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# Developing a better measure of market orientation

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## Introduction

Academics have been attempting to establish empirical support for the marketing concept for the past three decades (Deshpande and Webster, 1989; Houston, 1986; Kotler, 1977; Levitt, 1960; Shapiro, 1988; Webster, 1988). Meanwhile, managers have been facing a complementary challenge: how to implement this cornerstone of marketing theory. Both groups appear to have had limited success in their respective endeavours. Part of the problem may lie in a failure to establish a generalisable model of market orientation and also the lack of a parsimonious measure of market orientation which managers can use to pinpoint organisational short-comings.

Research has tended to focus on investigating the relationship between various measures of company performance and the adoption or implementation of particular aspects of a market or marketing orientation. Given the diverse range of research methodologies, measures and sample frames employed, it is unsurprising that there has been only limited validation.

Part of the problem is definitional, with the terms marketing orientation (a business philosophy) and a market orientation (implementation of that philosophy) often confused (Kohli and Jaworski, 1990) and/or used interchangeably. Another difficulty is the unresolved issue of how to measure company performance, with continuing debate over the applicability and reliability of various organisational and social measures.

There are likely to be operational difficulties in translating the marketing concept into action. Researchers in consumer behaviour warn of potential gaps between people's attitudes and their actual behaviour (Pieters, 1988). In a similar way, companies may have difficulty implementing the marketing concept because of a lack of ability (requisite knowledge, skills and systems) or opportunity (in less competitive environments a production orientation may be more profitable than a customer orientation).

Even if one assumes that there is a link between market orientation and performance and that companies have the ability and opportunity to translate the marketing concept into action, a more fundamental problem arises. How should market orientation be measured?

Studies by two groups of US researchers working in parallel on the relationship between market orientation and performance (Jaworski and Kohli, 1993; Kohli and Jaworski, 1990; Narver and Slater, 1990; Slater and Narver,

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1994b) offer valuable insights into how companies' levels of market orientation may be assessed in different environmental contexts. The Narver and Slater (1990) scales have been validated to some degree in both the Canadian (Deng and Dart, 1994) and UK (Greenley, 1995a, 1995b) environments. However, the scales published by Jaworski and Kohli (1993), although offering the promise of complementary measures, have received relatively little attention from researchers attempting to develop market orientation measures in markets outside the USA.

Therefore, this study replicates and extends the market orientation research of both Jaworski and Kohli (1993) and Narver and Slater (Narver and Slater, 1990, Slater and Narver, 1994a), using a large multi-industry sample of New Zealand companies. The aims are to validate what appear to be promising measures and to develop managerially useful and parsimonious scales for measuring market orientation in the New Zealand context.

*Defining market orientation*

Although there is no consensus on what a market orientation is, the definitions of Kohli and Jaworski (1990) and Narver and Slater (1990) appear to be gaining wide acceptance. The Kohli and Jaworski (1990) definition encompasses three broad business activities: the generation of market intelligence, the dissemination of this intelligence and organisation-wide responsiveness to it. The Narver and Slater (1990) definition complements this, with three behavioural components (customer orientation, competitor orientation, interfunctional co-ordination) and two decision criteria (long-term focus, profit objective).

Deng and Dart (1994), in synthesising the models of Kohli and Jaworski (1990) and Narver and Slater (1990), define market orientation as the implementation of a particular business philosophy, the marketing concept (p. 726):

- *Market orientation* – the generation of appropriate market intelligence pertaining to current and future customer needs and the relative abilities of competitive entities to satisfy these needs; the integration and dissemination of such intelligence across departments; and the co-ordinated design and execution of the organization's strategic response to market opportunities.
- *Marketing concept* – a business philosophy that holds that long-term profitability is best achieved by focusing the co-ordinated activities of the organization toward satisfying the needs of particular market segment(s).

Two streams of marketing research have tended to focus on one or other of these concepts. Marketing orientation studies, in line with the marketing concept, often investigate differences between a production, selling and marketing philosophy. Market orientation studies, on the other hand, tend to focus more on awareness of and responsiveness to environmental influences on marketing decision-making and implementation.

A complicating factor is that the terms market orientation and marketing orientation are often used interchangeably in the effectiveness literature (Dreher and Krismer, 1992). If one adopts the Deng and Dart (1994) definitions of market orientation and the marketing concept, though, a clearer picture emerges.

Marketing orientation studies tend to be concerned with the American view of the marketing concept, especially marketing's functional role in co-ordinating and managing the 4Ps to make companies more responsive to meeting customer needs. The major problem with these studies is that they appear to have underestimated the organisational difficulties of implementing the marketing concept. For example, Dunn *et al.* (1994) emphasise the importance of fostering appropriate organisational values, goals and climate to improve marketing effectiveness. The influence of the external market environment, particularly whether there is a sufficient level of competition to force companies to become more sensitive to customer needs, also tends to be ignored.

On the other hand, market orientation studies tend to de-emphasise the functional roles of marketing managers and marketing departments and instead posit that developing customer relations and enhancing customer value is the responsibility of everyone in an organisation. Although authors do not necessarily acknowledge the Nordic view of the marketing concept as articulated by Gronroos (1989), that marketing's aim is to develop long-term customer relationships through the fulfilment of mutual promises, they do concur that marketing should not be viewed as a specialist function. Instead, they highlight the importance of interdepartmental coordination, the gathering and dissemination of market information and responsiveness to that intelligence (Jaworski and Kohli, 1993; Kohli and Jaworski, 1990; Narver and Slater, 1990). The primary aim is to enable the whole firm to create greater customer value through implementation of the marketing concept; operationalising an organisational philosophy which is primarily concerned with developing long-term customer relations. The rewards appear to be an improvement in core capabilities, competitive advantage and performance (Slater and Narver, 1994a).

It should be noted that there is still some equivocality over the market orientation-performance relationship. While Deng and Dart (1994), in testing the Narver and Slater (1990) instrument on 248 senior Canadian managers, found that there was a direct relationship, Greenley (1995a, 1995b) who used the same scales on a sample of 240 chief executives and directors in the UK, found that any orientation-performance relationship was moderated by the environment.

Until recently, there have been few validated measures of market orientation, compounding the problems of comparing studies or generalising findings across industries. However, further testing of the Jaworski and Kohli (1993) and Narver and Slater (1990) instruments in a wider variety of business contexts appears to be a promising way of developing more generalisable measures. This is particularly important given the findings of both Greenley (1995a, 1995b) in the UK and Slater and Narver (1994a) in the USA that environmental variables may influence the orientation-performance relationship.

A synthesis of recent empirical studies suggests that the following research model (see Figure 1) could be useful for exploring market orientation and performance relationships in a wide variety of country-market contexts.

## Developing a better measure

The aims of the present study are to validate what appear to be promising measures of market orientation and to develop scales for measuring market orientation in the New Zealand context. Most measures have been academically, rather than managerially, useful. Developing a more parsimonious and generalisable scale has important implications for senior executives who may wish to assess their companies' levels of market orientation and to take steps to improve this, given some evidence of an orientation-performance link.

The use of a large multi-industry sample of New Zealand companies helps to determine the applicability of two North American research instruments (Jaworski and Kohli, 1993; Narver and Slater, 1990) to a quite different country-market environment (a relatively small, open, successful, export-led economy). The findings should also be more generalisable than those from Narver and Slater's initial, exploratory study (Narver and Slater, 1990), which was based on only one industry.

Whereas Jaworski and Kohli's (1993) later study also addresses managerial and organisational antecedents and consequences of a marketing orientation, the present study omits these. It was considered important to first establish the dimensions of market orientation in the New Zealand context, before examining environmental and organisational antecedents and consequences of a market orientation-performance relationship. These will be addressed in two follow-up studies.

## Methodology

*Data collection and sample frame*

The annual survey of the New Zealand Marketing Management Research Programme (NZMMRP), based at the University of Otago, Dunedin, was used to

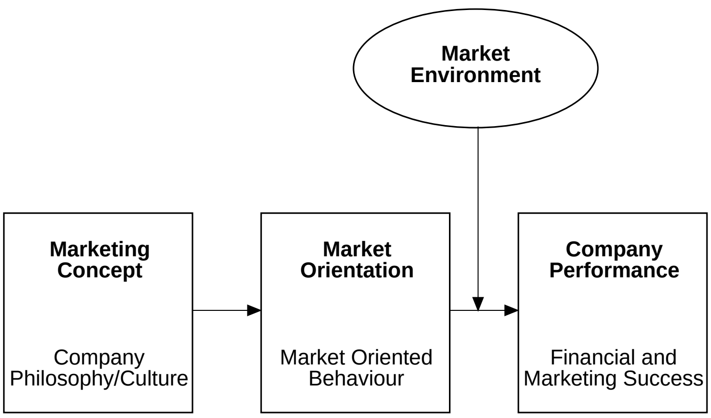


**Figure 1.** Research model

generate the data for this analysis. The programme has a large, regularly updated database of senior managers in New Zealand companies who are willing to participate in marketing research.

Where companies have subsidiaries, each subsidiary was treated as a separate company. Some companies still have more than one representative listed on the NZMMRP database, but this is limited to the chief executive or general manager and one other senior executive, usually the marketing manager.

The questionnaire was mailed to 1,099 senior executives in New Zealand companies in November 1995, which resulted in 374 responses. In December 1995 a follow-up letter and questionnaire resulted in another 116 usable questionnaires, giving a total of 490 respondents for an overall response rate of 45 percent. This is considered good for a questionnaire with a single follow-up in the New Zealand business environment (Brennan and Seymour, 1992).

A record was kept of those who responded to the follow-up mailout so that their responses could be compared to the first wave of returns. This provided a further opportunity to ensure the data collected were representative of the population being sampled.

### *Other actions taken to increase response rate*

The annual New Zealand Marketing Management Research Programme (NZMMRP) surveys offer respondents a free copy of the resulting research reports valued at $NZ100 + GST (the price charged to non-respondents who want a copy of the report). This incentive has been used since the start of the programme in 1992 and has resulted in consistently high responses. A postage paid, self-addressed envelope is also included with each mailout. Because the NZMMRP database is regularly updated, this study was able to utilise personalised cover letters, envelopes and questionnaires.

Other actions included an assurance that the information supplied was strictly confidential and that individual company information would not be reported to any outside party. The benefits of the research to managers and their companies were also highlighted in the covering letter.

### *Dealing with non-response*

A one page questionnaire was faxed to 90 managers who had agreed to take part in the survey but had not responded to either the original questionnaire or the follow-up mailing. The questionnaire was brief and covered one question on each of the following: company performance, customer orientation, competitive orientation, interfunctional coordination, intelligence generation, intelligence dissemination and eight demographic questions. This enabled profiles of non-respondents to be analysed to ensure they did not differ from the sample on any of the critical constructs. A total of 43 questionnaires were returned by fax. Early-late wave comparisons, plus an assessment of the faxed replies from non-respondents, revealed no significant non-response bias.

Compared to the Statistics New Zealand census figures, the sample frame over-represents medium-sized companies and manufacturing businesses and under-represents business and personal services. The industry classifications for New Zealand business require each company to register under only one main industrial activity. As manufacturers could also be offering services, the under-representation of service firms may not be unduly concerning.

*Questionnaire design*

This study utilised parts of three different instruments (see Table I) to test market orientation (Deng and Dart, 1994; Jaworski and Kohli, 1993; Narver and Slater, 1990) in New Zealand companies. A total of 44 items were chosen using Cronbach Alpha scores from the original studies as the basis for selection. All these questions were grouped in one section, under the title "approaches to marketing" and placed in the middle of the questionnaire. The questions were grouped in constructs from the previous studies and no mixing of questions took place.

Eight of the questions deal with customer orientation, six with competitor orientation and six with interfunctional coordination. Narver and Slater (1990) offer evidence of convergent validity, discriminant validity and concurrent validity for these measures of market orientation. The wording for these questions was adapted primarily from the Deng and Dart (1994) instrument which validated the Narver and Slater (1990) constructs in the Canadian context.

There are four questions covering profit emphasis. This construct was dropped from the Narver and Slater (1990) analysis due to a low Cronbach alpha score. Deng and Dart (1994), however, achieved a reasonably good alpha (0.75) for this construct and also offer evidence of content validity, criterion validity and construct validity for the three questions initially used by Narver and Slater (1990) and also for a fourth item. Therefore, this construct was included in the instrument.

Five questions deal with intelligence generation. This is one of the three constructs developed and validated by Jaworski and Kohli (1993). Market intelligence is the starting point of a market orientation and is a much broader concept than just finding out about customers. It includes informal mechanisms for generating information.

Intelligence dissemination is the subject of five questions. To effectively respond to market needs requires the participation of virtually all departments in the organisation. This involves both formal and informal means to keep the information flowing freely.

Ten questions deal with responsiveness to market intelligence (five with design and five with implementation aspects). If the organisation generates intelligence and disseminates it, but then fails to act on it, then implementation of the marketing concept has stalled. Responsiveness involves the whole organisation, not just marketing personnel. This construct provides the final dimension for the measurement of market orientation.

| | | |
|---|---|---|
| Customer orientation | 1. We encourage customer comments and complaints because they help us do a better job<br>2. After-sales service is an important part of our business strategy<br>3. We have a strong commitment to our customers<br>4. We are always looking at ways to create customer value in our products<br>5. We measure customer satisfaction on a regular basis<br>6. Our firm would be a lot better off if the sales force worked a bit harder<br>7. In our company marketing's most important job is to identify and help meet the needs of our customers<br>8. We define quality as the extent to which our customers are satisfied with our products/services | Deng and Dart, 1994; Narver and Slater, 1990 |
| Competitor orientation | 1. We regularly monitor our competitors' marketing efforts<br>2. We frequently collect marketing data on our competitors to help direct our marketing plans<br>3. Our salespeople are instructed to monitor and report on competitor activity<br>4. We respond rapidly to competitors' actions<br>5. Our top managers often discuss competitors' actions<br>6. We consider opportunities based on competitive advantage | Deng and Dart, 1994; Narver and slater, 1990 |
| Inter-functional co-ordination | 1. In our firm the marketing people have a strong input into the development of new products/services<br>2. Marketing information is shared with all departments<br>3. All departments are involved in preparing business plans/ strategies<br>4. We do a good job integrating the activities of all departments<br>5. The marketing people regularly interact with other departments on a formal basis<br>6. Marketing is seen as a guiding light for the entire firm | Deng and Dart, 1994; Narver and Slater, 1990 |
| Profit orientation | 1. Our management information system can quickly determine the profitability of our major customers<br>2. Our management information system can quickly determine the profitability of our product lines<br>3. Our management information system can quickly determine the profitability of our sales territories<br>4. Our management information system can quickly determine the profitability of our distribution channels | Deng and Dart, 1994; Narver and Slater, 1990 |
| Intelligence generation | 1. Frontline staff interact directly with customers to see how we can serve them better<br>2. We do a lot of marketing research to assess customer perceptions of our products/services<br>3. We are slow to detect changes in our customers' preferences<br>4. We collect industry information on an informal basis<br>5. We regularly review the likely effect of changes in our business environment (e.g. interest rate changes, deregulation) on our customers | Jaworski and Kohli, 1993 |

(*Continued*)

**Table I.**
Market orientation questions

| | | |
|---|---|---|
| Intelligence dissemination | 1. We regularly have inter-departmental meetings to discuss market trends and developments<br>2. Our marketing people regularly discuss customer needs with other departments<br>3. Customer satisfaction data are regularly distributed to all departments<br>4. There is minimal communication between marketing and other departments about market developments<br>5. When one department finds out something about a competitor it is often slow to alert other departments | Jaworski and Kohli, 1993 |
| Response design | 1. It takes us forever to decide how to respond to competitors' price changes<br>2. Somehow we tend to ignore changes to our customers' product/service needs<br>3. We regularly check our product/service developments to assess whether they are in line with customer needs<br>4. Our business activities are driven more by technological advances than by market research<br>5. The products/services we sell are determined more by internal politics than market needs | Jaworski and Kohli, 1993 |
| Response implementation | 1. If a competitor launches a programme targeted at our customers we'll react immediately<br>2. The activities of our departments are well-co-ordinated<br>3. Customer complaints fall on deaf ears in this firm<br>4 We are quick to respond to significant changes in our competitors' pricing<br>5. If we find out that customers are dissatisfied with the quality of our products/services we immediately take corrective action | Jaworski and Kohli, 1993 |

**Table I.**

### *Validity*

This study also adopted Deng and Dart's (1994) methodology to determine construct, criterion and discriminant validity of the market orientation measures. This necessitated asking a number of questions about company performance to determine criterion or predictive validity, as there is some empirical evidence which suggests that market orientation should be positively related to performance. To overcome criticisms of single-measure biases levelled at earlier studies, an objective/absolute financial measure, return on investment (ROI) and three relative/subjective marketing measures (brand awareness, customer satisfaction and loyalty) were used to provide criterion validity. A closer examination of the orientation-performance relationships is the subject of a separate study and beyond the scope of this paper.

Four business philosophy statements used by Deng and Dart (1994) to determine convergent and discriminant validity of the market orientation measures were also included in the questionnaire. These cover production, sales, marketing and societal orientations (see the Appendix for the actual questions), with marketing philosophy expected to be more closely associated with the major market orientation measures than the other business philosophies.

### Analytical techniques

Data were entered into SPSS for Windows, version 6.0. Cronbach alphas of the initial constructs were computed and unreliable questions dropped from the scales before further analysis. Exploratory and confirmatory factor analyses were then used to reduce the data set to those dimensions which appear to best measure market orientation. Correlations between one financial performance measure (ROI) and three marketing performance measures (brand awareness, customer satisfaction and loyalty) and the remaining market orientation variables were computed to determine criterion validity. Correlations between the market orientation variables and business philosophy statements were used to provide evidence of convergent and discriminant validity.

## Discussion of results

### Profiling respondents

A broad range of industries is represented in the survey (see Table II). However, manufacturers appear to be slightly over-represented and business and personal services under-represented when compared with census figures.

The sample also appears to be weighted in favour of medium-sized companies (see Table III), with nearly half reporting gross sales (in the New Zealand market) of between $NZ10 million and $NZ50 million. Almost half of the companies are also involved in exporting, with the largest group earning between $NZ1 million and $NZ10 million (NZ) in overseas sales. Marketing managers (36 percent) and general managers (24 percent) are the most common titles of respondents. These managers should be in a reasonable position to assess both the market orientation and performance of their firms. One could, perhaps, expect sales and marketing managers and directors to be closer to their customers and to be more interested in competitors' activities and thus be more aware of their companies' market-oriented behaviour. However, a comparison of the mean responses of managers with the words "sales" or

**Table II.** Industries represented in sample

| Industry (SIC codes) | Percent of survey respondents | Percent of NZ population |
|---|---|---|
| Agriculture, forestry, fishing | 8.2 | 4 |
| Mining, quarrying | 1.0 | 0.3 |
| Manufacturing | 36.1 | 10 |
| Electricity, gas, water | 2.2 | 0.2 |
| Construction | 4.4 | 13 |
| Wholesalers, retailers, hotels, restaurants | 18.6 | 25 |
| Transport, storage, communications | 14.4 | 10.2 |
| Business and financial services | 9.8 | 20 |
| Community, social, personal services | 5.3 | 17.3 |

| *Gross revenue in NZ* | *Percent of companies* | *ROI (NZ sales only)* | *Percent of companies* |
|---|---|---|---|
| Less than $1 million | 0.5 | Less than 0 percent | 4.3 |
| $1-10 million | 15.8 | 0-9 percent | 36.8 |
| $10-50 million | 44.8 | 10-19 percent | 33.2 |
| $50-100 million | 16.4 | 20-29 percent | 17.0 |
| $100-500 million | 17.0 | 30 percent + | 8.7 |
| $500 million+ | 5.5 | | |
| *Pre-tax profits in NZ* | *Percent of companies* | *Export sales* | *Percent of companies* |
| Loss | 4.3 | No exports | 53.2 |
| £0-0.5 million | 12.4 | Under $0.5 million | 9.0 |
| $0.5-1 million | 12.4 | $0.5-1 million | 2.8 |
| $1-10 million | 44.9 | $1-10 million | 20.0 |
| $10-25 million | 10.3 | $10-25 million | 6.7 |
| $25-50 million | 7.1 | $25-50 million | 3.8 |
| $50 million+ | 8.6 | $50 million+ | 4.5 |
| *Managers' titles* | | *Percent of respondents* | |
| Managing director | | 10 | |
| Marketing director | | 3 | |
| Chief executive | | 4 | |
| General manager | | 24 | |
| Marketing manager | | 34 | |
| Sales manager | | 12 | |
| Other | | 13 | |

**Table III.** Company and manager profiles

"marketing" in their titles (approximately half of the sample) and all other managers revealed no statistically significant difference in mean responses to the market orientation questions. This suggests that any differences in individual responses are not related to managers' positions, but rather to differences in company behaviour. It should be noted, though, that the managers listed in the NZMMRP database, from which the sample was drawn, tend to be the most senior marketing decision-makers in their respective firms. In smaller New Zealand companies these managers may bear the titles of chief executive, managing director or sales manager, rather than marketing manager. However, this may not be the case with smaller firms in other countries. Approximately 30 pairs of managers from the same firms (usually the chief executive and the most senior marketing manager) also responded to the questionnaire. Where there are replications from the same companies, it appears that marketing managers tend to be slightly more optimistic about levels of market-oriented behaviour than chief executives. Therefore, in future research it may be preferable to use multiple respondents to gain a better view of companies' overall levels of market orientation.

*Scale purification and reliability assessment*

The first stage was to assess the reliability of the eight constructs suggested by the literature (see Table IV). Due to low reliability, the intelligence generation construct suggested by Jaworski and Kohli (1993) was deleted, along with five other questions, leaving seven constructs with alphas greater than 0.60. A total of 34 questions (from the original 44) were retained for the factor analysis.

Exploratory factor analysis was used to determine which questions appear to best measure the various dimensions of market orientation and which items could be deleted from the market orientation scales. Because the Narver and Slater (1990) and Jaworski and Kohli (1993) scales appear to be measuring similar constructs, there was expected to be some overlap between their respective scales and some item redundancy.

The 34 items were factor analysed using a maximum likelihood extraction with a direct oblimin rotation (see Table V). Discontinuity analysis suggested that five factors should be retained. Low loading items (< 0.5) and cross-loading items exhibiting poor discriminant validity were removed. The result of this exploratory factor analysis was a parsimonious and interpretable solution containing 20 of the original 44 market orientation questions used in the questionnaire.

All items loaded as predicted, with the exception of Factor 1 (interfunctional co-ordination), which is a combination of Narver and Slater's (1990) interfunctional co-ordination and Jaworski and Kohli's (1993) intelligence dissemination variables. However, one could expect companies with better co-ordination between departments to also have better internal communication systems. Jaworski and Kohli's (1993) response design (referred to as responsiveness in the rest of this paper) emerges as the fifth factor.

Overall, the dimensions of market orientation suggested by this solution appear to have more in common with Narver and Slater's original model (Narver and Slater, 1990) than the later conceptualisation of Jaworski and Kohli (1993).

*Confirming the dimensions of market orientation*

Confirmatory factor analysis (CFA) was then used to test whether the five dimensional model suggested by the exploratory factor analysis is a good

| Variable name | Label | Initial alpha | Final alpha | Items retained |
|---|---|---|---|---|
| Customer orientation | CUSTOR | 0.6862 | 0.7460 | 1, 5-7 |
| Competitor orientation | COMPOR | 0.7967 | 0.7967 | All |
| Interfunctional co-ordination | FUNCOP | 0.7771 | 0.7771 | All |
| Profit emphasis | PROFEM | 0.8314 | 0.8314 | All |
| Intelligence generation | INTGEN | 0.2594 | 0.4391 | None |
| Intelligence dissemination | INTDIS | 0.7022 | 0.7022 | All |
| Response design | RESPDE | 0.6218 | 0.6602 | 1, 2 |
| Response implementation | RESPIM | 0.6218 | 0.6218 | All |

**Table IV.**
Reliability analysis

| Variables | Factor 1 Interfunctional co-ordination | Factor 2 Profit emphasis | Factor 3 Competitor orientation | Factor 4 Customer orientation | Factor 5 Responsiveness |
|---|---|---|---|---|---|
| CUSTOR1 | 0.12751 | –0.04046 | 0.00792 | 0.65866 | –0.01710 |
| CUSTOR2 | –0.01300 | 0.08133 | 0.06380 | 0.62946 | 0.07942 |
| CUSTOR3 | –0.03234 | –0.00919 | 0.01635 | 0.67178 | –0.15952 |
| CUSTOR4 | –0.08371 | 0.03239 | –0.15148 | 0.50560 | –0.07765 |
| CUSTOR5 | 0.13803 | –0.04297 | –0.04354 | 0.51677 | 0.05528 |
| COMPOR1 | –0.00701 | 0.02137 | –0.74933 | 0.03367 | –0.08217 |
| COMPOR2 | 0.02359 | –0.03590 | –0.89683 | 0.00719 | 0.05395 |
| COMPOR3 | 0.03905 | 0.04092 | –0.61214 | –0.00783 | 0.04283 |
| FUNCOP2 | 0.58942 | 0.01260 | –0.01776 | 0.05927 | –0.06212 |
| FUNCOP3 | 0.59499 | –0.03406 | 0.00773 | 0.06199 | 0.11962 |
| FUNCOP4 | 0.71463 | 0.04749 | 0.06545 | 0.01176 | –0.03449 |
| FUNCOP5 | 0.73508 | 0.00363 | –0.05201 | –0.05491 | –0.07593 |
| INTDIS1 | 0.55753 | 0.05684 | –0.07735 | 0.03298 | –0.03607 |
| INTDIS2 | 0.67101 | 0.02892 | –0.03995 | –0.04884 | –0.07747 |
| PROFEMP1 | 0.03402 | 0.62338 | –0.01629 | –0.02183 | 0.01005 |
| PROFEMP2 | 0.04329 | 0.69272 | –0.04731 | –0.03933 | –0.06215 |
| PROFEMP3 | –0.01775 | 0.80196 | 0.07713 | 0.06559 | 0.01744 |
| PROFEMP4 | –0.01928 | 0.79781 | –0.03851 | 0.01447 | 0.02978 |
| RESPDE1 | 0.07049 | 0.03764 | 0.05856 | 0.00168 | –0.59044 |
| RESPDE2 | 0.01186 | –0.02862 | –0.05673 | 0.05995 | –0.77231 |
| Alpha | 0.8252 | 0.8222 | 0.8035 | 0.7340 | 0.6578 |

**Table V.** Exploratory factor analysis

representation of market orientation. Because of intercorrelations between the five dimensions, one would expect a common high order factor (overall market orientation) to be present (Dabholkar *et al.*, 1996). Second-order CFA, using the LISREL structural equation modeling programme (Jöreskog and Sörbom, 1993) was used to overcome problems of multicollinearity which may occur when the dependent variable is regressed directly on the sub-dimensions (Bagozzi, 1994).

The results (see Figure 2) confirm that market orientation is a multi-dimensional construct consisting of five sub-dimensions. This model yielded an excellent fit ($\chi^2$ = 319.93, df = 165, GFI = 0.94, AGFI = 0.92, RMSEA = 0.044, ECVI = 0.84) with t-values for each of the loadings significant at $p$ = 0.01. Although the $\chi^2$ value is rather high, it is sensitive to sample size, particularly where the number of respondents exceeds 200 (Hair *et al.*, 1995) and in this case should not be examined in isolation. The other fit indices are highly satisfactory. Guidelines for the use of GFI and AGFI (Chin and Todd, 1995) suggest these should be higher than 0.9, with a measure of 1 indicating a perfect fit. RMSEA values of below 0.05 also suggest the data fit the hypothesised model very well (Bollen and Long, 1992). The ECVI has no specified range of accepted values, but smaller numbers are preferred (Chin and Todd, 1995; Hu and Bentler, 1995). Thus, the results of the confirmatory factor analysis provide good support for the proposed five-dimensional model of market orientation.

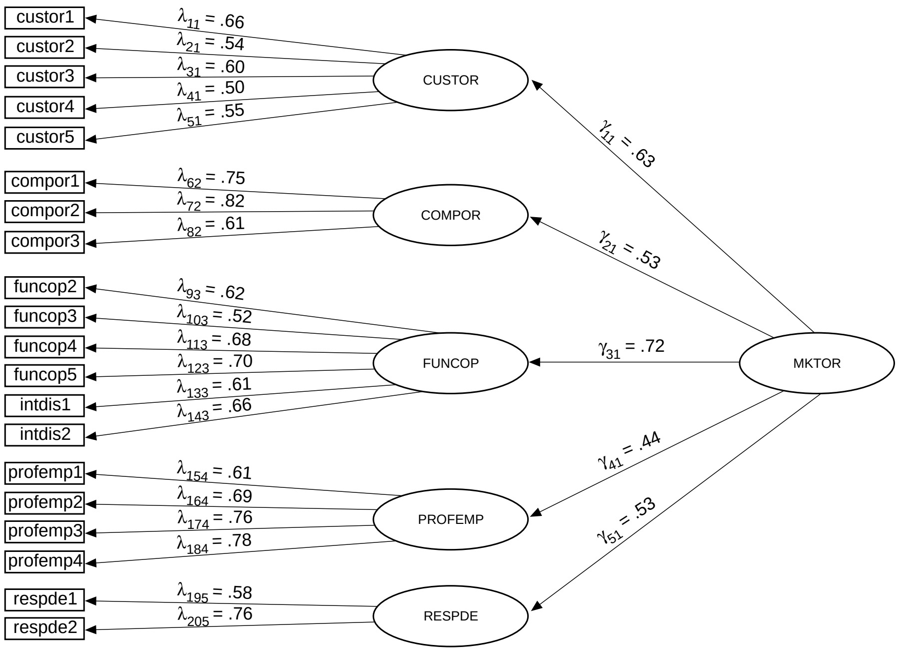


**Figure 2.**
Confirmatory factor analysis

Results of this analysis, then, suggest that market orientation in the New Zealand business context consists of five dimensions which may best be measured by 20 questionnaire items using a five-point Likert scale (see Table VI).

Customer orientation is measured by responses to five statements. The first aims to discover if customer comments and complaints are encouraged because they help the company do a better job. The second determines whether after sales service is an important part of business strategy. The third statement is about commitment to customers. The fourth discovers if ways to create customer value in the product or service are always being investigated. The final statement determines whether customer satisfaction is measured on a regular basis.

Competitive orientation is measured by responses to three statements. The first determines whether regular monitoring of competitors' marketing efforts is undertaken. The second discovers if frequent collection of market data on competitor activities is used to help with marketing plans. The final statement considers whether sales personnel monitor and report competitor activity.

Interfunctional co-ordination is measured by responses to six statements. The first assesses how well marketing information is shared between departments. The second determines whether all departments are involved in preparing business plans and strategies. The third is about the integration of activities between departments and the fourth discovers if marketing people regularly interact with other departments on a formal basis. The fifth looks at whether regular inter-departmental meetings are held to discuss market trends

| | |
|---|---|
| Customer orientation (CUSTOR) | 1. We encourage customer comments and complaints because they help us do a better job<br>2. After-sales service is an important part of our business strategy<br>3. We have a strong commitment to our customers<br>4. We are always looking at ways to create customer value in our products<br>5. We measure customer satisfaction on a regular basis |
| Competitor orientation (COMPOR) | 1. We regularly monitor our competitors' marketing efforts<br>2. We frequently collect marketing data on our competitors to help direct our marketing plans<br>3. Our salespeople are instructed to monitor and report on competitor activity |
| Interfunctional co-ordination (FUNCOP) | 1. Marketing information is shared with all departments<br>2. We regularly have inter-departmental meetings to discuss market trends and developments<br>3. Our marketing people regularly discuss customer needs with other departments<br>4. The marketing people regularly interact with other departments on a formal basis<br>5. All departments are involved in preparing business plans/strategies<br>6. We do a good job integrating the activities of all departments |
| Responsiveness (RESPDE) | 1. We are quick to respond to significant changes in our competitors' pricing<br>2. Somehow we tend to ignore changes to our customers' product/service needs (negative values indicate greater responsiveness) |
| Profit emphasis (PROFEMP) | 1. Our management information system can quickly determine the profitability of our major customers<br>2. Our management information system can quickly determine the profitability of our product lines<br>3. Our management information system can quickly determine the profitability of our sales territories<br>4. Our management information system can quickly determine the profitability of our distribution channels |

**Table VI.**
A parsimonious measure of market orientation

and developments. The final statement determines whether marketing people regularly discuss customer needs with other departments.

Responsiveness is measured by responses to two statements. The first concerns how long it takes to respond to competitors' price changes. The second assesses whether changes in customer's product/service needs are often ignored.

A profit emphasis is measured by responses to four statements about the ability of management information systems to determine the profitability of specific areas of business activity. These include the profitability of major customers, product lines, individual sales territories and distribution channels.

In summary, New Zealand companies which have a sufficient understanding of target buyers' needs to create superior value, are aware of the capabilities and activities of key current and potential competitors, share and use market information among departments to develop co-ordinated strategies, co-ordinate activities to respond quickly to competitors' actions and customers' requests and emphasise long term profitability, can be said to be exhibiting market-oriented behaviour.

### *Validity assessment*

Content validity depends on how well items cover the content domain of the variable being measured (Nunally, 1978). The market orientation items are based on a comprehensive literature review and only those which have been validated in previous empirical studies have been included in the analyses. Although a subjective judgement, the items appear to have high content validity.

Criterion or external validity is determined by how well the measures can predict an outcome (Nunally, 1978) such as company performance. Three subjective measures of marketing performance (relative to nearest competitor) and one objective/absolute measure of financial performance (ROI) were correlated with an overall (aggregated) market orientation measure which incorporated all 20 scale items (see Table VII). The Spearman correlation coefficients show there is a significant, albeit moderate, relationship between market orientation and the four measures of performance. The relationship is strongest with customer satisfaction and weakest with profitability, suggesting that market orientation may be a better predictor of superior customer service (relative to the nearest competitor) than objectively-measured financial performance in the New Zealand context. This is further supported by examining the relationship between the five components of market orientation

| | | Brand awareness | Customer satisfaction | Customer loyalty | ROI |
|---|---|---|---|---|---|
| (1) | Behaviour | | | | |
| | Customer orientation | 0.1764* | 0.2805* | 0.1688* | 0.0528 |
| | Competitor orientation | 0.0742 | 0.1379** | 0.0100 | 0.1068 |
| | Inter-functional co-ordination | 0.1243* | 0.1418** | 0.1004 | 0.1828* |
| | Profit emphasis | 0.1205** | 0.1324** | 0.1369** | 0.0962 |
| | Responsiveness | 0.1053 | 0.1919* | 0.1311** | 0.0416 |
| | Overall market orientation | 0.1769* | 0.2514* | 0.1600* | 0.1468** |
| (2) | Philosophy | | | | |
| | Production orientation | 0.0395 | 0.0997 | 0.1134** | –0.0604 |
| | Sales orientation | –0.0002 | 0.0771 | –0.0614 | 0.0532 |
| | Marketing orientation | 0.1554* | 0.1973* | 0.1682* | 0.1234** |
| | Societal orientation | 0.0358 | 0.0401 | –0.0071 | 0.0967 |

**Notes:** *Significant at 0.001 probability level; ** Significant at 0.01 probability level

**Table VII.**
Market-orientated behaviour, business philosophy and performance correlations

(or market-oriented behaviour) and performance, with customer orientation and responsiveness to changing customer needs and competitors' actions being significantly related to customer satisfaction.

The individual variable with the strongest relationship with ROI appears to be interfunctional co-ordination, suggesting that the sharing of market and product information throughout the organisation and the use of co-ordinated planning methods may be linked with improved business efficiency and profitability. However, the direct relationship between overall market orientation and performance is much weaker than that reported by Deng and Dart (1994), who claimed a multiple correlation coefficient of 0.79 between four market orientation variables and an aggregated financial and marketing performance measure in their Canadian study. In contrast, the most comprehensive replication of the Narver and Slater (1990) study in the UK, undertaken by Greenley (1995a, 1995b) found no direct relationship between orientation and performance. Instead, Greenley demonstrated that any relationship was moderated by environmental influences. The possibility that this situation exists in New Zealand, too, is the subject of a further study. However, the present results still suggest a reasonable degree of criterion validity if marketing performance and profitability are used as predictors.

Construct validity may be determined by assessing both convergent and discriminant validity (Nunally, 1978). Following Deng and Dart's (1994) suggestion, this was determined by analysis of the correlations between market orientation and four possible business philosophies: a production orientation, sales orientation, marketing orientation (adherence to the marketing concept) and societal orientation (see Table VIII). The four corporate philosophies were measured using single statements (two or three sentences long) suggested by Deng and Dart (1994) and a five-point Likert scale (see the Appendix for the actual wording). Given that market orientation is, in theory, the implementation of the marketing concept (Kohli and Jaworski, 1990), a relatively close relationship between the market orientation measures and a marketing philosophy would suggest convergent validity. Conversely, discriminant validity would be demonstrated if the correlations between the market

| | Production orientation | Sales orientation | Marketing orientation | Societal orientation |
|---|---|---|---|---|
| Customer orientation | 0.0300 | 0.1792* | 0.3261* | 0.1438* |
| Competitive orientation | 0.0292 | 0.1632* | 0.2238* | 0.1398** |
| Inter-functional co-operation | 0.0411 | 0.1794* | 0.3853* | 0.2896* |
| Profit emphasis | 0.0808 | 0.1943* | 0.2068* | 0.1046 |
| Responsiveness | 0.0151 | 0.1468* | 0.3441* | 0.1151** |
| Overall market orientation | 0.0642 | 0.2595* | 0.4348* | 0.2265* |

**Notes:** * Significant at 0.001 probability level; ** Significant at 0.01 probability level

**Table VIII.** Market-orientated behaviour and philosophy correlations orientation variables and the other business philosophies were significantly lower. The Spearman correlation coefficients suggest that this is indeed the case, with the market orientation variables more closely allied to a marketing orientation philosophy than any other business philosophy.

In addition, the relationships between the four business philosophies and company performance were also examined (see Table VII). The Spearman correlations suggest that a marketing orientation may be a better predictor of performance than other company philosophies or cultures. However, with the exception of customer loyalty, there is still a slightly stronger relationship between market orientation and performance than marketing orientation and performance, suggesting that encouraging market-oriented behaviour (the implementation of the marketing concept) may improve the corporate culture-performance relationship. Recent research by Greenley and Foxall (1997) suggests that companies with a multiple stakeholder orientation are likely to out-perform those with a single stakeholder orientation (e.g. those with a customer orientation). This suggests that companies may require more than just a marketing philosophy or culture to be successful. Implicit in the market orientation concept is the suggestion that the actions and concerns of both the external market (customers and competitors) and the internal market (functional areas beyond marketing) need to be considered. So, to successfully implement the marketing concept may also require an employee orientation. This will be explored further in the New Zealand context in a follow-up survey.

## Conclusions

The survey results suggest that a valid instrument for measuring the market orientation of New Zealand companies can be developed, based on the most robust elements of the Narver and Slater (1990), Deng and Dart (1994) and Jaworski and Kohli (1993) scales. Market orientation appears to consist of five dimensions and can be measured using 20 questionnaire items which demonstrate content, criterion and construct validity. This parsimonious instrument is a great improvement on the original 44 items used in the survey. Given the (albeit moderate) relationship between orientation and performance, this suggests that the purified scales (see Table VI) developed in this study could be used as a check list to pinpoint areas of weakness which may need to be corrected if companies are to improve their marketing and (to a lesser extent) financial performance.

A customer orientation includes the active encouragement of customer comments and complaints, an after-sales service emphasis, regular evaluation of ways to create superior product/service value and the regular measurement of customer satisfaction levels.

A competitive orientation consists of the regular monitoring of competitor activity, the collection and use of market information on competitors to develop marketing plans and using the sales force to monitor and report competitor activity.

Interfunctional co-ordination relates to how well marketing information is shared between departments, the involvement of all departments in the preparation of business plans and strategies, the integration of the activities between departments, the interaction of marketing personnel with other departments and regular inter-departmental meetings to discuss market trends, developments and customer needs.

A profit emphasis is based on the capability of management information systems to determine the profitability of each major customer, product line, sales territory and distribution channel.

Responsiveness entails being able to respond rapidly to competitor price changes and regularly monitoring customers' product/service needs.

The major implication for managers is that the successful implementation of the marketing concept can produce tangible customer and organisational benefits. Attention to the five dimensions of market orientation outlined above should help managers improve company performance. The development of a parsimonious instrument to measure market orientation should also help managers to pin-point areas of weakness and enable them to take corrective action.

A major limitation of this study is that it is cross-sectional and therefore unable to identify any lags which may occur between developing a market orientation and experiencing the corporate benefits which may flow from this. It also depends to a large extent on single respondents from each company.

There are a number of implications for future research. Given that the orientation-performance relationship in New Zealand appears to be weaker than that indicated in a similar study in Canada (Deng and Dart, 1994), but stronger than that indicated in a similar study in the UK (Greenley, 1995b), this suggests that further replication is required in other country-markets to determine the influences of environmental moderators (Slater and Narver, 1994a). This will be the focus of a separate analysis of the NZMMRP data.

It is also possible that there may be different modes of market orientation, whereby different combinations of customer and competitor orientation, interfunctional co-ordination, responsiveness and profit emphasis levels may produce similar benefits (Greenley, 1995b). It may also be possible to determine the relative importance of the five variables which make up market orientation, depending on the desired outcome. This, too, will be the subject of a further study using the New Zealand data. In both these additional studies, the results will be compared with those obtained by Greenley (1995a, 1995b) in his use of the Narver and Slater (1990) instrument on a large sample of senior UK business executives.

Given indications that there may be differences in perceived levels of market orientation between different functional groups, it would be useful in future research to seek multiple respondents from participating companies.

Finally, given that the implementation of the marketing concept is necessarily a dynamic process, there is a need for serious longitudinal research to assess problems inherent in developing a market orientation and identifying any lags between implementation and observable gains in marketing and financial performance.

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**Appendix: Business philosophy questions adapted from Deng and Dart (1994)**

*1. Production orientation*

The key business success is producing quality goods and services at a reasonable cost. Good products and services sell themselves. If possible, products and services should be standardised to keep costs down.

*2. Sales orientation*

The key to business success lies in persuading potential customers to buy your goods and services through advertising, personal selling or other means. Potential customers must be informed and convinced of the benefits of the products.

*3. Marketing orientation*

The key to business success is to integrate all company activities and personnel towards satisfying customers, while providing satisfactory profits to the firm. The firm should find out what benefits customers want and then provide these benefits through goods and services.

*4. Societal orientation*

The key to business success lies in satisfying important "publics" of the company. These publics include customers, employees, stockholders, government agencies, suppliers and the public at large. All of their interests should be considered when making decisions.