marketing for Europe*, European Marketing Academy, Aarhus, pp. 83-94.

Balakrishnan, S. (1996), "Benefits of customer and competitive orientations in industrial markets", *Industrial Marketing Management*, Vol. 25 No. 4, pp. 257-69.

Barney, J. (1991), "Firm resources and sustained competitive advantage", *Journal of Management*, Vol. 17 No. 1, pp. 99-120.

Becker, J. and Homburg, C. (1999), "Market-oriented management: a systems-based perspective", *Journal of Market-Focused Management*, Vol. 4 No. 1, pp. 17-41.

Bhuian, S.N. (1997), "Exploring market orientation in banks: an empirical examination in Saudi Arabia", *Journal of Services Marketing*, Vol. 11 No. 5, pp. 317-28.

Bloemer, J., de Ruyter, K. and Wetzels, M. (1998), "Customer loyalty in a service setting", in Englis, B.G. and Olofsson, A. (Eds), *European Advances in Consumer Research*, Vol. 3, Association for Consumer Research, Provo, UT, pp. 162-9.

Breman, P. and Dalgic, T. (1998), "The learning organization and market orientation: a study of export companies in The Netherlands", in Ford, J.B. and Honeycutt, E.D. (Eds), *Developments in Marketing Science*, Academy of Marketing Science, Coral Gables, FL, pp. 214-31.

Breman, P. and Dalgic, T. (2000), "Exporting firms, the learning organization and market orientation: a conceptual and empirical investigation of Dutch exporters", in Japrak, A. and Tutek, H. (Eds), *Advances in International Marketing. Vol. 10: Globalization, The Multinational Firm and Emerging Economies*, JAI Press, Greenwich, CT.

Cadogan, J.W. and Diamantopoulos, A. (1995), "Narver and Slater, Kohli and Jaworski and the market orientation construct: integration and internationalization", *Journal of Strategic Marketing*, Vol. 3 No. 1, pp. 41-60.

Cadogan, J.W. and Diamantopoulos, A. (1999), "Measuring market orientation in an export content: some preliminary findings", working paper, University of Wales, Cardiff.

Cadogan, J.W., Diamantopoulos, A. and de Mortanges, C.P. (1999), "A measure of export market orientation: scale development and cross-cultural validation", *Journal of International Business Studies*, Vol. 30 No. 4, pp. 689-707.

Cartwright, D. (1968), "The nature of group cohesiveness", in Cartwright, D. and Zander, A. (Eds), *Group Dynamics: Research and Theory*, Harper & Row, New York, NY, pp. 91-109.

Caruana, A., Ramaseshan, B. and Ewing, M.T. (1997), "Market orientation and organizational commitment in the Australian public sector", *International Journal of Public Sector Management*, Vol. 10 No. 4, pp. 294-303.

Caruana, A., Ramaseshan, B. and Ewing, M.T. (1998), "Do universities that are more market-oriented perform better?", *International Journal of Public Sector Management*, Vol. 11 No. 1, pp. 55-70.

Cohen, A. (1993), "Organizational commitment and turnover: a meta-analysis", *Academy of Management Journal*, Vol. 36 No. 5, pp. 1140-58.

Deng, S. and Dart, J. (1994), "Measuring market orientation: a multi-factor, multi-item approach", *Journal of Marketing Management*, Vol. 10 No. 8, pp. 725-42.

Deshpandé, R. and Farley, J.U. (1998), "Measuring market orientation: generalization and synthesis", *Journal of Market-Focused Management*, Vol. 2 No. 3, pp. 213-32.

Deshpandé, R. and Farley, J.U. (2000), "Market-focused organizational transformation in China", *Journal of Global Marketing*, Vol. 14 Nos 1/2, pp. 7-35.

Deshpandé, R., Farley, J.U. and Webster, F.E. Jr (1997), "Factors affecting organizational performance: a five-country comparison", working paper, Marketing Science Institute, Report 97-108, Cambridge, MA.

Deshpandé, R., Farley, J.U. and Webster, F.E. Jr (2000), "Triad lessons: generalizing results on high performance firms in five business-to-business markets", *International Journal of Research in Marketing*, Vol. 17 No. 2, pp. 353-62.

Diamantopoulos, A. and Cadogan, J.W. (1996), "Internationalizing the market orientation construct: an in-depth interview approach", *Journal of Strategic Marketing*, Vol. 4 No. 1, pp. 23-52.

Diamantopoulos, A. and Hart, S. (1993), "Linking market orientation and company performance: preliminary evidence on Kohli and Jaworski's framework", *Journal of Strategic Marketing*, Vol. 1 No. 1, pp. 93-121.

Dubinski, A.J., Howell, R.D., Ingram, T.N. and Bellenger, D.N. (1986), "Salesforce socialization", *Journal of Marketing*, Vol. 50 No. 4, pp. 192-207.

Dunham, R.B. and Pierce, J.L. (1989), *Management*, Scott, Foresman and Co., Glenview, IL.

Farley, J.U., Lehmann, D.R. and Ryan, M.J. (1982), "Patterns in parameters of buyer behavior models: generalizing from sparse replication", *Marketing Science*, Vol. 1 No. 2, pp. 181-204.

Fritz, W. (1996), "Market orientation and corporate success: findings from Germany", *European Journal of Marketing*, Vol. 30 No. 8, pp. 59-74.

George, J.M. and Bettenhausen, K. (1990), "Understanding pro-social behavior, sales performance, and turnover: a group-level analysis in a service context", *Journal of Applied Psychology*, Vol. 75 No. 4, pp. 698-709.

Geyskens, I., Steenkamp, J-B. and Kumar, N. (1999), "A meta-analysis of satisfaction in marketing channel relationships", *Journal of Marketing Research*, Vol. 36 No. 2, pp. 223-38.

Golden, P.A., Doney, P.M., Johnson, D.M. and Smith, J.R. (1995), "The dynamics of a marketing orientation in transition economies: a study of Russian firms", *Journal of International Marketing*, Vol. 3 No. 2, pp. 29-49.

Grant, K. and Cravens, D.W. (1999), "Examining the antecedents of sales organization effectiveness: an Australian study", *European Journal of Marketing*, Vol. 33 Nos 9/10, pp. 945-57.

Greenberg, J. and Baron, R.A. (1997), *Behavior in Organizations*, Prentice-Hall, Upper Saddle River, NJ.

Greenley, G.E. (1995), "Market orientation and company performance: empirical evidence from UK companies", *British Journal of Management*, Vol. 6 No. 1, pp. 1-13.

Gruen, T.W., Summers, J.O. and Acito, F. (2000), "Relationship marketing activities, commitment, and membership behaviors in professional associations", *Journal of Marketing*, Vol. 64 No. 3, pp. 34-49.

Harris, L.C. (2000), "The organizational barriers to developing market orientation", *European Journal of Marketing*, Vol. 34 Nos 5/6, pp. 598-624.

Harris, L.C. and Ogbonna, E. (1999), "Developing a market-oriented culture: a critical evaluation", *Journal of Management Studies*, Vol. 36 No. 2, pp. 177-96.

Hedges, L.V. and Olkin, I. (1985), *Statistical Methods for Meta-analysis*, Academic Press, Orlando, FL.

Homburg, C. and Pflesser, C. (1999), "A multiple layer model of market-oriented organizational culture: measurement issues and performance outcomes", paper presented at the Winter Conference of the American Marketing Association, St Petersburg, FL.

Hulland, J. (1995), "The influence of strategic orientation on market orientation: a preliminary assessment", *Marketing Theory and Applications*, Vol. 3 No. 3, pp. 347-54.

Jaworski, B.J. and Kohli, A.A. (1993), "Market orientation: antecedents and consequences", *Journal of Marketing*, Vol. 57 No. 3, pp. 53-70.

Jewell, L.N. and Reitz, H.J. (1981), *Group Effectiveness in Organizations*, Scott, Foresman and Company, Glenview, IL.

Knight, G.A. and Dalgic, T. (2000), "Market orientation, marketing competence, and the international performance of the firm", paper presented at the Summer American Marketing Association Conference, Orlando, FL, November.

Kohli, A.A. and Jaworski, B.J. (1990), "Market orientation: the construct, research propositions, and managerial implications", *Journal of Marketing*, Vol. 54 No. 2, pp. 1-18.

Kohli, A.A., Jaworski, B.J. and Kumar, A. (1993), "MARKOR: a measure of market orientation", *Journal of Marketing Research*, Vol. 30 No. 4, pp. 467-77.

Lusch, R.F. and Laczniak, G.R. (1987), "The evolving marketing concept, competitive intensity and organizational performance", *Journal of the Academy of Marketing Science*, Vol. 15 No. 3, pp. 1-11.

Michaels, R.E., Cron, W.L., Dubinsky, A.J. and Joachimsthaler, E.A. (1988), "Influence of formalization on the organizational commitment and work alienation of salespeople and industrial buyers", *Journal of Marketing Research*, Vol. 25 No. 4, pp. 376-83.

Moorman, C. (1995), "Organizational market information processes: cultural antecedents and new product outcomes", *Journal of Marketing Research*, Vol. 32 No. 3, pp. 318-35.

Mowday, R.T., Porter, L.W. and Steers, R.M. (1982), *Employee Organization Linkages: The Psychology of Commitment, Absenteeism, and Turnover*, Academic Press, New York, NY.

Narver, J.C. and Slater, S.F. (1990), "The effect of a market orientation on business profitability", *Journal of Marketing*, Vol. 54 No. 4, pp. 20-35.

O'Reilly, C. and Chatman, J. (1986), "Organizational commitment and psychological attachment: the effects of compliance, identification, and internalization on prosocial behavior", *Journal of Applied Psychology*, Vol. 71 No. 8, pp. 492-9.

Pelham, A.M. (1997), "Mediating influences on the relationship between market orientation and profitability in small industrial firms", *Journal of Marketing Theory and Practice*, Vol. 5 No. 3, pp. 55-76.

Pelham, A.M. (1999), "Influence of environment, strategy, and market orientation on performance in small manufacturing firms", *Journal of Business Research*, Vol. 45 No. 1, pp. 33-46.

Pelham, A.M. and Wilson, D.T. (1996), "A longitudinal study of the impact of market structure, firm structure, strategy, and market orientation culture on dimensions of small-firm performance", *Journal of the Academy of Marketing Science*, Vol. 24 No. 1, pp. 27-43.

Porter, L.W., Steers, R.M., Mowday, R.T. and Boulain, R.V. (1974), "Organizational commitment, job satisfaction, and turnover among psychiatric technicians", *Journal of Applied Psychology*, Vol. 59 No. 3, pp. 603-9.

Porter, M.E. (1991), "Towards a dynamic theory of strategy", *Strategic Management Journal*, Vol. 12 No. 5, pp. 95-117.

Prahalad, C.K. and Hamel, G. (1990), "The core competence of the corporation", *Harvard Business Review*, Vol. 68 No. 3, pp. 79-91.

Randall, R.M., Fedor, D.P. and Longenecker, C.O. (1990), "The behavioral expression of organizational commitment", *Journal of Vocational Behavior*, Vol. 36 No. 2, pp. 210-24.

Rose, G.M. and Shoham, A. (2002), "Export performance and market orientation: establishing an empirical link", *Journal of Business Research*, Vol. 55 No. 3, pp. 217-25.

Ruekert, R.W. (1992), "Developing a market orientation: an organizational strategy perspective", *International Journal of Research in Marketing*, Vol. 9 No. 2, pp. 225-45.

Sandvik, K. and Gronhaug, K. (1998), "How well does the firm know its customers? The moderating effect of market orientation", in Grewal, D. and Pechmann, C. (Eds), *Marketing Theory and Applications*, Vol. 9, American Marketing Association, Chicago, IL, pp. 42-8.

Sargeant, A. and Mohamad, M. (1999), "Business performance in the UK hotel sector – does it pay to be market-oriented?", *The Service Industries Journal*, Vol. 19 No. 3, pp. 42-59.

Scherer, F. and Ross, D. (1990), *Industrial Market Structures and Economic Performance*, Houghton-Mifflin, Boston, MA.

Schlegelmilch, B.B. and Ram, S. (2000), "The impact of organizational and environmental variables on strategic market orientation: an empirical investigation", *Journal of Global Marketing*, Vol. 13 No. 3, pp. 111-27.

Selnes, F., Jaworski, B.J. and Kohli, A.K. (1996), "Market orientation in United States and Scandinavian companies: a cross-cultural study", *Scandinavian Journal of Management*, Vol. 12 No. 2, pp. 139-57.

Shaw, M.E. (1981), *Group Dynamics: The Dynamics of Small Group Behavior*, McGraw-Hill, New York, NY.

Shoham, A. and Rose, G.M. (2001), "Marketing orientation: a replication and extension", *Journal of Global Marketing*, Vol. 14 No. 4, pp. 2-25.

Siguaw, J.A., Brown, G. and Widing, I.I. (1994), "The influence of the market orientation of the firm on salesforce behavior and attitudes", *Journal of Marketing Research*, Vol. 31 No. 2, pp. 106-16.

Sin, L.Y.M., Tse, A.C.B., Yau, O.H.M., Lee, J.S.Y., Chow, R. and Lau, L.B.Y. (2000), "Market orientation and business performance: an empirical study in mainland China", *Journal of Global Marketing*, Vol. 14 No. 3, pp. 5-29.

Slater, S.F. and Narver, J.C. (1994), "Does competitive environment moderate the market orientation-performance relationship?", *Journal of Marketing*, Vol. 58 No. 1, pp. 46-55.

Slater, S.F. and Narver, J.C. (1995), "Market orientation and the learning organization", *Journal of Marketing*, Vol. 59 No. 3, pp. 63-74.

Slater, S.F. and Narver, J.C. (1996), "Competitive strategy in the market-focused business", *Journal of Market-Focused Management*, Vol. 1 No. 2, pp. 159-74.

Somers, M.J. (1995), "Organizational commitment, turnover, and absenteeism: an examination of direct and interaction effects", *Journal of Organizational Behavior*, Vol. 16 No. 1, pp. 49-58.

Steers, R.M. (1977), "Antecedents and outcomes of organizational commitment", *Administrative Science Quarterly*, Vol. 22 No. 1, pp. 46-56.

Steers, R.M. and Porter, L.W. (1979), *Motivation and Work Behavior*, McGraw-Hill, New York, NY.

Tett, R.P. and Meyer, J.P. (1993), "Job satisfaction, organizational commitment, turnover intention, and turnover: path analysis based on meta-analytical findings", *Personnel Psychology*, Vol. 46 No. 2, pp. 259-74.

Wernerfelt, B. (1984), "A resource-based view of the firm", *Strategic Management Journal*, Vol. 5 No. 2, pp. 171-80.

Zeithaml, V.A., Berry, L.L. and Parasuraman, A. (1988), "Communication and control processes in the delivery of service quality", *Journal of Marketing*, Vol. 52 No. 2, pp. 35-48.

Further reading

Atuahene-Gima, K. (1995), "An exploratory analysis of the impact of a market orientation on new product performance: a contingency approach", *Journal of Product Innovation Management*, Vol. 12 No. 4, pp. 275-93.

Au, A.K.M. and Tse, A.C.B. (1995), "The effect of marketing orientation on company performance in the service sector: a comparative study of the hotel industry in Hong Kong and New Zealand", *Journal of International Consumer Marketing*, Vol. 8 No. 2, pp. 77-87.

Bonoma, T.V. and Clark, B.H. (1988), *Marketing Performance Assessment*, Harvard Business School, Boston, MA.

Cadogan, J.W. and Diamantopoulos, A. (1997), "Developing a measure of export market orientation: scale construction and cross-cultural validation", *Proceedings of the European Marketing Academy*, Vol. 26, pp. 232-51.

Gray, B., Matear, S., Boshoff, C. and Matheson, P. (1998), "Developing a better measure of market orientation", *European Journal of Marketing*, Vol. 32 Nos 9/10, pp. 884-903.

Hamel, G. (1996), "Strategy as revolution", *Harvard Business Review*, Vol. 74 No. 4, pp. 69-82.

Horng, S. and Chen-Hsui, A. (1998), "Market orientation of small and medium-sized firms in Taiwan", *Journal of Small Business Management*, Vol. 36 No. 3, pp. 79-85.

Levitt, T. (1960), "Marketing myopia", *Harvard Business Review*, Vol. 38 No. 1, pp. 45-56.

Van, D.L., Graham, J.W. and Dienesch, R.M. (1994), "Organizational citizenship behavior: construct redefinition, measurement, and validation", *Academy of Management Journal*, Vol. 37 No. 3, pp. 765-802.

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16. Jorge F. B. Lengler,, Carlos M. P. Sousa and, Catarina MarquesExamining the relationship between market orientation and export performance: The moderating role of competitive intensity 75-102. [Abstract] [Full Text] [PDF] [PDF]

17. Jorge Francisco Lengler, Carlos M.P. Sousa, Catarina Marques. 2013. Exploring the linear and quadratic effects of customer and competitor orientation on export performance. *International Marketing Review* **30**:5, 440-468. [Abstract] [Full Text] [PDF]

18. Mitchell Ross, Debra Grace, Wei Shao. 2013. Come on higher ed ... get with the programme! A study of market orientation in international student recruitment. *Educational Review* **65**, 219-240. [CrossRef]

19. Omotayo Oyeniyi. 2013. Organizational commitment and market orientation of Nigerian non-oil exporting companies. *African Journal of Economic and Management Studies* **4**:1, 95-108. [Abstract] [Full Text] [PDF]

20. Rok Škrinjar, Peter Trkman. 2013. Increasing process orientation with business process management: Critical practices'. *International Journal of Information Management* **33**, 48-60. [CrossRef]

21. Paul Chad. 2013. Extending the use of market orientation: Transforming a charity into a business. *Australasian Marketing Journal (AMJ)* **21**, 10-16. [CrossRef]

22. Paul Chad, Judy Motion, Elias Kyriazis. 2013. A Praxis Framework for Implementing Market Orientation Into Charities. *Journal of Nonprofit & Public Sector Marketing* **25**, 28-55. [CrossRef]

23. Paul Chad, Elias Kyriazis, Judy Motion. 2013. Development of a Market Orientation Research Agenda for the Nonprofit Sector. *Journal of Nonprofit & Public Sector Marketing* **25**, 1-27. [CrossRef]

24. Birgit Hagen, Antonella Zucchella, Paola Cerchiello, Nicolò De Giovanni. 2012. International strategy and performance—Clustering strategic types of SMEs. *International Business Review* **21**, 369-382. [CrossRef]

25. Mostaque Ahmed Zebal, David R. Goodwin. 2012. Market orientation and performance in private universities. *Marketing Intelligence & Planning* **30**:3, 339-357. [Abstract] [Full Text] [PDF]

26. Jesús J. Cambra-Fierro, Susan Hart, Yolanda Polo-Redondo, Ana Fuster-Mur. 2012. Market and learning orientation in times of turbulence: relevance questioned? An analysis using a multi-case study. *Quality & Quantity* **46**, 855-871. [CrossRef]

27. Liem Viet Ngo, Aron O'Cass. 2011. The relationship between business orientations and brand performance. *Asia Pacific Journal of Marketing and Logistics* **23**:5, 684-713. [Abstract] [Full Text] [PDF]

28. Jesús J Cambra-Fierro, Susan Hart, Ana Fuster Mur, Yolanda Polo Redondo. 2011. Looking for performance: How innovation and strategy may affect market orientation models. *Innovation: Management, Policy & Practice* **13**, 154-172. [CrossRef]

29. David C. Roach. 2011. The impact of product management on SME firm performance. *Journal of Research in Marketing and Entrepreneurship* **13**:1, 85-104. [Abstract] [Full Text] [PDF]

30. Henri Hakala. 2011. Strategic Orientations in Management Literature: Three Approaches to Understanding the Interaction between Market, Technology, Entrepreneurial and Learning Orientations. *International Journal of Management Reviews* **13**, 199-217. [CrossRef]

31. T. Ramayah, Nusrah Samat, May-Chiun Lo. 2011. Market orientation, service quality and organizational performance in service organizations in Malaysia. *Asia-Pacific Journal of Business Administration* **3**:1, 8-27. [Abstract] [Full Text] [PDF]

32. Henri Hakala, Marko Kohtamäki. 2011. Configurations of entrepreneurial- customer- and technology orientation. *International Journal of Entrepreneurial Behaviour & Research* **17**:1, 64-81. [Abstract] [Full Text] [PDF]

33. Carlos M.P. Sousa, Jorge LenglerExamining the determinants of interfunctional coordination and export performance: An investigation of Brazilian exporters 189-206. [Abstract] [Full Text] [PDF] [PDF]
34. Arieh Goldman, Amir Grinstein. 2010. Stages in the development of market orientation publication activity. *European Journal of Marketing* **44**:9/10, 1384-1409. [Abstract] [Full Text] [PDF]
35. HENRI HAKALA, MARKO KOHTAMÄKI. 2010. THE INTERPLAY BETWEEN ORIENTATIONS: ENTREPRENEURIAL, TECHNOLOGY AND CUSTOMER ORIENTATIONS IN SOFTWARE COMPANIES. *Journal of Enterprising Culture* **18**, 265-290. [CrossRef]
36. Mohammed A Mahmoud, Adelaide Kastner, Joseph Yeboah. 2010. Antecedents, environmental moderators and consequences of market orientation: A study of pharmaceutical firms in Ghana. *Journal of Medical Marketing* **10**, 231-244. [CrossRef]
37. Jing Zhang, Yanling Duan. 2010. Empirical study on the impact of market orientation and innovation orientation on new product performance of Chinese manufacturers. *Nankai Business Review International* **1**:2, 214-231. [Abstract] [Full Text] [PDF]
38. Barbara Sen. 2010. Theory, research and practice in library management 8. *Library Management* **31**:4/5, 344-353. [Abstract] [Full Text] [PDF]
39. Yung-Chul Kwon. 2010. Market orientation of Korean MNC subsidiaries and their performance in the Chinese and Indian markets. *International Marketing Review* **27**:2, 179-199. [Abstract] [Full Text] [PDF]
40. Yangcheng HuThe Impact of Market Orientation on Knowledge Management: An Empirical Investigation in China 432-435. [CrossRef]
41. Ezatollah Asgharizadeh, Amir Ekhlassi, Pedram ToloeiEvaluation of the Relationship Between Electronic-Marketing and Market-Driven Companies 168-172. [CrossRef]
42. Óscar González-Benito, Javier González-Benito, Pablo A. Muñoz-Gallego. 2009. Role of entrepreneurship and market orientation in firms' success. *European Journal of Marketing* **43**:3/4, 500-522. [Abstract] [Full Text] [PDF]
43. Carmen Otero-Neira, Martti Tapio Lindman, María J. Fernández. 2009. Innovation and performance in SME furniture industries. *Marketing Intelligence & Planning* **27**:2, 216-232. [Abstract] [Full Text] [PDF]
44. Michele O'Dwyer, Ann Ledwith. 2009. Determinants of new product performance in small firms. *International Journal of Entrepreneurial Behaviour & Research* **15**:2, 124-136. [Abstract] [Full Text] [PDF]
45. Anthony Foley, John Fahy. 2009. Seeing market orientation through a capabilities lens. *European Journal of Marketing* **43**:1/2, 13-20. [Abstract] [Full Text] [PDF]
46. Chittipa Ngamkroeckjoti, Mark Speece. 2008. Technology turbulence and environmental scanning in Thai food new product development. *Asia Pacific Journal of Marketing and Logistics* **20**:4, 413-432. [Abstract] [Full Text] [PDF]
47. David Martín-Consuegra, Arturo Molina, Águeda Esteban. 2008. Market driving in retail banking. *International Journal of Bank Marketing* **26**:4, 260-274. [Abstract] [Full Text] [PDF]
48. Hanny N. Nasution, Felix T. Mavondo. 2008. Organisational capabilities: antecedents and implications for customer value. *European Journal of Marketing* **42**:3/4, 477-501. [Abstract] [Full Text] [PDF]
49. N. Gladson Nwokah. 2008. Strategic market orientation and business performance. *European Journal of Marketing* **42**:3/4, 279-286. [Abstract] [Full Text] [PDF]

50. Fredric Kropp, Noel J. Lindsay, Aviv Shoham. 2008. Entrepreneurial orientation and international entrepreneurial business venture startup. *International Journal of Entrepreneurial Behaviour & Research* **14**:2, 102-117. [Abstract] [Full Text] [PDF]

51. José Carlos Pinho. 2008. TQM and performance in small medium enterprises. *International Journal of Quality & Reliability Management* **25**:3, 256-275. [Abstract] [Full Text] [PDF]

52. Amir Grinstein. 2008. The relationships between market orientation and alternative strategic orientations. *European Journal of Marketing* **42**:1/2, 115-134. [Abstract] [Full Text] [PDF]

53. David Martín-Consuegra, Águeda Esteban. 2007. Market orientation and business performance: An empirical investigation in the airline industry. *Journal of Air Transport Management* **13**, 383-386. [CrossRef]

54. Fredric Kropp, Noel J. Lindsay, Aviv Shoham. 2006. Entrepreneurial, market, and learning orientations and international entrepreneurial business venture performance in South African firms. *International Marketing Review* **23**:5, 504-523. [Abstract] [Full Text] [PDF]

55. Valter Afonso VieiraDo Market Orientation and Innovation Improve Organizational Performance? 57-75. [CrossRef]

56. Felipe Uribe Saavedra, Josep Rialp Criado, Joan Llonch AndreuIs Social Media Marketing Really Working? 174-193. [CrossRef]

57. Felipe Uribe Saavedra, Josep Rialp Criado, Joan Llonch AndreuIs Social Media Marketing Really Working? 1260-1279. [CrossRef]