What is the Predictive Power of Market Orientation?

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Abstract

The majority of studies on market orientation claim that compelling evidence exists that market orientation has a positive effect on business performance. This study takes a closer look at forty studies that have addressed the relationship between market orientation and business performance in the past thirteen years. The results show that there is no unequivocal evidence as to *if* and *when* market orientation has a positive impact on business performance. There is however some unequivocal proof, albeit limited, on *how* market orientation influences business performance. These findings are unsettling for academics and managers because market orientation is the foundation of marketing strategy.

Introduction

Market orientation is a business culture that: (1) places the highest priority on the profitable creation and maintenance of superior value for customers while considering the interest of other stakeholders, and; (2) provides norms for behaviours regarding the organisational generation of, dissemination of, and responsiveness to market information (Deshpandé, Farley & Webster 1993; Kohli & Jaworski 1990; Narver & Slater 1990). Moreover, Hunt & Morgan (1995) state that a market-oriented culture produces a position of sustainable competitive advantage and, thus, superior long-run financial performance. In line with this reasoning researchers have extensively pursued an understanding of the link between market orientation and business performance in the past twelve years. These studies have, in general, claimed that market orientation has positive effects on business performance (e.g., Jaworski & Kohli 1993; Narver & Slater 1994). Not surprisingly, the interest in the assumed positive relationship between market orientation and business performance has ostensibly remained steadfast for its apparent predictive power with regard to business performance (Matsuno, Mentzer & Özsomer 2002).

A closer look at the results of the body of empirical research on the relationship between market orientation and business performance reveals however that the predictive power of market orientation is still an open question (Deshpandé & Farley 1998). For example, Ruekert (1992) and Slater & Narver (1994) find a positive direct relationship, Hart & Diamantopolous (1993) and Han, Kim & Srivastava (1998) report no direct relationship, while Jaworski & Kohli (1993) and Narver & Slater (1990) encounter mixed results. These inconsistencies are unsettling, because they suggest that being market-oriented, a good management practice and the foundation of marketing strategy formulation and execution, may not always be beneficial for a firm. This contention is an unnerving one for managers who believe in market orientation: know the market, share the market information and act on it (Jaworski & Kohli 1993). The purpose of this study is therefore to investigate the predictive power of market orientation with regard to business performance. To this end we examine forty key studies that have addressed the relationship between market orientation and business performance in the past thirteen years. The descriptive work reported here is in the spirit of meta-analysis, and helps shape the field by directing researchers' attention towards research issues that really add to the existing knowledge on market orientation.

Measuring market orientation

Homburg & Pflesser (2000) distinguish two complementary perspectives on market orientation: behavioural and cultural. The *behavioural* stream of research describes market orientation in terms of specific behaviours related to the organisation-wide generation of market intelligence pertaining to current and future customer needs, dissemination of this intelligence across departments and organisation-wide responsiveness to it (Kohli & Jaworski 1990). Key features in this view are a focus on markets, an emphasis on a specific form of inter-functional co-ordination and a focus on activities related to information processing. To measure market orientation from this behavioural perspective Jaworski & Kohli (1993) developed a scale that was later labelled MARKOR by Kohli, Jaworski & Kumar (1993). This 20-item scale was constructed using non-linear factor analysis of matched samples of senior marketing and non-marketing executives from 222 strategic business units. The MARKOR scale is shown in appendix A.

The *cultural* stream describes market orientation as a culture that commits the organisation to the continuous creation of superior value for customers (Deshpandé, Farley & Webster 1993; Narver & Slater 1990). This culture creates an environment that maximises opportunities for learning about markets, for sharing information among functions in the organisation that allows for common interpretations, and for taking co-ordinated actions (Slater & Narver 1994). The result is an integrated effort on the part of employees and across departments in an organisation to create superior value for customers, which, in turn, gives rise to superior business performance. Narver & Slater (1998, p.235) emphasised the importance of the cultural perspective in comparison to the behavioural approach: “If a market orientation were simply a set of activities completely disassociated from the underlying belief system of an organisation, then whatever an organisation’s culture, a market orientation could easily be implanted by the organisation any time. But such is not what one observes.” For example, one study indicated that only 36% of a sample of UK firms has embraced a comprehensive market orientation (Greenley 1995a).

Homburg & Pflesser (2000) notice that research within the cultural perspective, although based on a cultural definition of market orientation, has typically measured market orientation in terms of behaviours. For example, Narver & Slater (1990, p.20-21) define market orientation as “the business culture that most effectively and efficiently creates superior value for customers”, but they measure market orientation through three behavioural components (i.e., customer orientation, competitor orientation and interfunctional co-ordination) that constitute “the activities of market information acquisition and dissemination and the co-ordinated creation of customer value." To measure these activities Narver & Slater (1990) developed a 15-item factor-weighted scale, which was tested on split samples of 371 self-administered questionnaires from top managers of 113 strategic business units of a single corporation. Similarly, Deshpandé, Farley & Webster (1993, p.27) define market orientation as "the set of beliefs that puts the customer's interest first, while not excluding those of all other stakeholders …. in order to develop a long term profit", but developed a 9-item behavioural market orientation scale using results from a study of 138 Japanese executives. The scales developed by Narver & Slater (1990) and Deshpandé, Farley & Webster (1993) are shown in appendices B and C.

More recently, Deshpandé & Farley (1998, p.226) defined market orientation as "the set of cross-functional processes and activities directed at creating and satisfying customers through continuous needs-assessment". To measure market orientation they developed the MORTN summary scale. This scale was synthesised from the three existing scales by Kohli, Jaworski & Kumar (1993), Narver & Slater (1990) and Deshpandé, Farley & Webster (1993), in a study of eight European and nineteen US companies. The MORTN scale is shown in appendix D.

In summary, scholars designate being market-oriented as an important factor that creates a setting conducive for behaviours by employees throughout the organisation. These congruent behaviours are directed at the continuous creation of superior value for customers that leads to superior business performance.

Market orientation and business performance

In line with this reasoning, and using the scales previously described, researchers have pursued an understanding of the link between market orientation and business performance by investigating: (1) a *direct* relationship (e.g., Pelham 1999; Ruekert 1992); (2) a *moderated* link (e.g., Greenley 1995b; Pelham 1997), and; (3) a *mediated* relationship (e.g., Baker & Sinkula

1999b; Han, Kim & Srivastava 1998). Table 1 provides a summary of key studies that have addressed the relationship between market orientation and business performance.

<< Table 1 about here >>

Studies investigating a direct relationship: The overview reveals thirty-nine studies that have investigated the direct influence of market orientation on ninety indicators of business performance.[1] Together these studies reveal sixty-one (67.8%) positive effects of market orientation on measures of business performance, twenty-seven (30.0%) non-significant effects, and two (2.2%) negative effects. For example, Ruekert (1992) and Slater & Narver (1994) find positive effects, Han, Kim & Srivastava (1998) and Greenley (1995b) reports no effects, while Grewal & Tansuhaj (2001) encounter negative effects. Thus, we conclude that the evidence on the *direct* business performance impact of market orientation is, at least, equivocal.

It is important to note that these irregularities in effects occur *within* and *across* studies. Within Appiah-Adu's (1998) study, for instance, market orientation is positively related to growth in market share, profit margins and overall performance, but not to new product success. Likewise, within Selnes, Jaworski & Kohli's (1996) study market orientation has a positive effect on overall performance, but not on market share. Looking across studies Slater & Narver (1994), for example, report a positive effect of market orientation on ROA, but Slater & Narver (1996) report no link between market orientation and ROA. Similarly, Harris (2001) reports no effect of market orientation on organisational performance, while Harris & Ogbonna (2001) report a positive link between market orientation and business performance.

[1] Nineteen (48.7%) studies report positive effects, ten (25.6%) studies report non-significant effects, two (5.1%) studies negative effects, and eight (20.5%) studies report mixed effects.

Table 2 compares the findings across studies that use different scales to measure market orientation. The findings show that the study that uses the MORTN scale by Deshpandé & Farley (1998) reports the highest share (100.0%), and that studies applying Deshpandé, Farley & Webster's (1993) scale report the lowest share (37.5%) of positive relationships between market orientation and measures of business performance. These two scales have, however, rarely been used to measure market orientation. The results also reveal that the two most frequently used scales to measure market orientation, those of Kohli, Jaworski & Kumar (1993) and Narver & Slater (1990), report similar shares of positive links between market orientation and measures of business performance. In studies that apply the MARKOR scale 69.6% of the total number of effects is positive, 26.1% of the effects is non-significant, and remarkably, 4.3% is negative. In studies that utilise Narver & Slater's (1990) scale 65.9% of the effects is positive, 31.8% is non-significant, and 2.3% is negative. Research that employs adaptations of one or more of the well-established scales, reports that 84.6% of the effects found is positive and only 15.4% is non-significant. Thus we conclude that the predictive power is dependent upon the scale used to measure market orientation.

<< Table 2 about here >>

Table 3 summarises context-specific differences in the findings in the link between market orientation and performance. The results illustrate clearly that the few studies conducted in continental Europe (100%) and the Middle East and Asia (82.4%) report the highest shares of positive links between market orientation and measures of business performance. The findings reveal that the many studies carried out in the US report that 67.6% of the effects is positive. Remarkably, the results show that the studies performed in the UK report the lowest share (28.6%) of positive relationships. In cross-national research 66.7% of the total number of effects is positive and 33.3% is non-significant. Thus we conclude that the predictive power of market orientation is context-dependent.

<< Table 3 about here >>

Table 4 illustrates sample-related differences in the results. The findings show that studies that use a single-corporation survey report the highest share (85.7%) of positive relationships between market orientation and business performance, while research that makes use of a dyad or quadrad survey reports the lowest share (14.3%) of positive effects. Studies that use a cross-sectional survey (71.0%) or a single-industry survey (70.0%) report similar shares of positive effects between market orientation and business performance. In the one study that utilises a longitudinal approach 75.0% of the effects is positive and 25.0% is non-significant. Thus we conclude that the predictive power of market orientation is dependent upon the sample used to investigate the effect of market orientation on business performance.

<< Table 4 about here >>

Table 5 compares the results of studies using a single-informant or a multi-informant approach. The findings reveal that studies that use a single-informants approach report a higher share (71.2%) of positive effects between market orientation and business performance than studies that use a multiple-informants method (58.3%). This is perhaps not remarkable, because the use of multi-informants allows for a more thorough analysis of validity and measurement error issues. Thus, we conclude that the predictive power is dependent upon the number of informants used to measure market orientation.

<< Table 5 about here >>

Studies investigating a moderated relationship: The equivocal nature of the direct performance impact of market orientation has stimulated researchers to look for moderating effects to understand *when* market orientation has a positive effect on business performance. For example, two conceptual studies suggest that potential market-level and firm-specific factors moderate the strength of the relationship between market orientation and business performance (Day & Wensley 1988; Kohli & Jaworski 1990). In line with this reasoning a number of researchers have empirically investigated the moderating effect of market-level (e.g., market turbulence, technological turbulence and competitive intensity) and firm-specific (e.g., strategy type) factors on the relationship between market orientation and business performance (e.g., Greenley 1995; Jaworski & Kohli 1993; Matsuno & Mentzer 1998). Table 6 summarises the results of these studies.[2]

<< Table 6 about here >>

The findings reveal that the moderating effects of specific market-level factors are inconsistent *across* studies. For example, studies investigating the moderating effect of market turbulence report two (22.2%) positive, three (33.3%) non-significant, and one (11.1%) negative monotonic (i.e., linear) moderating effect. These studies also report three (33.3%) non-monotonic (i.e., non-linear) moderating effects. Likewise, research examining the moderating effect of technological turbulence reports one (14.3%) positive, four (57.1%) non-significant, one (14.3%) negative monotonic, and one (14.3%) non-monotonic effect. Similar inconsistencies are found for the moderating effects of competitive intensity (two positive, four non-significant, one negative and

[2] It is important to note that the direct positive effect of market orientation on business performance is somewhat suppressed in studies that simultaneously investigate the moderating effects of market-level and firm-specific factors. Together these ten studies report twelve (54.5%) positive, nine (40.9%) non-significant, and one (4.6%) negative relationships. The twenty-four studies that only investigate the direct effect of market orientation on business performance report forty-eight positive (77.4%), thirteen (21.0%) non-significant and one negative (1.6%) relationships.

two non-monotonic) and market growth (one non-significant and one negative). Thus we conclude that the findings on the moderating influence of market-level factors on the link between market orientation and business performance are, at least, equivocal. The findings also show that one firm-specific factor (i.e., strategy type) has a non-monotonic moderating effect on the link between market orientation and business performance.

The irregularities in moderating effects occur regardless which scale is used to measure market orientation. For instance, Subramanian & Gopalakrishna (2001) use Narver & Slater's (1990) scale to register no moderating effects for competitive hostility and market turbulence. In contrast, Harris (2001), also employing Narver & Slater's (1990) scale, reports non-monotonic moderator effects for competitive hostility and market turbulence. Likewise, Jaworski & Kohli (1993) report no moderating effect for market turbulence, but Homburg & Plesser (2000), also using the MARKOR-scale, show that market dynamism positively moderates the relationship between market orientation and business performance. Thus we conclude that the irregularities in the moderating effects are independent from the scale used to measure market orientation.

Studies investigating a mediating effect: The inconsistencies in studies looking for *if* (i.e., direct effect) and *when* (i.e., moderating effect) market orientation has positive effects on business performance have induced researchers to examine *how* market orientation influences business performance. It is important to investigate this mediating mechanism through which market orientation affects business performance, because it would inform managers about the organisational traits through which they can influence business performance. In search of these mediating factors researchers have focused on: (1) customer relationship indicators (Siguaw, Baker & Sinkula 1998); (2) firm effectiveness (Pelham 1997), and; (3) innovation (Baker &

Sinkula 1999b; Han, Kim & Srivastava 1998). Table 7 summarises the results of these studies.[3]

<< Table 7 about here >>

The findings show that the relationship indicator of customers' trust in suppliers positively mediates the link between market orientation and business performance. In contrast, the indicator of customers' willingness to co-operate with suppliers negatively mediates this relationship (Siguaw, Simpson & Baker 1998). The results also show that firm effectiveness (i.e., the effectiveness of marketing strategy in terms of new product success, relative product quality and customer retention) positively mediates the effect of market orientation on sales growth/market share and profitability. Thus, Pelham (1997, p.67) concludes that "firms seeking to enhance market-oriented behaviours should see the most immediate consequences in more effective new product development, improved relative quality, and improved customer retention". The studies investigating the mediating effect of product quality and innovation reinforce this conclusion by revealing that: (1) product quality partially and positively mediates the link between market orientation and business performance (Chang & Cheng 1995); (2) organisational innovativeness completely and positively mediates the relationship between market orientation and business performance (Han, Kim & Srivastava 1998), and that; (3) the link between market orientation and organisational performance is completely and positively mediated by innovation success Baker & Sinkula 1999b). These findings seem to substantiate Gatignon and Xuereb's (1997) suggestion that although being market-oriented may lead to general benefits for the firm's marketing activities, the ability to develop and market innovations may be critical. Which

[3] It is valuable to know that the direct positive effect of market orientation on business performance is strongly suppressed in studies that investigate the mediating effects of relationship indicators, firm effectiveness, product quality and innovation. Together these five studies report six (16.7%) positive and five (83.3%) non-significant relationships. Studies that only investigate the direct effect of market orientation on business performance report, as mentioned earlier, forty-eight positive (77.4%), thirteen (21.0%) non-significant and one negative (1.6%) relationships.

innovation activities convert a market orientation into innovation success remains unknown. This is important however, as it would inform managers about activities through which they can influence innovation success, and hence business performance, as is evidenced by reports of returns of innovation accounting for 50% or more of corporate revenues (Han, Kim & Srivastava 1998). Thus we conclude that there is some unequivocal proof, albeit limited, on how market orientation influences business performance.

Conclusion

From a theoretical point of view the literature argues that market orientation provides a unifying focus of individual and departmental efforts in the delivery of value to customers while also providing a comparative impetus with competitors' activities (Jaworski & Kohli 1993; Narver & Slater 1990). Therefore, a market-oriented firm is more likely to achieve high levels of customer satisfaction, keep existing customers loyal, attract new customers, and subsequently attain the desired level of growth, market share and hence organisational performance (Homburg & Pflesser 2000). To test this contention we examined the performance impact of market orientation in forty key studies that used well-known scales developed by Kohli, Jaworski & Kumar (1993), Narver & Slater (1990), Deshpandé, Farley & Webster (1993), and Deshpandé & Farley (1998) to measure market orientation. Our review reveals that the evidence revealing *if* and *when* market orientation has positive effects on business performance is, at least, equivocal. There is however limited unequivocal evidence on *how* market orientation influences business performance, namely through innovation (Baker & Sinkula 1999b; Han, Kim & Srivastava 1998). Thus we conclude that despite claims made in the literature such as:

- "with considerable confidence, one can say there exists a positive relationship between market orientation and performance" (Narver & Slater 1998, p.235).
- "compelling evidence exists that market orientation leads to positive business performance" (Matsuno, Mentzer & Özsomer 2002, p.18).

the overall issue of predictive power of market orientation is, after thirteen years of extensive research, still an open question.

Implications for research

The findings of our study raise a variety of interesting research issues such as the following:

(1) Why is it that market orientation is not always positively correlated to business performance?

(2) What are the inter-scale and intra-scale characteristics of the well-established scales to measure market orientation?

(3) Do subjective and objective measures of business performance suffice for gauging the impact of market orientation on organisational performance?

(4) Why is the effect of market orientation on business performance not robust across various contexts (e.g., countries, industries, markets and firms)?

(5) Could it be that only firms with a superior business performance can afford, but not always choose to, to develop a market orientation?

(6) How does market orientation affect business performance in cross-national longitudinal research designs?

(7) What kind of organisational activities encourage and reward market-oriented behaviours?

The impetus to answer these questions comes from a number of sources, not the least of which is managers' impatience to know for sure *if*, *when* and *how* market orientation influences business performance.

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Table 1:
The effect of market orientation on measures of business performance

Study:	Empirical basis:	Measure of market orientation:	Direct effect of market orientation on measures of business performance:*	Moderating or mediating effect:
1. Appiah-Adu & Ranchod (1998)	Single industry survey of 62 UK firms in the bio-industry.	Narver & Slater (1990)	Significantly positive for: - Growth in market share, profit margins, overall performance Not significant for: - New product success	Not investigated
2. Avlonitis & Gounaris (1997)	Cross-sectional survey of 444 Greek industrial, consumer and services firms.	Jaworski & Kohli (1993)	Significantly positive for: - Profits, annual turn-over, ROI, market share	Not investigated
3. Baker & Sinkula (1999a)	Cross-sectional survey of 411 US manufacturing and non-manufacturing firms.	Jaworski & Kohli (1993)	Significantly positive for: - Change in relative market share, new product success, overall performance	Not investigated
4. Baker & Sinkula (1999b)	Cross-sectional survey of 411 US manufacturing and non-manufacturing firms.	Kohli, Jaworksi & Kumar (1993)	Not significant for: - Organisational performance	Complete positive mediation of MO through: - Product innovation on organisational performance.
5. Bhuian (1998)	Cross-sectional survey of 115 Saudi manufacturing firms.	Jaworski & Kohli (1993)	Significantly positive for: - Organisational performance	Significant positive moderator effect for: - Competitive intensity on MO-organisational performance relationship No significant moderator effect for: - Technological turbulence
6. Caruana, Pitt & Berthon (1999)	Cross-sectional survey of 950 UK service firms.	Jaworski & Kohli (1993)	Not significant for: - Business performance	Not investigated
7. Chan Hung Ngai & Ellis (1998)	Single industry survey of 73 firms in Hong Kong textile and garment industry	Narver & Slater (1990)	Significant positive for: - Growth/share, relative growth/share, relative profitability Not significant for: - Satisfaction with profitability	Not investigated
8. Chang & Chen (1995)	Single industry survey of 116 retail stock brokerage firms in Taiwan.	Narver & Slater (1990)	Significant positive for: - Business performance	Partial positive mediation of MO through: - Product quality

Table 1 (continued)

Study:	Empirical basis:	Measure of market orientation:	Direct effect of market orientation on measures of business performance:*	Moderating or mediating effect:
9. Deshpandé & Farley (1998)	Cross-sectional survey of 82 US and European firms in goods and services industries.	Deshpandé, Farley & Webster (1993)	Significantly <u>positive</u> for: - Narver & Slater's (1990) performance measure - Deshpandé, Farley & Webster's (1993) performance measure	Not investigated
		Kohli, Jaworski & Kumar (1993)	Significantly <u>positive</u> for: - Narver & Slater's (1990) performance measure - Deshpandé, Farley & Webster's (1993) performance measure	
		Narver & Slater (1990)	Significantly <u>positive</u> for: - Narver & Slater's (1990) performance measure - Deshpandé, Farley & Webster's (1993) performance measure	
		Deshpandé & Farley (1998)	Significantly <u>positive</u> for: - Narver & Slater's (1990) performance measure - Deshpandé, Farley & Webster's (1993) performance measure	
10. Deshpandé, Farley & Webster (1993)	Multi-informant (personal) interviews in 50 quadrads in Japan.	Deshpandé, Farley & Webster (1993)	Significantly <u>positive</u> for: - Business performance (customer-reports) <u>Not</u> significant for: - Business performance (self-reports)	Not investigated
11. Deshpandé, Farley & Webster (2000)	Multi-informant (personal) interviews in 148 Japanese, US, English, French and German quadrads.	Deshpandé, Farley & Webster (1993)	<u>Not</u> significant for: - Profits, size, growth, share	Not investigated
12. Gray, Matear, Boshoff & Matheson (1998)	Cross-sectional survey of 490 New Zealand firms.	Adaptation of Jaworski & Kohli (1993) and Narver & Slater (1990)	Significantly <u>positive</u> for: - ROI	Not investigated

Table 1 (continued)

Study:	Empirical basis:	Measure of market orientation:	Direct effect of market orientation on measures of business performance:*	Moderating or mediating effect:
13. Greenley (1995b)	Cross-sectional survey of 240 UK industrial and consumer firms and product and services firms.	Narver & Slater (1990)	Not significant for: - ROI, new product success, sales growth	Significant non-monotonic moderator effect for: - Market turbulence on MO-ROI relationship - Technological change on MO-new product success relationship - Customer power on MO-sales growth relationship No significant moderator effect for: - Market growth
14. Grewal & Tansuhaj (2001)	Cross-sectional survey of 120 Thai firms.	Jaworski & Kohli (1993)	Significantly negative for: - Performance after crisis	Significant negative moderator effect for: - Competitive intensity on MO-performance relationship after crisis Significant positive moderator effect for: - High demand uncertainty on MO-performance relationship after crisis - Technological uncertainty on MO-performance relationship after crisis
15. Han, Kim & Srivastava (1998)	Single industry survey of 134 US banks.	Narver & Slater (1990)	Not significant for: - Business performance	Complete positive mediation of MO through: - Administrative and technical innovations on business performance
16. Harris (2001)	Cross-sectional survey of 241 UK firms.	Narver & Slater (1990)	Not significant for: - Subjective sales growth, objective sales growth, subjective ROI, objective ROI	Significant non-monotonic moderator effect for: - Competitive hostility on MO-sales growth (subjective and objective) relationship. - Market turbulence on MO-ROI (subjective and objective) relationship. No significant moderator effect for: - Technological turbulence
17. Harris & Ogbonna (2001)	Cross-sectional survey of 322 UK firms.	Narver & Slater (1990)	Significantly positive for: - Organisational performance	Not investigated

Table 1 (continued)

Study:	Empirical basis:	Measure of market orientation:	Direct effect of market orientation on measures of business performance:*	Moderating or mediating effect:
18. Harrison-Walker (2001)	Multi-informant cross-sectional survey of 137 US firms in hospitality and manufacturing industry.	Adaptation of Kohli, Jaworski & Kumar (1993)	Not significant for: - Business performance	Not investigated
19. Hart & Diamantopolous (1993)	Cross-sectional survey of 97 UK firms.	Adaptation of Jaworski & Kohli (1993)	Not significant for: - Organisational performance	Significant positive moderating effect for: - Competitive hostility on MO-sales growth relationship
20. Homburg & Pflesser (2000)	Cross-sectional survey of 160 German firms.	Kohli, Jaworski & Kumar (1993)	Significantly positive for: - Financial performance	Significant positive moderator effect for: - Market dynamism on MO-market performance relationship
21. Jaworski & Kohli (1993) sample I	Multi-informant cross-sectional survey of 222 US based SBU's.	Jaworski & Kohli (1993)	Significantly positive for: - Overall performance Not significant for: - Market share	No significant moderator effect for: - Market turbulence - Technological turbulence - Competitive intensity
22. Jaworski and Kohli (1993) sample II	Cross-sectional survey of 230 US firms.	Jaworski & Kohli (1993)	Significantly positive for: - Overall performance Not significant for: - Market share	No significant moderator effect for: - Market turbulence - Technological turbulence - Competitive intensity
23. Langerak (2001a)	Cross-sectional multi-informant survey of 72 Dutch matched sets of suppliers, manufacturers and customers.	Adaptation of Jaworski & Kohli (1993) and Narver & Slater (1990)	Significantly positive for: - Sales growth, profit, NPD-success, ROI	Not investigated
24. Langerak (2001b)	Cross-sectional survey of 72 Dutch matched sets of suppliers, manufacturers and customers.	Adaptation of Jaworski & Kohli (1993) and Narver & Slater (1990)	Significantly positive for: - Financial performance	Not investigated
25. Matsuno & Mentzer (2000)	Cross-sectional survey of 364 US manufacturing firms.	Adaptation of Kohli, Jaworski & Kumar (1993)	Not investigated	Significant non-monotonic moderator effect for: - Strategic type on MO-economic performance relationship
26. Matsuno, Mentzer & Özsomer (2002)	Cross-sectional survey of 364 US manufacturing firms.	Adaptation of Kohli, Jaworski & Kumar (1993)	Significantly positive for: - Market share, ROI, new product sales	Not investigated

Table 1 (continued)

Study:	Empirical basis:	Measure of market orientation:	Direct effect of market orientation on measures of business performance:*	Moderating or mediating effect:
27. Narver & Slater (1990) sample I	Multi-informant survey of 36 SBU's in one US corporation with commodity products.	Narver & Slater (1990)	Significantly <u>negative</u> for: - ROA	Not investigated
28. Narver & Slater (1990) sample II	Multi-informant survey of 74 SBU's in one US corporation with non-commodity products.	Narver & Slater (1990)	Significantly <u>positive</u> for: - ROA	Not investigated
29. Oczkowski & Farrell (1998)	Cross-sectional survey of 237 publicly listed and 190 privately owned Australian firms	Jaworski & Kohli (1993) and Narver & Slater (1990)	Significantly <u>positive</u> for: - Business performance Significantly <u>positive</u> for: - Business performance	Not investigated
30. Pelham (1997)	Cross-sectional survey of 160 US firms with commodity and speciality products.	Narver & Slater (1990)	<u>Not</u> significant for: - Growth/share, profitability	Complete <u>positive</u> mediation of MO through: - Firm effectiveness on growth share and through growth share on profitability
31. Pelham (1999)	Cross-sectional survey of 229 US firms with commodity and speciality products.	Narver & Slater (1990)	Significantly <u>positive</u> for: - Marketing effectiveness, growth/share, profitability, firm growth	Not investigated
32. Pelham & Wilson (1996)	Longitudinal study of 68 US firms in a cross-section of industries.	Narver & Slater (1990)	Significantly <u>positive</u> for: - Relative product quality, new product success, profitability <u>Not</u> significant for: - Growth/share	Not investigated
33. Pitt, Caruana & Berthon (1996)	Cross-sectional survey of 161 UK service firms and 193 Maltese firms.	Kohli, Jaworski & Kumar (1993)	Significantly <u>positive</u> for: - Business performance	Not investigated
34. Ruekert (1992)	Multi-informant survey within five divisions of a single US corporation in computer and information management industries.	Adaptation of Jaworski & Kohli (1993) and Narver and Slater (1990)	Significantly <u>positive</u> for: - Sales revenue growth, profitability	Not investigated

Table 1 (continued)

Study:	Empirical basis:	Measure of market orientation:	Direct effect of market orientation on measures of business performance:*	Moderating or mediating effect:
35. Selnes, Jaworski & Kohli (1996)	Multi-informant cross-sectional survey of 222 US based SBU's and 292 Scandinavian SBU's.	Kohli, Jaworski & Kumar (1993)	Significantly positive for: - Subjective performance Not significant for: - Market share	Not investigated
36. Siguaw, Simpson & Baker (1998)	Dyadic multi-informant survey of 179 of suppliers and wholesalers in US.	Kohli, Jaworski & Kumar (1993)	Not significant for: - Satisfaction with financial performance	Complete positive mediation of MO through: - Trust on satisfaction with performance Complete negative mediation of MO through: - Co-operative norms on satisfaction with performance
37. Slater & Narver (1994)	Multi-informant survey of 107 SBU's within a diversified manufacturing corporation in the US.	Narver & Slater (1990)	Significantly positive for: - ROA, success new products, sales growth	Significant negative moderator effect for: - Market turbulence on MO-ROA relationship - Technological turbulence on MO-NPD-success relationship - Market growth on MO-sales growth relationship No significant moderator effect for: - Competitive hostility
38. Slater & Narver (1996)	Cross-sectional survey of 228 US manufacturing firms.	Narver & Slater (1990)	Significantly positive for: - Sales growth Not significant for: - ROA	Not investigated
39. Slater & Narver (2000)	Multi-informant survey of 53 SBU's of US multi-business corporations.	Narver & Slater (1990)	Significantly positive for: - ROI	Not investigated
40. Subramanian & Gopalakrishna (2001)	Cross-sectional survey of 162 Indian firms in public, private and quasi public sectors.	Narver & Slater (1990)	Significantly positive for: - Growth in revenue, ROC, new product success, customer retention, controlling expenses	No significant moderator effect for: - Competitive hostility, market turbulence, supplier power

* ROI = return on investment; ROA = return on assets; ROC = return on capital

Table 2:
Scale-related differences in the direct effect of market orientation on business performance

Scale used:	Number of times scale used:*	Total number of effects:	Number of significant positive effects:		Number of non-significant effects:		Number of significant negative effects:	
- Narver & Slater (1990)	18	44	29	(65.9%)	14	(31.8%)	1	(2.3%)
- Kohli, Jaworski & Kumar (1993)	14	23	16	(69.6%)	6	(26.1%)	1	(4.3%)
- Deshpandé, Farley & Webster (1993)	3	8	3	(37.5%)	5	(62.5%)	0	(0.0%)
- Deshpandé & Farley (1998)	1	2	2	(100.0%)	0	(0.0%)	0	(0.0%)
- Combined or adapted scale	7	13	11	(84.6%)	2	(15.4%)	0	(0.0%)
	—	—	—		—		—	
Total:	43	90	61	(67.8%)	27	(30.0%)	2	(2.2%)

* A number of studies used more than one scale.

Note: In tables 2 to 5 we include 39 out of 40 studies because Matsuno & Mentzer (2000) did not investigate the direct effect of market orientation on business performance.

Table 3:
Context-related differences in the direct effect of market orientation on business performance

Context:	Number of studies:	Total number of effects:	Number of significant positive effects:		Number of non-significant effects:		Number of significant negative effects:	
- US-based studies	17	34	23	(67.6%)	10	(29.4%)	1	(2.9%)
- UK-based studies	6	14	4	(28.6%)	10	(71.4%)	0	(0.0%)
- European-based studies (excl. UK)	4	10	10	(100.0%)	0	(0.0%)	0	(0.0%)
- Middle east and Asian-based studies	8	17	14	(82.4%)	2	(11.8%)	1	(5.9%)
- More than one country	4	15	10	(66.7%)	5	(33.3%)	0	(0.0%)
	—	—	—		—		—	
Total:	39	90	61	(67.8%)	27	(30.0%)	2	(2.2%)

Table 4:
Sample-related differences in the direct effect of market orientation on business performance

Research approach:	Number of studies:	Total number of effects:	Number of significant positive effects:		Number of non-significant effects:		Number of significant negative effects:	
- Cross-sectional	27	62	44	(71.0%)	17	(27.4%)	1	(1.6%)
- Single industry	4	10	7	(70.0%)	3	(30.0%)	0	(0.0%)
- Single corporation	4	7	6	(85.7%)	0	(0.0%)	1	(14.3%)
- Longitudinal	1	4	3	(75.0%)	1	(25.0%)	0	(0.0%)
- Dyads and quadrads	3	7	1	(14.3%)	6	(85.7%)	0	(0.0%)
Total:	39	90	61	(67.8%)	27	(30.0%)	2	(2.2%)

Table 5:
Informant-related differences in the direct effect of market orientation on business performance

Type of informant:	Number of studies:	Total number of effects:	Number of significant positive effects:		Number of non-significant effects:		Number of significant negative effects:	
- Single informant	27	66	47	(71.2%)	18	(27.3%)	1	(1.5%)
- Multiple informants	12	24	14	(58.3%)	9	(37.5%)	1	(4.2%)
Total:	39	90	61	(67.8%)	27	(30.0%)	2	(2.2%)

Table 6:
Differences in the moderating effects of market-level and firm-specific factors on the relationship between market orientation on business performance

Market-level effects:	Number of studies:*	Total number of effects:	Number of significant positive moderating effects:	Number of non-significant moderating effects:	Number of significant negative moderating effects:	Number of non-monotonic moderator effects:
- Market turbulence, demand uncertainty	9	9	2 (22.2%)	3 (33.3%)	1 (11.1%)	3 (33.3%)
- Technological turbulence, technological uncertainty	7	7	1 (14.3%)	4 (57.1%)	1 (14.3%)	1 (14.3%)
- Customer power	1	1	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (100.0%)
- Market growth	2	2	0 (0.0%)	1 (50.0%)	1 (50.0%)	0 (0.0%)
- Competitive intensity, hostility and rivalry	9	9	2 (22.2%)	4 (44.4%)	1 (11.1%)	2 (22.2%)
- Supplier power	1	1	0 (0.0%)	1 (100.0%)	0 (0.0%)	0 (0.0%)
Firm-specific effects:						
- Strategy type	1	1	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (100.0%)
	—	—	—	—	—	—
Total:	30	30	5 (16.7%)	13 (43.3%)	4 (13.3%)	8 (26.7%)

* Eleven studies investigated the moderating effects of market-level and firm-specific factors on the relationship between market orientation and business performance. Most of these studies incorporated multiple moderating variables. Ten of these eleven studies simultaneously investigated the direct effect of market orientation on business performance.

Table 7:
Differences in the mediating effects of relationship indicators, firm effectiveness, product quality and innovation in the relationship between market orientation on business performance

	Number of studies:	Total number of effects:	Complete positive mediating effect:	Partial positive mediating effect:	Complete negative mediating effect:	Partial negative mediating effect:
- Relationship indicators	1	2	1 (50.0%)	0 (0.0%)	1 (50.0%)	0 (0.0%)
- Firm-effectiveness	1	1	1 (100.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
- Product quality	1	1	0 (0.0%)	1 (100.0%)	0 (0.0%)	0 (0.0%)
- Innovation	2	2	2 (100.0%	0 (0.0%)	0 (0.0%)	0 (0.0%)
	—	—	—	—	—	—
Total:	5	6	4 (66.7%)	1 (16.7%)	1 (16.7%)	0 (0.0%)

Appendix A

The MARKOR scale by Jaworski & Kohli (1993) and Kohli, Jaworski & Kumar (1993)

In responding to the following questions, please focus on your strategic business unit rather than the corporation as a whole. If a question is not applicable please leave a blank.

		Strongly disagree				Strongly agree
1.	In this business unit, we meet with customers at least once a year to find out what products or services they will need in the future.	1	2	3	4	5
2.	In this business unit, we do a lot of in-house market research.	1	2	3	4	5
3.	We are slow to detect changes in our customers' product preferences.[R]	1	2	3	4	5
4.	We poll end users at least once a year to assess the quality of our products and services.	1	2	3	4	5
5.	We are slow to detect fundamental shifts in our industry (e.g., competition, technology, regulation).[R]	1	2	3	4	5
6.	We periodically review the likely effect of changes in our business environment (e.g. regulation) on customers.	1	2	3	4	5
7.	We have interdepartmental meetings at least once a quarter to discuss market trends and developments.	1	2	3	4	5
8.	Marketing personnel in our business unit spend time discussing customers' future needs with other functional departments.	1	2	3	4	5
9.	When something important happens to a major customer or market, the whole business unit knows about it in a short period.	1	2	3	4	5
10.	Data on customer satisfaction are disseminated at all levels in this business unit on a regular basis.	1	2	3	4	5
11.	When one department finds out something important about competitors, it is slow to alert other departments.[R]	1	2	3	4	5
12.	It takes us forever to decide how to respond to our competitors' price changes.[R]	1	2	3	4	5
13.	For one reason or another we tend to ignore changes in our customers' product or service needs.[R]	1	2	3	4	5
14.	We periodically review our product development efforts to ensure that they are in line with what customers want.	1	2	3	4	5
15.	Several departments get together periodically to plan a response to changes taking place in our business environment.	1	2	3	4	5
16.	If a major competitor were to launch an intensive campaign targeted at our customers, we would implement a response immediately.	1	2	3	4	5
17.	The activities of the different departments in this business unit are well coordinated.	1	2	3	4	5
18.	Customer complaints fall on deaf ears in this business unit.[R]	1	2	3	4	5
19.	Even if we came up with a great marketing plan, we probably would not be able to implement it in a timely fashion.[R]	1	2	3	4	5
20.	When we find that customers would like us to modify a product or service, the departments involved make concerted efforts to do so.	1	2	3	4	5

[R] = reversed score

Appendix B

The Narver & Slater (1990) scale

In answering please use the following response scale and place the most appropriate number to the left of each statement. Please respond to all statements.

Not at all	To a very slight extent	To a small extent	To a moderate extent	To a considerate extent	To a great extent	To an extreme extent
1	2	3	4	5	6	7

______	Our salespeople regularly share information within our business concerning competitors' strategies.
______	Our business objectives are driven primarily by customer satisfaction.
______	We rapidly respond to competitive actions that threaten us.
______	We constantly monitor our level of commitment an orientation to serving customers needs.
______	Our top managers from every function regularly visit our current and prospective customers.
______	We freely communicate information about our successful and unsuccessful customer experiences across all business functions.
______	Our strategy for competitive advantage is based on our understanding of customers needs.
______	All of our business functions (e.g. marketing/sales, manufacturing, R&D, finance/accounting, etc.) are integrated in serving the needs of our target markets.
______	Our business strategies are driven by our beliefs about how we can create greater value for our customers.
______	We measure customer satisfaction systematically and frequently.
______	We give close attention to after-sales service.
______	Top management regularly discusses competitors' strengths and strategies.
______	All of our managers understand how everyone in our business can contribute to creating customer value.
______	We target customers where we have an opportunity for competitive advantage.
______	We share resources with other business units.

Appendix C

The Deshpandé, Farley & Webster (1993) scale

The statements below describe norms that operate your business. Please indicate your extent of agreement about how well the statements describe the actual norms in your business (circle one number for each line).

		Strongly disagree				Strongly agree
1.	We have routine or regular measures of customer service.	1	2	3	4	5
2.	Our product and service development is based on good market and customer information.	1	2	3	4	5
3.	We know our competitors well.	1	2	3	4	5
4.	We have a good sense of how our customers value our products and services.	1	2	3	4	5
5.	We are more customer focused that our competitors.	1	2	3	4	5
6.	We compete primarily based on product or service differentiation.	1	2	3	4	5
7.	The customer's interest should always come first, ahead of the owners.	1	2	3	4	5
8.	Our product/services are the best in the business.	1	2	3	4	5
9.	I believe this business exists primarily to serve customers.	1	2	3	4	5

Appendix D

The MORTN scale by Deshpandé & Farley (1998)

The statements below describe norms that operate your business. Please indicate your extent of agreement about how well the statements describe the actual norms in your business (circle one number for each line).

		Strongly disagree				Strongly agree
1.	Our business objectives are driven primarily by customer satisfaction.	1	2	3	4	5
2.	We constantly monitor our level of commitment and orientation to serving customer needs.	1	2	3	4	5
3.	We freely communicate information about our successful and unsuccessful customer experiences across al business functions.	1	2	3	4	5
4.	Our strategy for competitive advantage is based on our understanding of customers' needs.	1	2	3	4	5
5.	We measure customer satisfaction systematically and frequently.	1	2	3	4	5
6.	We have routine measures or regular measures of customer service.	1	2	3	4	5
7.	We are more customer focused than our competitors.	1	2	3	4	5
8.	I believe that business exists primarily to service customers.	1	2	3	4	5
9.	We poll end users at least once a year to assess the quality of our products and services.	1	2	3	4	5
10.	Data on customer satisfaction are disseminated at all levels in this business unit on a regular basis.	1	2	3	4	5

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