Information Utilization, Marketing Planning, and Marketing Performance: A Study of New Zealand Manufacturers

Anne L. Souchon and John W. Cadogan
Loughborough University Business School,

David B. Procter
Telecom, Auckland, New Zealand

Ian N. Lings
University of Technology Sydney, Australia

Abstract

While marketing information use is often cited as a critical facet of decision-making and a key denominator of competitive firms, little empirical evidence currently exists on its relationship with organizational performance. This study addresses this gap by examining the mediating role that marketing planning plays in the information use-performance relationship. A structured questionnaire was administered to New Zealand manufacturers, and 253 useable mail responses were obtained. Measures were tested using exploratory and confirmatory factor analyses, and hypotheses were tested via moderated hierarchical regression. Findings indicate that instrumental/conceptual use of information and interfunctional coordination are positively related to marketing planning effectiveness, while the latter is negatively related to symbolic use of information. In turn, marketing planning effectiveness was found to be positively linked to organizational performance. Conclusions are drawn and future research avenues proposed.

Keywords: marketing information use, planning effectiveness, performance, New Zealand

Introduction

In the current information-intensive business environment, information utilization is regarded as an integral part of decision-making and indeed a critical factor in the achievement of organizational success (e.g., Deshpandé and Zaltman, 1984; Souchon et al., 2003; Toften and Olsen, 2004). Early studies on the use of marketing information were concerned with the identification of its key antecedents (Deshpandé and Zaltman, 1982). Since then, multi-dimensional conceptualizations of marketing information use have been proposed (Menon and Varadarajan, 1992), measures have been developed (Menon and Wilcox, 2001), and certain outcomes have been examined (Moorman, 1995).

While our understanding of information use has certainly increased since the 1980s, little evidence exists of the relationship between utilization of information when making marketing decisions and business performance. As a result, marketing academics are currently in a weak position to provide clear practical guidelines to marketing managers on how to make the most of the (often expensive) information collected.

In an effort to begin addressing this issue, we examine the indirect relationship between marketing information use and organizational performance. In the next section of the paper the conceptual framework is presented. An explanation of the methodology employed then

follows. Next, the results are outlined, and the paper concludes with a discussion of the findings and directions for further research.

Conceptualization

Information use is the process by which information is considered when decisions are being made (e.g., Moorman et al., 1992). Conceptualized as a multi-dimensional construct since the 1970s, recent marketing studies have delineated two main facets of it, namely instrumental/conceptual and symbolic use (e.g., Diamantopoulos and Souchon, 1999), which go beyond a simple examination of the extent to which information is used.

Instrumental/conceptual use refers to the rational application of marketing information to solve specific problems, or to enhance the marketing department's overall knowledge of market situations and procedures (Souchon et al., 2003). Symbolic use, on the other hand, pertains to marketers' more political treatment of information in response to a hidden personal agenda (Knorr, 1977).

All other things being equal, instrumental/conceptual use of marketing information should be positively related to performance (Souchon and Diamantopoulos, 1996). However, little empirical research has succeeded in identifying a direct relationship between the two. Given the relevance, or indeed application, of information use to the decision-making process, it is likely that 'good' (or rational) use of information will result in better decisions which will, *in turn*, result in higher performance levels (Richey and Myers, 2001). Here, we conceptualize optimal decision-making as marketing planning effectiveness, to incorporate both planning and implementation concepts (in a similar vein to the 'responsiveness' dimension of market orientation adopted in many studies, see Kohli and Jaworski, 1990). As explained by Sashittal and Jassawalla (2001) strategic outcomes are derived from the *interaction* of planning and implementation processes, which should not be considered as two separate entities.

However, an increasingly prevalent situation under which decision-makers find themselves is one of information overload (Bardin and Majer, 1983). The quality of decision-making can be adversely affected by the provision of excess amounts of information (Piercy and Lane, 1996). Thus, an information-overloaded decision-maker may treat information rationally and take it into account for its own sake, but may, for example, select the wrong information to apply under time-constraints (Glazer et al., 1992). This would then shift the likelihood of making optimal decisions. As a result, we expect that:

H1: The link between instrumental/conceptual use of marketing information and marketing planning effectiveness is moderated by information overload. When information overload is absent or low, the link is positive. As information overload increases, the link becomes negative.

An increasingly large number of marketing scholars advocate interfunctional coordination (or the ability for the diverse organizational departments to work closely together) as a key factor in the successful development of marketing plans or strategy (Deshpandé and Webster, 1989; Cravens, 1998; Noble and Mokwa, 1999; Rapert et al., 2002). As Tadepalli and Avila (1999, p. 69) explain, "marketing strategy formulation, implementation, and evaluation in a market oriented organization needs to be carried out with the explicit understanding that inter-functional cooperation is essential along with the concomitant organizational and managerial antecedents". Thus, for rational (i.e., instrumental/conceptual) information use to be effective

and lead to higher quality decisions, it has to occur within an integrated internal business environment, where the various functional areas are involved in the decision-making process. We anticipate the following:

H2: The link between instrumental/conceptual use of marketing information and marketing planning effectiveness is specified by interfunctional coordination. When interfunctional coordination is low, the link is weaker. As interfunctional coordination increases, the link strengthens.

Symbolic use of marketing information entails the more political ways in which information can be applied (Vyas and Souchon, 2003). For example, information running against preconceived ideas may be distorted to support those ideas. However, the market-driven organization seeking sustainable competitive advantage would clearly have more to gain by *learning* from counter-intuitive information rather than by ignoring it or manipulating it (c.f., Day, 1994). Given that the ability to learn is at the heart of the successful marketing organization (Baker and Sinkula, 1999), and that by definition, symbolic use is an antithesis to learning (c.f., Feldman and March, 1981), we expect that:

H3: Symbolic use of marketing information is negatively related to marketing planning effectiveness.

An increasing body of empirical support exists for the link between planning/implementation and performance (Jaworski and Kohli, 1993). Sashittal and Jassawalla (2001, p. 51) state that "planning and implementation processes interact strongly, and their interaction – more than the intrinsic quality of either – shapes market behaviours of the firm and affect strategic outcomes". However, frequent environmental changes in industry competitors, regulations, or customer needs increase the need for the firm's ability to plan adequately (Richey and Myers, 2001, p. 338). The relationship between marketing orientation, or marketing planning, and organizational performance is unlikely to be stable across all environmental circumstances (Greenley, 1995). In fact, it has been found that the degree of stability of the external environment could render the development of marketing oriented plans unnecessarily costly and redundant (Cadogan et al., 2002). Thus, we expect that:

H4: The link between marketing planning effectiveness and organizational performance is moderated by environmental turbulence. When environmental turbulence is low, the link is negative. As environmental turbulence increases, the link becomes positive.

Methodology

In order to test the hypotheses, a mail survey of marketing managers and managing directors/CEOs of manufacturing companies in New Zealand was conducted. The questionnaire was pretested using peer review, debriefing, protocols and a pilot study, and revised according to the issues that arose. The sample frame used for this study was Atlantis Group. A total of 1126 marketing decision-makers were sent the questionnaire. After follow-up, 253 usable questionnaires were returned. An analysis of reasons for non-response revealed ineligibility to be the most common explanation (e.g., the firm was no longer in operation). An effective response rate (Daniel and Terrell, 1986) was calculated accordingly and was found to be 28%. A comparison of early versus late respondents was undertaken via t-tests on all the variables included in the analysis to assess potential non-response bias (Armstrong and

Overton, 1977). None of the results were significant, indicating a probable lack of non-response bias.

In developing the questionnaire, most items were drawn from the literature (e.g., O'Reilly, 1980; Sivaramakrishnan and Perkins, 1992; Souchon and Diamantopoulos, 1997; Cadogan et al., 1999; Jaworski and Kohli, 1993, 1996; Ruekert and Walker, 1987; Greenley and Foxall, 1998; Kohli and Kumar, 1993; Slater and Narver, 1994), as well as discussions with marketing decision-makers. For example, information overload was partly drawn from a study by Souchon and Diamantopoulos (1997), while overall marketing planning effectiveness was mostly captured using respondents' in-vivo statements.

All analyses conducted in this study (measure development and hypothesis testing) were undertaken on a consistent sample of 219 cases (with no missing values). In order to develop and purify the measures to be used in the testing of the hypotheses, principal axis factoring (PAF) and confirmatory factor analysis (CFA) were conducted. An additional post-hoc test for common method bias, a Harman's (1976) one-factor test, was performed following the approach described by Podsakoff et al. (1984) and Schriesheim (1979). All of the self-report items were entered into a principal components factor analysis with varimax rotation. According to this technique, if a single-factor emerges from the factor analysis or one-factor accounts for more than 50% of the variance in the variables, common method variance is present (Mattila and Enz, 2002). The hypotheses were then tested via regression. In the case of testing for the existence of moderating variables, hierarchical moderated regression analysis was used (Sharma et al., 1981), and variables of interest were mean-centred to avoid multicollinearity.

Results and Discussion

The fit indices for the CFA were all within or above acceptable standards (RMSEA = .03, GFI = .86, NNFI = .93, CFI = .94), and both composite reliabilities and average variance extracted were above the minimum threshold required (c.f., Bagozzi and Yi 1988). Furthermore, discriminant validity between all constructs was assessed by examining the pairs of multi-item scales. The correlation between the two constructs was first set at unity, and then freed. In every case, significant decreases in χ^2 were observed on freeing the correlation between the concepts, demonstrating good results. Thus, the measures used for this study were both reliable and valid. In terms of testing for common method bias, results of the Harman test revealed an 11-factor structure with no general factor present (the first factor accounted for only 9% of the variance). Noteworthy is the fact that the environmental turbulence measure used for hypothesis testing was created as a formative index (see Diamantopoulos and Winklhofer, 2001) of technological turbulence, competitive intensity, market turbulence, buyer power, and regulatory turbulence.

Both regression F statistics proved significant at the 1% level. The independent variables explained, in turn, 27% of responsiveness quality, and 10% of performance, and only main effects were uncovered. Instrumental/conceptual use of marketing information was found to be positively related to marketing planning effectiveness (_ = .327; sig = .000), while symbolic use was negatively related to the same outcome variable (_ = -.141; sig = .025). However, though hypothesized as a homologizer (a specification variable affecting the strength rather than the form of a relationship and having no relationship to either predictor or criterion – see Sharma et al., 1981), interfunctional coordination was found to be a positive predictor of marketing planning effectiveness (_ = .277; sig = .000). In turn, marketing planning

effectiveness was significantly and positively related to performance (_ = .303; sig = .000), with no moderator effect from environmental turbulence. Thus, H1, H2, and H4 were partially supported, while H3 was fully supported.

Conclusion

As explained by Day (1994), the market-driven firm is one which systematically *responds* to information. Most firms will recognize that they collect much marketing information in an attempt to reduce any uncertainty their decision-makers may feel about the environment in which they operate (March and Shapira, 1982). The simple fact of having information made available is often enough to safeguard decision-makers' confidence in the decisions made. However, once the information has been collected, it does need to be put to use in order to serve decision-making (Zaltman and Moorman, 1988). Having said that, there are two main ways in which information can be applied, namely instrumentally/conceptually and symbolically (Diamantopoulos and Souchon, 1999). Thus, the effect of marketing information use on decisions depends, not on the extent to which information is applied, but on the way it is taken into account. In attempting to increase organizational performance, marketing decision-makers should maximize rational and transparent (i.e., instrumental/conceptual) use of information. With decisions based on fact rather than intuition or preconceptions, the risk of either missing out on promising opportunities or failing to make the most of those already identified is reduced. Similarly, symbolic use is a common occurrence in organizations today (Vyas and Souchon, 2003), but our study provides empirical evidence for the negative (indirect) relationship between this type of marketing information use and firm performance. Because of the relationship identified in this research, decision-makers need to recognize the opportunities available from *learning* from information they may otherwise discard or distort.

A surprising result was the main effect found between interfunctional coordination and marketing planning effectiveness, when a homologizer effect was expected. Thus, the importance of interfunctional coordination lies not in its strengthening the positive relationship between instrumental/conceptual use and planning, but on *directly* improving the latter. It would appear that interfunctional coordination is at the root of successful planning and implementation (Piercy and Lane, 1996).

Another important result is that information overload was found to be neither a moderator nor a predictor in our analysis. However, it would be premature to conclude that the overload of information marketing decision-makers often experience (Sivaramakrishnan and Perkins, 1992) has no bearing on these decision-makers' ability to make optimal decisions. It may be the case that the negative effect of information overload acts through an increase in symbolic use of information (see Souchon et al., 2003). Indeed, when faced with too much information, decision-makers may be more likely to select information for use more randomly, use only the information that supports what they believe or that which was expensive to collect (Vyas and Souchon, 2003).

Finally, marketing planning effectiveness was found to be related to firm performance *irrespective* of the turbulence in the environment. In practical terms, this finding suggests that there is a need for the marketing function to plan its courses of action whatever the intensity of competitiveness, for example, or the rate at which customer preference alter.

Replications of this study are necessary to ensure the generalizability of the findings. For example, the current study limited itself to manufacturing firms. A similar study conducted

among service organizations may reveal some disparities in the way information use affects performance. Further research into this area should also operationalized organizational performance using financial indicators in a bid to test for the links between information use, planning and objective success. The relationship between marketing information overload and information use also warrants further investigative work. More specifically, the relationship between information overload and symbolic use of marketing information is a promising way forward in this respect.

References

Achrol, RS. and Stern LW., 1988. Environmental determinants of decision making uncertainty in marketing channels. Journal of Marketing Research. 25(February), 36-50.

Armstrong, JS. And Overton, TS., 1977. Estimating nonresponse bias in mail surveys. Journal of Marketing Research, 14(3), 396-402.

Bagozzi RP. and Yi Y. 1988. On the evaluation of structural equation models. Journal of the Academy of Marketing Science. 16(1), 74-94.

Baker, WE. and Sinkula, JM., 1999. Learning orientation, market orientation, and innovation: integrating and extending models of organizational performance, Journal of Market Focused Management. 4, 309-318.

Bardin, M. and Majer, K., 1983. Managing information overload. The Public Relations Journal. 39(9), 26-28.

Bonoma, TV. 1984. Making your marketing strategy work, Harvard Business Review, 62(2), 69-76.

Cadogan, JW. and Diamantopoulos, A., 1998. Measuring market orientation in an export context: Some preliminary evidence. In The Strategy and Organization of International Business. Buckley et al. eds, Macmillan, 75-88.

Cadogan, JW., Diamantopoulos A. and de Mortanges CP., 1999. A measure of export market orientation: scale development and cross-cultural validation. Journal of International Business Studies. 30(4), 689-707.

Cadogan, JW., Sundqvist S., Salminen R., and Puumalainen K., 2002. Market-oriented behaviour: comparing service with product exporters. European Journal of Marketing. 36(9/10), 1076-1102.

Caplan, N., Morrison, A. and Stambaugh, R.J., 1975. The Use of Social Science Knowledge in Policy Decisions at the National Level. Ann Arbor, MI: Institute for Social Research.

Cespedes, FV., 1991. Organizing and implementing the marketing effort. Reading, MA: Addison-Wesley.

Cravens, DW., 1998. Implementation strategies in the market-driven strategy era. Journal of the Academy of Marketing Science. 26(3), 237-242.

Daniel, W.W. and Terrell, J.C., 1986. Business Statistics: Basic Concepts and Methodology. 4th Edition, Boston: Houghton Mifflin.

Day, GS., 1994. The capabilities of market-driven organizations. Journal of Marketing. 58(4), 37-53.

Deshpandé, R. and Zaltman, G., 1982. Factors affecting the use of market research information: A path analysis. Journal of Marketing Research. 19, 14-32.

Deshpandé, R. and Zaltman, G., 1984. A comparison of factors affecting researcher and manager perceptions of market research use. Journal of Marketing Research. 21, 32-38.

Diamantopoulos, A. and Souchon, AL., 1999. Measuring export information use: Scale development and validation. Journal of Business Research. 46(1), 1-14.

Diamantopoulos A., and Winklhofer HM., 2001. Index construction with formative indicators: an alternative to scale development. Journal of Marketing Research. 38, May, 269-77.

Feldman, M.S. and March, J.G., 1981. Information in organizations as signal and symbol. Administrative Science Quarterly. 26, 171-186.

Glazer, R., Steckel, J.H. and Winer, R.S., 1992. Locally rational decision making: The distracting effect of information on managerial performance. Management Science. 38(February), 212-226.

Greenley, GE., 1995. Market orientation and company performance: Empirical evidence from UK companies. British Journal of Management. 6(1), 1-13.

Greenley, GE. and Foxall, GR., 1996. Consumer and nonconsumer stakeholder orientation in U.K. companies. Journal of Business Research. 35, 105-16.

Harman, HH., 1976, Modern Factor Analysis. Chicago: University of Chicago Press.

Jaworski, BJ. and Kohli, AK., 1993. Market orientation: Antecedents and consequences. Journal of Marketing. 57(July), 53-70.

Jaworski BJ. And Kohli AK., 1996. Market orientation: review, refinement, roadmap. Journal of Market Focused Management. 1(2), 119-35.

John G. and Martin J., 1984. Effects of organizational structure of marketing planning on credibility and utilization of plan output. Journal of Marketing Research. 21(May), 170-83.

Knorr, K.D., 1977 Policymakers' Use of Social Science Knowledge: Symbolic or Instrumental? In Using Social Research in Public Policy Making, ed. C. H. Weiss. Lexington Books, D. C. Heath and Company.

Kohli, AJ. and Jaworski, BJ., 1990. Market orientation: the construct, research propositions, and managerial implications. Journal of Marketing. 54, 1-18.

Kohli, AJ. and Kumar, A., 1993. MARKOR: A measure of market orientation. Journal of Marketing Research. 30(November), 467-477.

March, JG. and Shapira J., 1982. Behavioral decision theory and organizational decision theory. In Decision-making: An Interdisciplinary Inquiry. G.R. Ungson and D.N. Braunstein, editors. Boston: Kent.

Mattila, AS. and Enz, CA., 2002. The role of emotions in service encounters. Journal of Services Research. 4(4), 268-277.

Menon, A and Varadarajan, PR., 1992. A model of marketing knowledge use within firms. Journal of Marketing. 56, 53-71.

Menon, A. and Wilcox, J.B., 2001. USER - A scale to measure use of market research. In Using Market Knowledge. R. Deshpandé (ed.). Thousand Oaks: Sage Publications. 243-272.

Moorman, C., 1995. Organizational market information processes: Cultural antecedents and new product outcomes. Journal of Marketing Research. 32(August), 318-335.

Moorman, C., Zaltman, G. and Deshpandé, R., 1992. Relationships between providers and users of market research. Journal of Marketing Research. 29(3), 314-329.

Noble, CH., and Mokwa, MP., 1999. Implementing marketing strategies: Developing and testing a managerial theory. Journal of Marketing. 63(4), 57-74.

O'Reilly CA III., 1980. Individuals and information overload in organizations: is more necessarily better? Academy of Management Journal. 23(4), 684-96.

Piercy, NF. and Lane, N., 1996. Marketing implementation: building and sharing real market understanding. Journal of Marketing Practice. 2(3), 15-23.

Podsakoff, PM., Todor, WD., Grover, RA., Huber, VL., 1984. Situational moderators of leader reward and punishment behaviors: Fact or fiction? Organizational Behavior and Human Decision Processes. 34(1), 21-63.

Procter, DB., Souchon, AL., and Cadogan, JW., 2000. Enhancing the quality of market-oriented behaviours: Understanding the characteristics of the information environments of market-oriented firms. Academy of Marketing Conference, July 4-7, Derby, UK.

Rapert, MI., Velliquette, A, and Garretson, J., 2002. The strategic implementation process: evoking strategic consensus through communication. Journal of Business Research. 55(4), 301-311.

Richey, RG., and Myers, MB., 2001. An investigation of market information use in export channel decisions: Antecedents and outcomes. International Journal of Physical Distribution and Logistics Management. 31(5), 334-354.

Ruekert, RW. and Walker, OC. Jr., 1987. Marketing's interaction with other functional units: A conceptual framework and empirical evidence. Journal of Marketing. 51(January), 1-19.

Sashittal, HC., and Jassawalla, AR., 2001. Marketing implementation in smaller organizations: Definition, framework, and propositional inventory. Journal of the Academy of Marketing Science. 29(1), 50-70.

Sashittal, HC. and Tankersley, C., 1997. The strategic market planning-implementation interface in small and midsized industrial firms: an exploratory study. Journal of Marketing Theory and Practice. 5(3), 77-93.

Schriesheim CA., 1979. The similarity of individual directed and group directed leader behavior descriptions. Academy of Management Journal. 22(2), 345-55.

Sharma, S, Durand, RM., Gur-Arie, O., 1981. Identification and analysis of moderator variables. Journal of Marketing Research. 18(August), 291-300.

Sivaramakrishnan, S. and Perkins, W.S., 1992. Too much of a good thing? – An empirical investigation of information overload in predicting marketing outcomes. In Enhancing Knowledge Development in Marketing Proceedings of the Annual AMA Conference. 377-384.

Slater SF. and Narver JC., 1994. Does the competitive environment moderate the market orientation- performance relationship? Journal of Marketing. 58(January), 46-55.

Souchon, AL. and Diamantopoulos, A., 1996. A conceptual framework of export marketing information use: Key issues and research propositions. Journal of International Marketing. 4(3), 49-71.

Souchon, A.L. and Diamantopoulos, A., 1997. Use and non-use of export information: some preliminary insights into antecedents and impact on export performance. Journal of Marketing Management. 13, 135-151,

Souchon, AL., Diamantopoulos, A., Holzmüller, HH., Axinn, CN., Sinkula, JM., Simmet-Blomberg, H. and Durden, GR., 2003. Export information use: a five-country investigation of key determinants. Journal of International Marketing. 11(3), 106-127.

Tadepalli, R. and Avila, RA., 1999. Market orientation and the marketing strategy process. Journal of Marketing Theory and Practice. 7(2), 69-82.

Toften, K. and Olsen, SV., 2004. The relationships among quality, cost, value, and use of export market information: an empirical study. Journal of International Marketing. 12(12), 104-131.

Vyas, R. and Souchon, AL., 2003. Symbolic use of export information: A multidisciplinary approach to conceptual development and key consequences. International Marketing Review. 20(1), 67-94.

Zaltman, G. and Moorman, C., 1988. The importance of personal trust in the use of research. Journal of Advertising Research. 28(3), 16-24.

ANZMAC 2004

Marketing Accountabilities and Responsibilities

29 November – 1 December 2004

Wellington, New Zealand

Conference Proceedings