

The Positive Effect of a Market Orientation on Business Profitability: A Balanced Replication

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Narver and Slater's (1990) finding of a positive relationship between market orientation and business profitability is retested in a broad sample of product and service businesses operating in a variety of industries. The assessment of the extent of market orientation is provided by the chief marketing officer, and profitability is assessed by the general manager, thus avoiding the problem of common respondent bias. The analysis of the influence of culture on business performance is extended by including a measure of entrepreneurial orientation in the study. The influence of a market orientation on business profitability is then compared with that of an entrepreneurial orientation. The regression coefficient for market orientation (.662) is higher in this replication than in the original study (.501), and the pairwise correlation coefficient for the relationship between market orientation and profitability is very similar in both studies (.362 and .345, respectively). No relationship is found between entrepreneurial orientation and business profitability. Thus, by drawing a sample from a more diverse population, avoiding the common respondent bias problem, and comparing the effect of a market orientation to that of an entrepreneurial orientation, the findings from this balanced replication increase confidence in the importance and generalizability of the market orientation–profitability relationship found in the 1990 Narver and Slater study. J BUSN RES 2000. 48.69–73. © 2000 Elsevier Science Inc. All rights reserved.

Market orientation is the business culture that produces outstanding performance through its commitment to creating superior value for customers. The values and beliefs implicit in this culture encourage: (1) continuous cross-functional learning about customers' expressed and latent needs and about competitors' capabilities and strategies; and (2) cross-functionally coordinated action to create and exploit the learning (e.g., Shapiro, 1988; Deshpande and

Webster, 1989; Day, 1990, 1994a; Kohli and Jaworski, 1990; Narver and Slater, 1990; Slater and Narver, 1995). In the first rigorous study of the effect of a market orientation on business performance, Narver and Slater (1990) developed a measure of market orientation based on the organizational behaviors of customer orientation, competitor orientation, and inter-functional coordination. They found a significant relationship between market orientation and return on investment (ROI) in a sample of business units belonging to one corporation operating in the forest products industry. As an indicator of the importance of this study, by August 1996 the Social Sciences Citation Index showed 43 references to it and it is frequently cited in both marketing management and marketing strategy texts (e.g., Boyd, Walker, and Larreche, 1995; Kotler, 1996; Kotler and Armstrong, 1994; Walker, Boyd, and Larreche, 1995) and in tradebooks (e.g., Barabba and Zaltman, 1991).

However, another study did not show the same results. In two broad samples of businesses, Jaworski and Kohli (1992) found no relationship between their measure of market orientation and managers' assessments of either ROE or market share. The finding of no results in a broad sample is troubling, because it raises concerns about the generalizability of Narver and Slater's (1990) result.

The Narver and Slater (1990) study also has two important research design limitations. But using business units from one corporation as their sampling frame, Narver and Slater gained access to entire top management teams in the subject strategic business units (SBUs), thus increasing confidence in the reliability of their measures (Huber and Power, 1985; Slater, 1995). However, increased confidence in the internal validity of the study comes at the expense of external validity (i.e., generalizability of the findings). It is possible, based on the Narver and Slater study, that the market orientation–profitability relationship is corporation- or industry-specific. Another limitation of the Narver and Slater study concerns common respondent bias, because all of their measures are averages of the responses

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from all of the informants in each SBU. Thus, the study uses the same source for its assessments of both market orientation and performance.

Balanced replications that combine exact replications of major study conditions with the manipulation of additional substantive and/or methodological variables are an important means for increasing the confidence in previous findings (Sawyer and Peter, 1983). This balanced replication retests Narver and Slater's (1990) hypothesis using the control variables that were significant in the earlier study, but it uses a broad sample of businesses and also uses different respondents' assessment of market orientation and business performance in a business unit to address the limitations in the original study. Thus, the first hypothesis:

- H1. Market orientation and business profitability are positively related.

Entrepreneurial Orientation and Business Performance

We further extend the original study by considering the influence of entrepreneurial orientation on profitability. It could be argued that a market orientation, with its focus on understanding latent needs, is inherently entrepreneurial (Kohli and Jaworski, 1990). However, Hamel and Prahalad (1994, p. 83) warn that a market focus, even one that is concerned with uncovering latent needs, may miss the emergence of new markets or segments. Others (e.g., Hayes and Wheelwright, 1984; Brown, 1991) argue that a market orientation coupled with traditional market research techniques cannot avoid focusing the company's efforts on the expressed needs of customers, leading to incremental line extensions instead of innovative new products.

Where a market orientation is primarily concerned with learning from various forms of contact with customers and competitors in the market (Narver and Slater, 1990; Day, 1994a), entrepreneurship is primarily concerned with learning from experimentation (Dickson, 1992). Furthermore, an entrepreneurial orientation encompasses such values and behaviors as innovativeness, risk taking, and competitive aggressiveness (Lumpkin and Dess, 1996), which are not explicit in a market orientation. Thus, entrepreneurial values may enhance the prospects for developing a breakthrough product or identifying an unserved market segment, both of which are fertile ground for developing competitive advantage (Hamel and Prahalad, 1994). Webster (1994, p. 14) argues that managers must create, "an overwhelming predisposition toward entrepreneurial and innovative responsiveness to a changing market." In practice, a market orientation and entrepreneurial values should complement each other (Slater and Narver, 1995).

This study extends the research on the relationship between business culture (i.e., market orientation and entrepreneurial

orientation) and performance by introducing another substantive variable and assessing whether the amount of explained variation in performance is increased when entrepreneurial orientation is added to the model. Accordingly, the second hypothesis:

- H2: Entrepreneurial orientation and business profitability are positively related.

Research Design

Sample

The data were collected from 53 single-business corporations of SBUs of multibusiness corporations in three western cities by teams of MBA students from Strategic Management and Marketing Strategy classes. Responses represent a wide variety of businesses (53% product, 47% service).

Data Collection

Questionnaires were completed by the general manager, chief marketing officer, and chief human resources management officer in each business. Each respondent provided information about a unique set of constructs, described in the Measures subsection. This was done to avoid concern about common respondent bias in survey research of this type. The drawback to this type of research design is that, because it requires the cooperation of multiple informants in a business, it requires personal contact, which limits the number of businesses that can be included in the sample.

Several items were on two or more questionnaires to assess inter-rater reliability. We included responses from all informants in our initial calculation of coefficient α and found that neither the α for the market orientation scale nor the α for the entrepreneurial orientation scale dropped below .7, indicating adequate inter-rater agreement. A variety of scaling techniques, described in the Measures subsection, were used to reduce the possibility of common method bias.

Measures

We used existing scales with demonstrated measurement properties for the market orientation (Narver and Slater, 1990) and entrepreneurial orientation (Naman and Slevin, 1993) constructs. We refer you to the cited sources for additional information about these measures. GM means the general manager is the primary informant, and MK refers to the chief marketing officer. Responses from the chief human resources (HR) officer were used to assess inter-rater reliability.

MARKET ORIENTATION (MK). We exclude two items from the original scale, one of which was concerned with inter-SBU relationships that are not relevant to this study, and both of which had item-to-total correlations of less than .4 with their respective subscales in Narver and Slater (1990). The resultant

13-item measure uses a 1 (not descriptive) to 5 (very descriptive) Likert-type scale ($\alpha = 0.77$). We conducted an exploratory factor analysis of the data and found three interpretable factors (all with eigenvalues greater than 1.0) that closely correspond to the customer orientation, competitor orientation, and interfunctional coordination dimensions that Narver and Slater hypothesized. Cronbach's α s for the subscales are 0.77, 0.40, and 0.61, respectively.

ENTREPRENEURIAL ORIENTATION (MK). Naman and Slevin's (1993) 7-item measure uses a 1 (not descriptive) to 5 (very descriptive) Likert-type scale ($\alpha = 0.75$).

PERFORMANCE (GM). The general manager was asked to assess "the return on investment of your business over the past 3 years relative to your primary competitors in your principal market" on a 1 to 5 scale from "far below" to "far exceeds." Subjective measures of performance are frequently used in strategy research and have been shown to be reliable and valid (Dess and Robinson, 1984).

Control Variables

We include the following control variables that were related to performance ($p < 0.05$) in Narver and Slater's (1990) regression model. Theory (e.g., Porter, 1980; Scherer, 1980) suggests that these variables can affect business performance.

RELATIVE SIZE (GM). This was assessed with a 1–7 semantic differential scale from "one of the largest" to "one of the smallest" in our principal market.

RELATIVE COST POSITION (GM). This was assessed with a 1–5 scale from "very bad" to "very good."

COMPETITOR CONCENTRATION (MK). This was assessed with a 1–7 semantic differential scale from "The four largest competitors in this industry account for a very large proportion of total industry sales" to "The four largest competitors in this industry account for a very small proportion of total industry sales."

MARKET GROWTH (GM). This was assessed on a 1–7 semantic differential scale from "no growth" to "demand growth is very high."

BUYER POWER (MK). This was measured with a 1–7 semantic differential scale from "Buyers are price takers" a "Buyers have substantial bargaining power."

TECHNOLOGICAL CHANGE (MK). This was measured with a 1–7 semantic differential scale from "The production/service technology is well established and not subject to very much change" to "The modes of production/service change often and in a major way."

Analysis and Results

Table 1 contains descriptive statistics and a correlation matrix for the independent variables. Following Narver and Salter (1990) and Jaworski and Kohli (1992), the hypotheses were

tested with a multiple regression model employing the previously described independent variables. Because the power of a statistical test to reject a null hypothesis correctly is largely determined by sample size (Sawyer and Ball, 1981, p. 275), both OLS and stepwise regression were used because of the large number of independent variables and the relatively small sample. Stepwise regression searches for the set of variables that best explains variation in the data (Neter, Wasserman, and Kutner, 1983). An inspection of the scatter diagram showed no outliers with respect to the market orientation–profitability relationship (Table 2).

Discussion and Conclusions

Hypothesis 1, market orientation and business profitability are positively related, is supported by both the OLS ($p < 0.05$) and stepwise regression results ($p < 0.01$), despite the relatively small sample. As Sawyer and Peter (1983, p. 124) contend, because we would expect virtually always to find a significant result in a study with high statistical power (i.e., a large sample), "researchers should have more confidence in the study with the smaller sample." In this study, market orientation is the only significant predictor of profitability in either equation.

Further supporting Narver and Slater's (1990) result is the finding that the regression coefficient for market orientation in this study (0.662 in the OLS model and 0.737 in the stepwise model) is somewhat higher than the coefficient found in the earlier study (0.501). The smaller adjusted R^2 s in this study than in the Narver and Slater study may be attributable to the diversity of businesses in the sample (Slater, 1995) and the lack of explanatory power provided by the set of control variables, not because of a weaker relationship between market orientation and profitability. In fact, the measure of bivariate association, the Pearson correlation coefficient, was 0.345 in Narver and Slater and is 0.362 in this study, providing further evidence that this relationship is robust across industry boundaries. And, according to Sawyer and Ball (1981), the R^2 s are in the range that is often considered theoretically important in social science research. We believe that the present findings reinforce Narver and Slater's conclusion (1990, p. 34) that, "after controlling for important market-level and business-level influences, market orientation and performance are strongly related."

Surprisingly, entrepreneurial values do not add to the explanatory power of the model; thus, *H2* is not supported. One possible explanation is that entrepreneurial orientation has an indirect effect on profitability, operating through product development or market development. If that is the case, measures of new product success or sales growth would be more likely to be directly affected by entrepreneurial orientation than would a measure of profitability. It is also possible that entrepreneurial orientation has a delayed effect on profitability. In that case, a cross-sectional design, such as the one employed in this study, may not detect the effect. We must also recognize the difficulty

Table 1. Descriptive Statistics and Correlation Coefficients

Variables	Mean SD	MKTOR	ENTREP	RSIZE	RCOST	COMPC	MKGRO	BUYPOW	TECHCHG	ROI
Market orientation	3.30 (0.664)	1.00								
Entrepreneurial orientation	3.24 (0.814)	0.515 ^a	1.00							
Relative size	5.19 (1.84)	0.248 ^c	0.113	1.00						
Relative cost	3.06 (1.15)	0.285 ^b	0.273 ^b	-0.087	1.00					
Competitor concentration	3.30 (2.06)	-0.056	0.002	-0.081	0.114	1.00				
Market growth	4.55 (1.50)	0.098	0.367 ^a	-0.226 ^c	0.282 ^b	0.064	1.00			
Buyer power	4.26 (1.57)	0.117	0.004	-0.071	-0.136	-0.144	-0.242 ^c	1.00		
Technology change	4.30 (1.95)	0.107	0.078	0.193	-0.119	0.116	-0.071	-0.008	1.00	
ROI	3.26 (1.20)	0.362 ^a	0.167	0.117	0.240 ^c	0.092	0.014	-0.099	0.188	1.00

^a $p \leq 0.01$.^b $p \leq 0.05$.^c $p \leq 0.10$, two-tailed tests.

of detecting a significant relationship in a study with low statistical power. Understanding how entrepreneurial values influence business effectiveness and the nature of their relationship with market orientation (there is a 0.52 correlation between entrepreneurial orientation and market orientation) is an important area for future research.

This balanced replication increases our confidence in the existence of a positive relationship between market orientation and business profitability. Using responses from a broad cross section of businesses and using different informants to supply information about the independent variables and the dependent variable, a result that is very similar to the Narver and

Table 2. Regression Coefficients/(Standard Errors)

Variable	Narver and Slater (1990)	OLS w/o ENTREP	OLS w/o MKTO	OLS w/ENTREP & MKTO	STEPWISE
Market orientation	0.501 ^b (0.223)	0.661 ^b (0.306)	na	0.696 ^b (0.343)	0.737 ^a (0.238)
Entrepreneurial orientation	na	na	0.162 (0.233)	-0.057 (0.250)	
Relative size	0.192 ^b (0.082)	-0.002 (0.095)	0.044 (0.098)	0.000 (0.097)	
Relative cost	-0.583 ^a (0.114)	0.174 (0.154)	0.258 (0.157)	0.177 (0.157)	
Competitor concentration	0.030 (0.119)	0.034 (0.080)	0.025 (0.083)	0.034 (0.080)	
Market growth	-0.305 ^a (0.086)	-0.070 (0.117)	-0.070 (0.131)	-0.060 (0.127)	
Buyer power	-0.104 (0.206)	-0.096 (0.109)	-0.057 (0.113)	-0.094 (0.111)	
Technology change	-0.280 ^b (0.127)	0.098 (0.085)	0.113 (0.089)	0.100 (0.086)	
Adjusted R ²	0.410	0.080	0.00	0.061	0.114
F value	na	1.65	0.97	1.42	7.68 ^a

DV = Return on investment.

n = 53.

^a $p \leq 0.01$.^b $p \leq 0.05$.

na = not available.

Slater (1990) result (magnitude of regression coefficients and correlations between market orientation and profitability) is found. Furthermore, market orientation, as a component of business culture, seems to be more important than an entrepreneurial orientation.

Future Research on Market Orientation

This study provides additional support for the importance of a market orientation. A significant research objective is to identify the organizational processes that take full advantage of a market-oriented culture. For example, Day (1994b, p. 41) suggests that successfully implementing a market orientation requires developing, “superior market-sensing, customer-linking, and channel-bonding capabilities.” These three areas alone represent an interesting line for future research. How do we measure them? Does a market-sensing capability look different in a high-tech industrial market than it does in a consumer packaged-goods market? Are all of these capabilities required to obtain the maximum benefit from a market orientation? Slater and Narver (1995) suggest that market orientation is one component in the architecture of a learning organization. Does a market orientation lead to a superior learning capability? What other organizational capabilities are required to optimize organizational learning? These, and many other issues concerning how businesses operationalize a market-oriented culture remain to be explored.

In conclusion, we believe that this replication provides strong support for the existence of a positive relationship between market orientation and performance. Future research should focus on the processes for developing and reinforcing a market-oriented culture and for implementing it through organizational structure, systems, capabilities, and strategies.

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