

Copyright is owned by the Author of the thesis. Permission is given for a copy to be downloaded by an individual for the purpose of research and private study only. The thesis may not be reproduced elsewhere without the permission of the Author.

# **THE RELATIONSHIP BETWEEN MARKET RESEARCH AND BUSINESS PERFORMANCE**

**A Thesis presented in partial fulfilment  
of the requirements**

**for the degree of**

**Doctor of Philosophy in Marketing**

**at Massey University, New Zealand.**

**Ganeshasundaram Raguragavan**

**2001**

## **ABSTRACT**

Over recent years, academics and practitioners alike have been taking a growing interest in the evaluation of market research activities. Discussions of the relationship between market research and business performance emphasise a logical link between useful information and good decisions. While many marketers agree with this logic, and think that market research and business performance are positively related, the sole empirical study conducted so far did not confirm this. A possible reason for the lack of confirmation is that different types of market research have different effects on business performance.

This study tested two hypotheses: that the type of research makes no difference to the usefulness of research projects as evaluated by the managers; and that business performance is unaffected by the type of research companies predominantly employ. These hypotheses were empirically tested by assessing the usefulness of the different types of market research projects, and by assessing whether the company performance is affected by the type of research employed by the company. Two substantive issues arise from these assessments: the classification of projects, and of companies, into types, and the evaluation, by type, of usefulness and business performance.

Market research projects conducted by the surveyed companies, were classified as “decision research” or “background research”, based on the purpose for which each project was undertaken and how it was used. The companies were then classified on the basis of the type of research they predominantly commissioned.

The assessment of usefulness indicated that background research is carried out much more often than decision research, yet is regarded as less useful by managers. The assessment of company performance suggested that companies carrying out more decision research perform better than those that place more emphasis on background research. This evidence, if replicated, would justify a re-orientation from background research to decision research.

## ACKNOWLEDGEMENTS

This study could not have been completed without the guidance, help and support of many people. I owe a great debt of gratitude to my supervisors at Massey University, New Zealand, Associate Professor Tony Lewis and Dr Zane Kearns, for their wisdom and considerable assistance at all stages of this project, particularly during some personal ordeals. Their personal ethos was paramount in establishing a publication stream from research undertaken for this thesis. Special thanks are extended to my former co-supervisor, Mr Don Esslemont, who has provided boundless enthusiasm and unwavering support for my study.

I also would like to acknowledge and thank the following people for their continued assistance and encouragement in completing this thesis. In particular, I wish to thank:

1. The Marketing Department at Massey University, in particular Professor Phil Gendall, for research funding and the use of department resources.
2. The Massey University Research Services, in particular Mr Don Brown, for preparing and administering confidentiality agreements with participating organisations.
3. The Chief Executives and management of participating organisations for their trust in my research endeavours, and in particular the assistance of senior managers and staff who so willingly provided me with the information needed to complete this study. Without their time and willingness to participate, this thesis would not exist.

I acknowledge the support of my family during the course of this project. This study could not have been carried out without the support of my wife, Jananee. My two young children, Aarahnan and Aarohan, also played their part by helping me to maintain my humour and sense of perspective during this project. Finally, I am indebted to my mother and posthumously, my father, for their continuous positive support and instilling a spirit of continuance and a value for education. It is therefore appropriate that this study should be dedicated to them.

# TABLE OF CONTENTS

	Page
<b>ABSTRACT</b>	<b>i</b>
<b>ACKNOWLEDGEMENTS</b>	<b>ii</b>
<b>TABLE OF CONTENTS</b>	<b>iii</b>
<b>LIST OF TABLES</b>	<b>viii</b>
<b>LIST OF FIGURES</b>	<b>x</b>
<b>LIST OF APPENDICES</b>	<b>xi</b>
<b>OVERVIEW OF THE STUDY</b>	<b>01</b>
1    INTRODUCTION	01
2    OBJECTIVES OF THE STUDY	02
3    RESEARCH METHOD	04
4    OUTLINE OF THE THESIS	05
<b>PART I - LITERATURE REVIEW: INFORMATION USE, MARKET RESEARCH ACTIVITY AND PERFORMANCE</b>	<b>08</b>
1.1    INFORMATION USE AND MARKET RESEARCH ACTIVITY	08
1.1.1    Information Environment	09
1.1.2    Market Research Defined	12
1.1.3    Types of Market Research	16
1.1.4    Variables Underlying Market Research Use	20
1.1.4.1    Informational Characteristics	20
1.1.4.2    Organisational Characteristics	23
1.1.4.3    Environmental Characteristics	26
1.1.5    Logical Arguments in Support of Market Research Use	28
1.1.5.1    The Marketing Concept	28
1.1.5.2    Market Orientation	32

1.1.5.3	Overview of Logical Arguments in Support of Market Research Use	35
1.1.6	Reservations on Market Research-performance Relationship	36
1.1.7	Empirical Research Into Market Research-Performance Relationship	38
1.1.8	Section Summary	39
1.2	PERFORMANCE MEASUREMENT	41
1.2.1	Measurement of Market Research Usefulness	41
1.2.1.1	Overall Usefulness	41
1.2.1.2	Market Understanding	42
1.2.1.3	Actionable	43
1.2.1.4	Value	43
1.2.1.5	Influence of Managers' Involvement on Project Assessment	44
1.2.2	Measurement of Business Performance	45
1.2.2.1	Profitability Measures of Performance	47
1.2.2.2	Growth As A Measure of Performance	49
1.2.2.3	Influence Firm Size and Market Research Expenditure on Business Performance	50
1.2.2.4	Self-assessed and Subjective Performance Measures	51
1.2.3	Section Summary	54
<b>PART II - RESEARCH METHOD</b>		<b>57</b>
2.1	INTRODUCTION	57
2.2	OBJECTIVES	57
2.3	SAMPLE	58
2.3.1	Sample Size and Response Rate	58
2.3.2	Non-Respondents	59
2.3.3	Sample Characteristics	60
2.3.4	People	60

2.4	PROCEDURE	61
2.4.1	Rapport Development	62
2.4.2	Confidentiality	62
2.4.3	In-depth Interviews and Gathering the Data	63
2.4.4	Initial Questionnaire Design and Piloting the Questionnaire	63
2.4.5	Final Questionnaire Administration	66
2.5	DATA REDUCTION TECHNIQUES	67
2.5.1	Principal Components Analysis	67
2.5.2	Cluster Analysis	70
2.6	LIMITATIONS	73
2.7	SUMMARY	74
<b>PART III - CLASSIFICATION OF PROJECTS AND COMPANIES</b>		<b>76</b>
3.1	CLASSIFICATION OF MARKET RESEARCH	77
3.1.1	Validation of the Research Use Dimensions	79
3.1.1.1	Measures of Market Research Use Dimensions	80
3.1.1.2	Classification of Research Type by Cluster Solution	96
3.2	CLASSIFICATION OF COMPANIES	99
3.2.1	Classification of Companies by Research Type	99
3.2.2	Validation of Company Classification	100
3.2.2.1	Classification of Companies by Cluster Solution	100
3.2.2.2	Classification of Companies by Q-type Factor Solution	103
3.3	SUMMARY	106

<b>PART IV - PROJECT AND BUSINESS PERFORMANCE</b>	<b>108</b>
4.1    PROJECT PERFORMANCE	108
4.1.1    Introduction	109
4.1.2    Measurement of Market Research Usefulness	110
4.1.3    Use of Control Variable - Involvement	110
4.1.4    Project Ratings	112
4.1.4.1    Distribution of Responses	112
4.1.4.2    Ratings	113
4.1.5    Relationship Between Variables - Multivariate Results	116
4.1.5.1    Dimensionality of the Project Ratings	117
4.1.5.2    Data Reduction	118
4.1.6    Section Summary	119
4.2    BUSINESS PERFORMANCE	121
4.2.1    Introduction	121
4.2.2    Measurement of Business Performance	122
4.2.3    Use of Control Variables - Size and Expenditure	123
4.2.3.1    Firm Size Effect	123
4.2.3.2    Market Research Expenditure Effect	125
4.2.4    Performance Ratings	127
4.2.4.1    Distribution of Responses	127
4.2.4.2    Ratings	128
4.2.5    Relationship Between Variables - Multivariate Results	132
4.2.7.1    Dimensionality of the Performance Ratings	132
4.2.7.2    Data Reduction	133
4.2.8    Section Summary	136



<b>PART V - SUMMARY AND CONCLUSIONS</b>	<b>138</b>
5.1    OVERVIEW OF THE PROJECT	138
5.2    SUMMARY OF RESEARCH METHODS	139
5.3    SUMMARY OF RESEARCH RESULTS	141
5.4    CONTRIBUTION OF THE RESEARCH	144
5.5    MANAGERIAL IMPLICATIONS	146
5.6    LIMITATIONS OF THE STUDY AND AREAS FOR FUTURE RESEARCH	147
5.7    FINAL REMARKS	148
 <b>REFERENCES</b>	 <b>149</b>
 <b>APPENDICES</b>	 <b>170</b>

## LIST OF TABLES

Table 2.1	Sample Size and Response Rate	59
Table 2.2	Characteristics of Non-respondents Compared to the Sample	60
Table 3.1	Details of Projects Collected	78
Table 3.2	Variables Measuring Managers' Attitudes Towards Types of Market Research Use	80
Table 3.3	Analysis of Agglomeration Coefficient for Clusters of Variables	97
Table 3.4	Clusters of Variables Measuring Type of Market Research Use	98
Table 3.5	Analysis of Agglomeration Coefficient for Clusters of Companies	101
Table 3.6	Comparison of Results From Project-based and Cluster Classification Procedures	103
Table 3.7	Q-type Solution - Total Variance Explained	104
Table 3.8	Rotated Q-type Factor Matrix	105
Table 3.9	Comparison of Results From Project-based and Q-type Classification Procedures	106
Table 4.1	Details of Projects Collected and Analysed	110
Table 4.2	Level of Involvement by Research Type	111
Table 4.3	Mean Scores of Ratings by Level of Involvement in Market Research Projects	112
Table 4.4	Distribution of Responses by Research Type	113
Table 4.5	Mean Project Ratings by Type of Research	114
Table 4.6	Overall Usefulness by Research Type	114
Table 4.7	Market Understanding by Research Type	115
Table 4.8	Actionable by Research Type	115
Table 4.9	Value by Research Type	116

Table 4.10	Usefulness by Type of Research - Multivariate Manova Results	117
Table 4.11	Correlations Between Rating Variables	117
Table 4.12	Total Variance Explained - Measures of Project Usefulness	118
Table 4.13	Unrotated Factor Matrix	119
Table 4.14	Mean Factor Scores by Type of Research	119
Table 4.15	Firm Size by Type of Companies	124
Table 4.16	Ratings by Firm Size	124
Table 4.17	Market Research Expenditure by Type of Companies	126
Table 4.18	Ratings by Market Research Expenditure	126
Table 4.19	Distribution of Responses by Type of Companies	127
Table 4.20	Mean Performance Ratings by Type of Companies	129
Table 4.21	Overall Performance by Type of Companies	129
Table 4.22	Sales GrowthType of Companies	130
Table 4.23	Return of Total Assets by Type of Companies	131
Table 4.24	Return of Total Sales by Type of Companies	131
Table 4.25	Business Performance by Type of Companies - Multivariate Manova Results	132
Table 4.26	Correlations Between Measurement Variables	133
Table 4.27	Total Variance Explained (Company Performance)	134
Table 4.28	Three-factor Matrix	134
Table 4.29	Mean Factor Scores by Type of Companies	135
Table 5.1	Ranking Types of Research on Usefulness Dimensions	142
Table 5.2	Ranking Types of Companies on Business Performance Dimensions	144

**LIST OF FIGURES**

Figure 2.1	Clusters of Variables Using Ward’s Method	97
Figure 2.2	Clusters of Companies Using Ward’s Method	102

## **LIST OF APPENDICES**

Appendix 2.1	Sample Copy of the Initial Letter
Appendix 2.2	Details of Companies that Refused to Take part in the Project
Appendix 2.3	Sample Copy of the Personal Letter Addressed to the Respondents
Appendix 2.4	New Zealand Market Research Society's Code of Ethics
Appendix 2.5	Sample Copy of the Confidentiality Agreement
Appendix 2.6	Variables Measuring Market Research Use in Organisations
Appendix 2.7	Variables Measuring Business Performance
Appendix 2.8	Variables Measuring Usefulness of Market Research Projects
Appendix 2.9	Sample Copy of the Questionnaire and the Cover Letter
Appendix 3.1	Table of Frequencies for Variables Measuring Research Use Dimensions
Appendix 3.2	Details Results of the Variable Cluster Solution
Appendix 3.3	Details Results of the Cluster Solution
Appendix 3.4	Details Results of the Q-type Factor Solution
Appendix 3.5	Comparison of Results - Subjective and Objective Classifications
Appendix 4.1	Results of Level of Involvement in Research Projects
Appendix 4.2	Details of Cross-tabulations, Chi-square test and anova results
Appendix 4.3	Manova results, Correlations table and Paired sample test
Appendix 4.4	Full Details of the Reliability, KMO, Bartlett tests and the Results of the Factor Solution - Measures of Usefulness
Appendix 4.5	Results of the Effect of Firm Size on Performance Measures
Appendix 4.6	Details Results of the Level of Market Research Expenditure on Performance Measures
Appendix 4.7	Details of Cross-tabulations, Chi-square test and anova results
Appendix 4.8	Manova results, Correlations table and Paired sample test
Appendix 4.9	Details of the Reliability, KMO, Bartlett tests and the Results of the Factor Solution - Measures of Business Performance

# OVERVIEW OF THE STUDY

## 1. INTRODUCTION

There is a widespread belief among business academics, and some practitioners, that more information always leads to better business decisions. Some authors (for example, Deshpande and Zaltman, 1982; Turner, 1991; Glazer, 1991; Maltz and Kohli, 1996; Wierenga and van Bruggen, 1997; Dawes, Lee and Dowling, 1998; Li and Calantone, 1998), go so far as to say that the growth and even survival of today's business entities will depend on their strategies for handling and processing information. Kohli and Jaworski (1990) and Narver and Slater (1990), go so far as to claim that market research information is the important factor in overall business success.

Despite the apparent consensus that marketing information is central to business success, there has been surprisingly little research specifically examining the link between market research and business performance. With very few exceptions, the literature tends to focus on issues surrounding the collection, use, and effects of marketing information. The majority of studies pertain to the sources of information used by marketers, the organisation of research activities, the data collection methods employed and the factors affecting the use of information (Menon and Varadarajan, 1992; Hart and Diamantopoulos, 1993; Goodman, 1993; Hart, Webb and Jones, 1994; Hamlin, 1995; Diamantopoulos and Horncastle, 1997).

Regarding the specific contribution of market research to business performance, the evidence is scattered and conflicting. Some authors claim to have identified a positive relationship between business performance and the use of market research (Hooley and West, 1984; Moorman, 1995; Slater and Narver, 1997). On the other hand, in the only reported empirical investigation of the relationship between market research activity and success, Hart and Diamantopoulos (1993) detected no difference between users and nonusers of market research with respect to measures

of business performance. Some have argued that it is probably the case that different types of market research have different effects (Holbert, 1974; Gandz and Whipple, 1977; O'Dell, Rupell, Trent and Kehoe, 1984), but this argument has not been examined empirically.

Most of the writings that discuss the relationship between market research and business performance emphasise a logical link between useful information and good decisions. In particular, Holbert (1974), Gandz and Whipple (1977), and O'Dell, Rupell, Trent and Kehoe (1984) voice the opinion that research that tests ideas is likely to be better than research that generates ideas, but they did not tested this opinion empirically. This thesis develops this opinion, formulates it so it is amenable to empirical testing, and carries out an empirical test.

## **2. OBJECTIVES OF THE STUDY**

This study explores the relationship between market research and business performance; specifically it measures how type of research that is carried out by a company affects the company's performance. Paralleling the overall objective is two research hypotheses and are set out below.

- H1<sub>o</sub>     The type of research makes no difference to the usefulness of market research projects.
- H2<sub>o</sub>     Company performance is unaffected by the type of research they predominantly employ.

In order to test these hypotheses a number of sub-objectives have been formulated.

1.        To achieve a robust classification of the market research projects under investigation.
2.        To achieve a robust classification of the companies under investigation.
3.        To formulate a measure of performance with respect to the projects.

4. To formulate a measure of performance with respect to the companies.
5. To assess how project type affects project performance.
6. To assess how company type, as classified by the research type they predominantly employ, affects business performance.

Thus, the study examines the extent to which performance differences can be explained by variations in the type of market research. Type of research is defined on the basis of purpose for which the research is undertaken and on the use to which it is put. The study views performance from two different perspectives; from the perspective of particular market research projects; and from the perspective of particular companies, that base their research predominantly on one type of research or the other. Performance is defined with respect to the usefulness of market research projects and the self evaluation of financial and market performance companies.

## **Justification**

Barwise (1995) points out that much marketing practice, and much of what is taught in marketing departments is based on beliefs about the truth of generalisations which have not been empirically tested, except anecdotally. While most marketers think that market research and business performance are positively related (Hooley and West, 1984; Hooley and Lynch, 1985; Baker, Hart, Black and Abdel-Mohsen, 1986; Baker, Hart and Black, 1988; Hill, 1988; Lehman, 1989), the sole empirical study (Hart and Diamantopoulos, 1993) could not confirm the link and ended with a call to extend research in this area. The Hart and Diamantopoulos study did not distinguish between types of research and the current study extends their research in that direction. From the conceptual base provided by the literature on the implementation of the marketing concept, and through an extension into marketing performance, this study attempts to test a fundamental tenet of the marketing concept. The task of evaluating the usefulness of different types of



research and estimating the relationship between types of market research and business performance is a crucial issue for marketers.

### **3. RESEARCH METHOD**

A survey was used to collect the data for this study. In order to gather information on market research use and business performance, a list of company names was compiled from the *New Zealand Market Research Society Directory* (1998) and from the *New Zealand Business Who's Who* (1998). Market research companies were excluded and agreement to participate was sought from 87 substantial client companies. Of these, 53 refused to participate or had not done any research, leaving a sample of 34 companies to work with. After a critical review of all 3018 market research projects identified from the participating companies, follow-up interviews were held with respondents to confirm and clarify responses, as well as to gather other qualitative data on the operational aspects of research.

#### **Operationalisation**

The issues discussed above are addressed in this study by focusing on the constructs that may be associated with the use of market research and the assessment of business performance. The constructs were developed and operationalised as follows:

Based on the literature review and the information obtained from participants about the market research projects, the research projects were classified as “decision research” or “background research”. Background research refers to the indirect use of information that provides “general enlightenment” to develop a manager's knowledge base (Menon and Varadarajan, 1992). Decision research refers to its direct application to marketing decisions; such information can be used to make, implement or evaluate marketing decisions (Moorman, 1995). This classification

was accomplished by the researcher reviewing each project critically. The validity of this classification was examined by cluster analysis based on 37 statements (adapted from a questionnaire developed by Diamantopoulos and Souchon, 1999) to identify similar groups of variables with respect to managers' attitudes towards research types. The companies were then classified by the researcher into three groups according to the proportion of decision research they had carried out. The validity of this classification was examined by considering the underlying attitudes held by the respondents towards market research use. The same 37 statements were used to classify the companies by Q-type factor analysis and cluster analysis.

In order to evaluate the usefulness of market research, a sample of 775 projects was selected, of which 342 were decision research, and 433 background research. These were assessed by participants using five-point Likert scales. The measures include four usefulness dimensions - "overall usefulness", "market understanding", "actionable" and "value". The choice of these constructs is based on those used by Deshpande and Zaltman (1982). The effect of manager involvement in the particular project was also examined to investigate the possible bias that this might introduce into the manager's assessments.

Business performance was assessed using a five-point Likert scale on four measures - "overall performance", "sales growth", "return on total sales" and "return on total assets". These were used because of their extensive use in the literature concerning the outcomes of market orientation, see for example, Narver and Slater (1990); Kohli and Jaworski (1990); Jaworski and Kohli (1993). The effects of "firm size" and the level of "market research expenditure" on business performance were examined to allow for possible moderating effects.

#### **4. OUTLINE OF THE THESIS**

The overall objective of this study is to examine the relationship between research type and usefulness in terms of project performance and business performance. Two

substantive issues arise from this objective: the classification of research into types; and the evaluation of the research by type. On the basis of these issues the thesis is presented in five parts. Part I describes the background of the study and the theory development. Part II discusses the research methodology. Part III describes classification issues and procedures. Part IV presents the results and discusses project performance in Section 4.1 and business performance in Section 4.2. Part V concludes with a summary and discussion of the study objectives and the research outcomes. These parts and sections are more fully described below.

**Part I - Literature Search and Theory Development.** This part identifies and reviews prior research on the general topic of market research, its usefulness and business performance. Section 1.1 reviews literature on types of research use, the variables underlying market research use in organisations, and the various theories and hypotheses advanced in the literature on the marketing concept and market orientation on the link between market research use and performance. The empirical studies conducted on the relationship between market research and business performance, the research problem and its importance as a topic for academic investigation are also discussed. Section 1.2 reviews literature on the alternative perspectives on performance measurement. The section begins with the identification and development of measures of market research usefulness and continues with a discussion of the evaluation measures of project performance. The section then reviews the literature on the measurement of business performance.

**Part II - Research Method.** This part outlines the way the data were collected and analysed to achieve the tasks set out in Parts III and IV. It describes the selection of the sample, the sources of data, the statistical procedures employed, the measurement of variables used, the development of the interview instrument, the conduct of the interviews, and the analysis of data. The rationales for using the particular statistical, interview and document analysis methods in this project are explained.

**Part III - Classification of Projects and Companies.** This part describes a two-fold system of classification of research projects and of companies. Section 3.1 develops a classification system that forms the basis for the classification of research into types. This section then justifies the validation process, continuing with discussion of statements used for validation. Section 3.2 describes the classification of companies according to the proportion of research projects undertaken by the organisations that fall into the classes identified in Section 3.1. It then justifies the validation process, examining the validity of the classification by considering the underlying attitudes towards market research held by the respondents.

**Part IV - Project and Business Performance.** Part IV examines the relationship between the classifications developed in Part III and the respondents' ratings of project usefulness and business performance. Managerial perceptions of project usefulness and business performance form a major component of this part and are discussed from a number of perspectives. Section 4.1 begins with the discussion of the measures of market research usefulness and continues with the evaluation of project performance, distinguishing the usefulness of different types of researches. Section 4.2 discuss measures on business performance, and continues the investigation of the relationship between companies using different types of research and the measures of business performance.

**Part V - Summary and Conclusions.** This part revisits the justification for the research, summarises the results of the study, discusses relevant managerial and theoretical implications, suggests areas for future research, points out the study's key limitations and concludes with a summary of research outcomes.

## **PART I**

### **LITERATURE REVIEW: INFORMATION USE, MARKET RESEARCH ACTIVITY AND PERFORMANCE**

This part identifies and reviews prior research on the general topic of market research, its usefulness and business performance. Section 1.1 reviews literature on types of research use, the variables underlying market research use in organisations, and the various theories and hypotheses advanced in the literature on the marketing concept and market orientation on the link between market research use and performance. The empirical studies conducted on the relationship between market research and business performance, the research problem and its importance as a topic for academic investigation are also discussed. Section 1.2 reviews the literature on the alternative perspectives on performance measurement. The section begins with the identification and development of measures of market research usefulness and continues with a discussion of the evaluation measures of project performance. The section then reviews the literature on the measurement of business performance.

#### **1.1. INFORMATION USE AND MARKET RESEARCH ACTIVITY**

Much literature supports the notion that market research and business performance are positively related. Hooley and Lynch (1985) claim the level of use of market research is positively related to company effectiveness. In addition, Baker, Hart, Black and Abdel-Mohsen (1986) argue that it is logical to hypothesise that market research has a positive influence on business performance. Baker, Hart and Black (1988) claim that successful companies carry out market research, in sharp contrast to less successful companies. The collective message sent by this stream of research is that “those companies with zero or low usage could significantly improve their performance by making better use of market research” (Hooley and West, 1984, p. 347). Although most of the relevant literature supports the notion that market

research and business performance are positively related, relatively little empirical work has been conducted. The sole critical empirical study (Hart and Diamantopoulos, 1993) could not confirm the link, and ended with a call to extend research in this area.

Support for the link between market research and business performance is part of a much wider discussion of the role of information in achieving competitive advantage and is now discussed.

### **1.1.1. Information Environment**

Hogarth and Makridakis (1981a) state that the “central theme of this generation” has been the onset of the “information age” in which information replaces matter and energy as the primary resource of society. Indeed, Menon and Varadarajan (1992) describe the society in which we live as an information society. According to them, better and more effective use of information is critical to being more market-oriented and to succeeding in an intensely competitive business environment.

In an early article on the role of information as a marketing resource, Kotler (1966, p. 63) states the “company’s effectiveness in the marketplace is increasingly at the mercy of the executive’s market information”. Sixteen years later, this claim was reiterated by Deshpande (1982, p. 91), according to whom “the growth and even survival of today’s business entities will depend on their strategies for handling and processing information”. Deshpande claims good information is the raw material used by management in deciding a company’s policy and day-to-day operations. In a marketing context, Peters and Waterman (1982) claim that keeping “close to customers” is one of the critical factors identified during research as helping to make the American companies they surveyed outstandingly successful over many years.

Schewe and Smith (1980) state that the increasing pace of change has increased pressure on marketers to become more competitive through better decision-making. The importance of effective information use cannot be overemphasised if costly mistakes are to be avoided and opportunities not bypassed (Douglas and Craig, 1983). This, therefore, highlights the need for information as the basis for effective decision-making. Garvin and Bermont (1983) speak of information consciousness and assert that every problem relating to a business or profession ultimately boils down to an information problem. They say, “we think we have decision problem. But if we had a sufficient amount of information all correct decisions would be inherent in that information. That’s why it’s so important, when thinking about problems, to think information. That’s information consciousness” (p.57).

Bentley (1986) defines information as being data that is meaningful and useful to the user and which, ideally, should be comprehensive yet concise, accurate, applicable, timely and available. As such information is rarely available in such an ideal form, organisations have had to develop either formal or informal methods to collect, analyse and disseminate it. Though there have, undoubtedly, been many successful management decisions based on “gut reaction”, the consensus amongst management and marketing theorists (Stoner, 1978; Kast and Rosenzweig, 1979; Deshpande and Zaltman, 1982) is that objective information is a prerequisite basis on which to found management decisions which will reduce risk and uncertainty. Their work suggests companies undertake formal investigations because managers expect the resulting information to reduce uncertainty in decision-making. On an informal basis too, Johanson and Vahlne (1977) suggest that management decisions themselves are initiated by knowledge of opportunities or threats and that knowledge gives rise to the evaluation of alternative responses.

The UK - based study by Oasis (1989) found that while the majority of organisations were aware of the importance of information to marketing, a disappointing few had achieved success in using information as a core business resource integrating and driving the company’s total marketing efforts. It was

suggested that "...before a company can begin to make use of computers in the marketing area, it must have strong appreciation of the value of information to marketing" (p. 3). The study also notes that ".....the degree to which companies regard market information as a vital strategic asset will inevitably affect the way they are able to capitalise on the resource for competitive advantage" (p. 6). Czinkota and Ronkainen (1990, p. 15) state that "the single most important cause for failure in the marketplace is insufficient preparation and information.... Failures continue to occur because firms either do not believe that market research is worthwhile or face manpower and resource bottlenecks that impede research".

Kotler (1988) suggests that three developments, the move from local to international marketing, the increasing focus on buyer wants as opposed to buyer needs and the growth of non-price competition, have increased the need for information. Hamel (1991) also argues that a firm's ability to change rapidly and the extent to which it accumulate information will determine competitiveness to a large extent. According to Badaracco (1991), competitive firms succeed by developing, improving, protecting, and renewing market information.

Lewis (1990), in discussing the concept of the "intelligence corporation", also notes the critical importance of information in today's global marketplace. Barabba and Zaltman (1991) argue that "more than ever before", companies must listen to and correctly interpret the "voice of the market". They say that companies must be fully attuned to the signals coming from customers, dealers and competitors in order to make the right decisions at the right time. Accordingly, firms which lose touch with the market, either by ignoring or misinterpreting its signals, will fail in today's competitive environment. Churchill (1991) states market research is a major source of information that affects marketing decision-making, in that it serves as the firm's formal communication link with the environment.

Anthony (1994, p. 23) states that "in today's turbulent trading conditions, firms should build up a comprehensive and dynamic knowledge base about their markets



and about those who consume their products. Armed with specific knowledge, effective targeting strategies can be developed". He states that the discipline of fact-based analysis will become increasingly important in the future to most customer oriented companies and, it might be added, to all organisations which seek to attract profitable business or, perhaps, serve efficiently in the public sector. According to Anthony, this re-orientation of business activities demands the more analytical and systematic approach provided by market research. It is market research, founded on an assessment of customer requirements, with the objective of maximising net profits by providing customers with products and services that really fulfills customer needs.

Barabba (1994) claims managers can create dynamic, market-based decision-making mechanisms that lead to competitive advantage. He offers a "new strategic approach" to marketing, based on his principle that market leadership can be attained by transforming information into shared knowledge. Civi (2000) claims that the success of businesses in an increasingly competitive market place depends critically on the quality of the market knowledge which those organisations apply to their key business processes.

The views summarised so far emphasise that market research is considered to be the process of "listening to the voice of the market" and conveying information about it to appropriate management. The writers, as a whole, conclude that better decisions can be made when this is done. In spite of the critical role of information stressed in these reviews, little empirical research has been conducted to substantiate this conclusion.

### **1.1.2. Market Research Defined**

The literature discusses various definitions of market research. A review of these definitions is included for completeness. It shows many authors think it crucial to settle the matter of a definition.

The American Marketing Association has defined market research as “the accurate, objective and systematic gathering, recording and analysing of data about problems relating to the marketing of goods and services” (AMA, 1961). This definition was echoed in the British Institute of Management’s definition of the following year: “The objective gathering, recording and analysing of all facts about problems relating to the transfer and sale of goods and services from producer to consumer” (BIM, 1962).

Buzzell (1963) expresses concern over the term “research” adopted to describe the activities of data collection and evaluation for marketing decisions. He felt this term was inappropriate for what essentially is some distance removed from pure academic research conducted in a research laboratory under controlled conditions. Instead, he suggests the function of market research is more analogous to military intelligence which had the duty of obtaining complete, accurate and current information for the development of strategic plans.

In reviewing the American Marketing Association’s definition, Kotler (1967) commented that while the major activities of market research are clearly stated, its objectives are less well articulated. He offered the following definition, which emphasises the purpose of market research, viz. to help management make better decisions: “... systematic problem analysis, model building and fact-finding for the purposes of improved decision-making and control in the marketing of goods and services” (p. 17). Market research is thus broadly construed by Kotler to include understanding the characteristics of organisational aspects of the environment relevant to the development of sensitivity to the market.

Another definition of market research, specifically related to industrial products, was made by the Industrial Marketing Research Association - now subsumed into the Business and Industrial Group of the Market Research Society - as follows: “The systematic, objective and exhaustive search for and study of facts relevant to any problem in the field of industrial marketing” (IMRA, 1969).

Zaltman and Burger (1975) point out that these market research definitions do not include the pre-research analysis necessary to define what information should be gathered, recorded and analysed. Therefore, they propose a wider definition which assumes the marketing organisation is concerned with its environment as follows: “market research involves the diagnosis of information needs and the selection of relevant interrelated variables about which valid and reliable information is gathered, recorded and analysed” (p. 3). In this definition, market research also includes the analysis and evaluation of action taken on the basis of information.

Following this approach, the American Marketing Association subsequently approved the new definition of market research - “Market research is the function which links the consumer, customer and public to the marketer through information - information used to identify and define marketing opportunities and problems; generate, refine and evaluate marketing actions; monitor marketing performance; and improve understanding of marketing as a process” (AMA, 1987).

Green, Tull and Albaum (1988, p. 2) defined market research as “a systematic and objective search for and analysis of information relevant to the identification and solution of any problem in the field of marketing”. Market research can be considered to be primarily fundamental or primarily applied. Fundamental research, frequently called basic or pure research, seeks to extend the boundaries of knowledge in a given area with no necessary immediate application to existing problems. Applied research (which they also call “decisional research”) attempts to use existing knowledge as an aid in the solution of some given problems.

Malhotra, Hall, Shaw and Crisp (1996) define market research as the systematic and objective identification, collection, analysis and dissemination of information for the purpose of assisting management in decision-making related to the identification and solution of opportunities and problems. Zikmund (1996) defines market research in a similar fashion, as one of the principal tools for linking the consumer

and the general public to the market through information used to identify and define market performance and improve understanding of marketing as a process.

Hamlin (2000) claims that market research is used as part of a decision-making process, usually in the deployment of company assets to achieve a specific result. He also argues that market research should be defined with reference to the decision-maker, who is the ultimate consumer of such research. This claim allows him to make the following pragmatic definition of the scope of market research: “Effective market research supports the rational selection of a course of action that will lead to an outcome that is satisfactory to the decision-maker” (p. 1040).

Hamlin (2000) argues that if the above definition is used, then any market research should be designed to achieve the following list of six prerequisites.

- ▶ The research must be based on an accurate description of desired outcome for the decision-maker.
- ▶ The research must exclusively test the feasibility of at least one course of action that could produce this outcome.
- ▶ The research must accurately test the feasibility of one or more alternative courses of action that could produce this outcome.
- ▶ The research results and their implications should be clear to the decision-maker.
- ▶ The decision-maker must be able (and willing) to use these results and implications logically in their decision-making process.
- ▶ The research must be cost effective in terms of the resources of money and time devoted with respect to the risk represented by the decision.

All these “definitions” have much in common: they state that market research is essentially about the disciplined collection and evaluation of specific data in order to help companies better understand customer needs. In these definitions, market research includes the following: specifying the information required to understand customer needs; designing the method for collecting the data; managing and

implementing the data collection process; analysing the results; and communicating the findings and their implications.

The following section reviews the literature pertaining to the types of market research and traces the development of the typology used to classify market research in this study.

### **1.1.3. Types of Market Research**

There is great diversity in the way research use is defined (Deshpande and Zaltman, 1982; John and Martin, 1984), measured (Deshpande and Zaltman, 1982, 1987; Larsen, 1985; Wilton and Myers, 1986) and categorised (Knorr, 1977; Rich, 1977; Deshpande and Zaltman, 1982, 1987; Wilton and Myers, 1986; Lee, Acito, and Day, 1987). For instance, research use has been conceptualised or defined by (1) the extent to which research is used directly to guide behaviour and make decisions; (2) the extent to which the information provided leads to the reduction in uncertainty by decision-makers; and (3) the extent to which there has been specific changes in behavioural, cognitive and affective areas as a result of the work.

The literature on research use has proposed the existence of three types of research use, namely, *instrumental*, *conceptual* and *symbolic use* (Deshpande and Zaltman, 1982). Instrumental research use refers to the direct application of research findings and conclusions to solve a particular problem. In other words, the problem's solution will come through the research findings (Caplan, Morrison and Stambaugh, 1975). Moorman (1995) also describes instrumental research use as the direct application of research findings to marketing strategy decisions; such research can be used to make, implement or evaluate marketing decisions. When research is used instrumentally to evaluate marketing decisions, the outcomes are assessed as positive or negative and the reasons for those outcomes identified (Zaltman and Moorman, 1988). Using information to evaluate alternative courses of action is

thought to be a powerful learning tool for managers since it is based on observed cause-effect relationships over time (Fiol and Lyles, 1985; Huber and Daft, 1991).

Conceptual research use refers to the lateral application of available research findings, which are not directly related to a problem or relevant to a given situation or period in time (Beyer and Trice, 1982). It also refers to the indirect use of information that provides “general enlightenment” in developing a manager's knowledge base (Menon and Varadarajan, 1992). This use is subtle and indirect and therefore managers may not be able to identify specific effects or “observe” the influence.

However, there are times when research findings are used outside their intended purpose and used more symbolically (Menon and Varadarajan, 1992). Symbolic research use occurs when information is used to justify a decision previously made, perhaps on the basis of the decision-maker's instinct (Knorr, 1977; Weiss, 1977), or when information is distorted in order to support the decision-maker's opinion in the eyes of subordinates, colleagues and superiors (Piercy, 1983; Goodman, 1993).

In a similar way, but using different terms, Menon and Varadarajan (1992) conceptualise research use along three dimensions: action-oriented use, knowledge-enhancing use and affective use. They claim this differentiation is interesting and critical when one is attempting to evaluate the type, extent and effect of research use in companies.

Menon and Varadarajan (1992) claim action-oriented use is demonstrated by changes in the user's activities, practices or policies directly linked to the findings and implications of a study. They consider instrumental use as one form of action-oriented use and view it in terms of congruous (use of information in a manner consistent with the intent and implications of the study findings) and incongruous

use (intentionally distorted use of information). Though incongruous use is traditionally considered as a type of symbolic use, the authors view it as a form of instrumental use if the information is used directly in decision-making.

Menon and Varadarajan (1992) believe knowledge-enhancing research use, akin to conceptual use, results in the user's improved knowledge and understanding of the issues and themes of the study. Knowledge enhancement could happen through inspection of the results and/or through the research process.

Affective use of research is viewed as use with the intent of "feeling good" (Menon and Varadarajan, 1992). Like knowledge-enhancing use, affective use also has two subdimensions; outcome-based and process-based. Outcome-based affective use is based on the manager's overall satisfaction and confidence level created by the study findings or implications; for example, information from research studies could be used to make the manager feel more comfortable with a decision made prior to the conclusion of a study. Process-based affective use is the overall positive level of satisfaction and confidence existing because research was done. These effects occur during the conduct of a research study and over a period of time thereafter and they also have a major influence on the researcher-manager relationship and interaction, which is critical for research use (Deshpande and Zaltman, 1982).

The literature is divided as to the distinct and simultaneous existence of instrumental and conceptual uses of information. For example, Weiss (1981) places instrumental and conceptual use at two opposite ends of a continuum representing directness of use. Dunn (1986), on the other hand, posits that instrumental use is just a particular type of conceptual use. Alternatively, Larsen (1985) claims that the different types or the number of dimensions identified are of no consequence, but it is the acknowledgement that alternative types exist that is important.

Menon and Varadarajan (1992) point out that there has been an increase in research efforts to understand the issues surrounding research use; however, a critical

evaluation of these studies reveals that their measurement of the construct “use” is problematic. Most of the marketing studies define use in narrow terms, but some operationalise and measure “use” in broader terms. Specifically, some of the studies employ broad measures of use that do not discriminate between the direct (instrumental) and indirect (conceptual) effects of a research report on the decision-making process (Deshpande and Zaltman, 1982; Lee, Acito and Day, 1987) or between instrumental, conceptual and symbolic use (Zinkhan, Joachimsthaler and Kinnear, 1987).

Despite seemingly general recognition of the multidimensional nature of research use, most of the previous work has been focussed on a single dimension of the construct, namely instrumental use (Deshpande and Zaltman, 1982, 1984, 1987). Not until very recently were both instrumental and conceptual uses of information considered in a single study (Moorman, 1995). In her study, Moorman (1995) attempted to measure organisational information processes, as opposed to individual information use, and her work is therefore not directly comparable to previous studies.

Weiss (1981) and Menon and Varadarajan (1992) claim that limiting the measurement to instrumental use because it is easier to measure than conceptual or symbolic forms of use is not an adequate justification, especially if it leads not only to measuring use incompletely, but also to measuring a form or type of use that may be less likely. The literature thus presents a gap in the measurement of decision-makers’ information use since (1) neither conceptual nor symbolic use have been explicitly considered in marketing studies of information use, and (2) both instrumental and conceptual uses of information are not considered in a single study.

The following section reviews literature pertaining to variables underlying market research use in organisations.



#### **1.1.4. Variables Underlying Market Research Use**

The use of marketing information by managers and the underlying variables influencing its use has received increased attention in the literature (e.g., Maltz and Kohli, 1996; Wierenga and van Bruggen, 1997; Dawes, Lee and Dowling, 1998; Li and Calantone, 1998). The literature suggests three areas of research that explain the underlying variables influencing market research use in organisations (O'Reilly, 1983; Menon and Varadarajan, 1992). These underlying variables measure informational, organisational and environmental characteristics.

##### **1.1.4.1. Informational Characteristics**

Mintzberg (1971, 1975) states that one of the reasons managers do not use information as they should is because of problems in the functioning of organisations. He claims that the existence of power and politics within the organisation causes managers to ignore or distort information related to overall effectiveness. Political tactics such as withholding or distorting information and even overwhelming or inundating others with information may be frequently used (Allan, Madison, Porter, Renwick and Mayes, 1979).

Piercy (1980, p. 18) proposes that “...marketing information is no more and no less than a tool in the organisational power struggle”. This is shown in the control of the premises on which decisions are made, controlling the choice of alternatives to be considered and controlling information about the alternatives - the “hidden agenda” (Pfeffer, 1981). It is suggested that because of the political and power dimensions of marketing information, “non-rational” considerations often surround the search for and use of marketing information (Piercy, 1983). Davis and Olson (1985) also suggest that rather than acting with complete rationality, utilising all the information available in making decisions, there is evidence that people often depend on past experience, inductive inference and intuition in making decisions.

Deshpande and Jeffries (1981) studied marketing managers' use of market research information and identified five factors apparently influencing the use of market research: (1) conformity to expectations, (2) clarity of presentation, (3) research quality, (4) political acceptability and (5) challenge to the status quo. Subsequently, Deshpande and Zaltman (1982) assess the linkages of these factors to research use and report that all five factors were significantly related. Deshpande and Zaltman also found that managers tended to use more information if it was deemed technically adequate, if it confirmed prior expectations and if the managers worked closely with the researchers. In an extension of this work, Deshpande and Zaltman (1984) compare the perceived influence of the above factors on managers and researchers. In general, market researchers did not share managers' views on the importance of political acceptability and conformity to prior expectations.

Some research on information use has focused on the "two communities" theory which maintains that a major source of difficulty in research use is the fact that information producers, e.g., researchers, are from a basically different culture or community than the consumers or users of information and each has different values and interests (Myers, Greyser and Massy, 1979). Zaltman and Moorman (1988) conclude, after 170 interviews with research users and providers that one phenomenon, personal trust, is potentially the most important behavioural factor affecting research use. Later Moorman, Deshpande and Zaltman (1993) studied the importance of trust to research utilisation and found that there are effects stemming from the low levels of trust exhibited by marketing managers toward their research colleagues. These effects include laying off researchers and minimising the role of research in decision-making.

Moorman, Zaltman and Deshpande (1992) claim that trust in research providers is important to research use because trust reduces perceived uncertainty and the perceived vulnerability associated with using market information. They further state that uncertainty may arise for several reasons: first, managers often feel they have more information available than is necessary for decision-making; second, advanced

information technologies and increasingly sophisticated research techniques make it difficult for managers to use research; third, problems of volume and sophistication are exacerbated by a growing variety of customers of market research who are unfamiliar with research or its use in decision-making; and, finally, more and more firms trim operating expenses by relying on external research organisations rather than internal staff. The result is often shorter term relationships with researchers who lack experience with the firm and perhaps do not have access to information that could assist in creating and using research in more effective ways.

Hogarth and Makridakis (1981a) state that time pressure causes complexity in the decision-making environment which can lead to superficial information processing. They note that the negative impact of time pressure on the ability to benefit from market research decreases in later decision-making periods. Bruggen, Smidth and Wierenga (1998) claim that time pressure has a negative impact on performance, for two reasons: (1) highly time-pressured decision-makers were less able to set the values of the decision variables in the direction toward improving profit and (2) they seemed to be more susceptible to using decision-oriented research.

In contrast to the preceding studies, which addressed macro issues pertaining to research use in firms, several studies in marketing have also explored micro issues, such as the use of research by individual decision-makers. Wilton and Myers (1986) studied the role of instrumental and conceptual research tasks in decision-making and found that new information was tolerated by managers and, more specifically, led to increased utilisation. Other individual factors found to be significantly related to research use include risk aversion, cognitive differentiation and involvement in the projects (Zinkhan, Joachimsthaler and Kinnear, 1987). A laboratory-based study on the use of marketing knowledge, by Lee, Acito and Day (1987) found greater use of market research information when it confirmed prior beliefs, regardless of its technical quality. Similarly, Perkins and Rao (1990) found experience related to decision-making and types of information used by marketing managers.

The literature suggests that informational characteristics such as withholding or distortion of information, dependence on experience, inductive inferences and intuition, conformity to expectations, research quality, management acceptability, researcher-manager relationship, time pressure and type of information search affects the use of marketing information by managers in organisations.

#### **1.1.4.2. Organisational Characteristics**

Several studies exploring the use of market research in organisations make claims about the role of organisational variables in research use. Albaum (1964) suggests the need to organise in a manner facilitating the flow of information, while Nonaka and Nicosia (1979) propose that there cannot be optimal or near-optimal management decisions without near-optimisation of the underlying organisational designs. Deshpande and Zaltman (1982) argue that organisational structure variables have a particularly large effect on research use. Piercy (1983, 1985) contends that the organisational setting influences both the search for, and use of, information.

John and Martin (1984) state a culture or climate that promotes change and innovative behaviour would encourage the active exchange of ideas and increase communication flows. Such a pro-information and pro-innovation orientation would be reflected in a general atmosphere of inventiveness, creativity and willingness to take chances. Managers operating in such a culture would not only actively promote exchange of information and boundary-spanning behaviour, but would also be willing to adopt and use ideas and concepts that may have originated outside their immediate work group. Deshpande and Webster (1989) argue that organisations which welcome change are perhaps more likely to possess a culture which encourages the gathering and sharing of information through increased communication flow and idea exchange.

Deshpande and Zaltman (1982) examine such factors as product life-cycle, maturity, research purpose and report attributes, finding that the use of market research is affected by the organisation's structure and the interaction between researcher and manager. According to them, the degree of centralisation and formalisation (or lack thereof) seems to outweigh all other factors. Deshpande (1982) claims that the effects of formalisation and centralisation on the utilisation of research and knowledge within organisations are widely recognised as potent.

Consistent with the above view, John and Martin (1984) observe that the structural dimensions of organisations, such as formalisation, centralisation and spatial differentiation, have significant effects on the use of marketing information. Menon and Varadarajan (1992) also note that organisational structure is thought to affect the task structures of decision-makers, as well as the amount and type of research use. They state that the key variables affecting market research use are formalisation and centralisation.

Woodman, Sawyer and Griffin (1993) state that flexible and relatively informal management structures facilitate (1) fast and effective internal communication and the willingness to accept change and (2) interdepartmental communication and the frequent and unhindered sharing of information. Arguably, firms operating in such flexible systems are more adventurous in their information gathering activities, more critical in their interpretation of information and more likely to encourage individual initiative, which in turn, intensifies the thirst for information (Bennett and Gabriel, 1999).

Deshpande and Zaltman (1982) found that more decentralised firms, where lower level managers are actively involved in research activities, make greater use of new information than centralised firms. These firms encourage lower-level managers to take a greater part in research activities, thus ensuring their commitment to the results of such activities. Diamantopoulos and Horncastle (1997) also argue in

favour of the delegation of decision-making authority as a way of improving market information use within an organisation.

The alternative position alleges that decentralisation leads to a policy vacuum, in turn leading to less research use and information search. Decentralisation, with its small jurisdictions and departmental rivalries, can lead to a situation rendering relevant research findings inaccessible to other divisions that could logically benefit from using the results (Corwin and Louis, 1982). Fletcher, Wright and Desai (1996) argue that centralisation of decision-making, in particular, facilitates the implementation of innovations as it enables the development of precise and definite control procedures throughout a company. Concomitantly, centralisation assists in the introduction of any innovation which requires organisational standardisation for its proper adoption (Parthasarathy and Sohi, 1997).

Hooley and West (1984) point out that the types and sources of information used by companies vary across different industries. They found a high level of reliance on internally conducted, rather than externally commissioned, research. John and Martin (1984) also confirm that the source of information and the reliance on those sources has been shown to affect the perceived credibility and usefulness of the information. They further observe that, as task complexity increases, a decision-maker is likely to solicit and gather information from more sources. Menon and Varadarajan (1992) note that not only the source of information, but also the location of the source determines the quality of the information.

The literature suggests organisational characteristics such as organisational structure (centralisation, formalisation and partial differentiation), organisational culture, product life-cycle, maturity, type of industry, company size, type and source of information affects research information use in organisations.

#### **1.1.4.3. Environmental Characteristics**

Daft and Macintosh (1981) propose the concept of environmental ambiguity whereby managerial uncertainty increases not because of lack of information, but because of lack of definiteness about the “right” way to perform a task or unsureness about questions that need to be addressed to get the “right” answer. According to Milliken (1987), in an environment characterised by greater dynamism, top managers will experience much more uncertainty or lack of information relative to the current state of the environment, potential impact of developments, and strategic options available in any given circumstance. Daft and Huber (1987) suggest that the highest levels of information processing occur when the organisation is (1) in a rapidly changing environment, (2) in an emerging industry, or (3) undergoing rapid technological development. Although greater environmental instability will lead to greater use of information, managers are also more likely to be cautious toward information because of changing situations (Daft, Lengel and Trevino, 1987).

Modifying the finding that market intelligence has general and positive effects on business performance are two theoretical works (Day and Wensley, 1988; Kohli and Jaworski, 1990) implying that an unstable environment might affect the market intelligence-performance relationship. On the basis of Day and Wensley’s and Kohli and Jaworski’s studies, it can be considered that there are two principal possible moderating effects of a volatile environment on the market. First, an unstable environment (the rate of market growth, market turbulence, technological turbulence and competitive hostility) could affect the strength of the market intelligence-performance relationship (Kohli and Jaworski, 1990). Second, Day and Wensley (1988) suggest the competitive environment could affect the necessary focus of market intelligence within a given magnitude of market orientation. This implies that a greater benefit might be realised from generating and acting on customer-oriented information.

Day (1991) claims businesses that can learn rapidly about their markets and act on that information are well positioned for competitive advantage. Managers cope with vast amounts of this rapidly changing and often conflicting market information through the processes of selective attention and simplification. These processes often lead to adoption of either a customer or a competitor-focussed market perspective, determined by the manager's perception of the relative importance of customer or competitor analysis to a business's ability to create and sustain superior value for customers.

Han, Kim and Srivastava (1998) put forward the premise that a market-oriented business culture facilitates information gathering and innovativeness and they expect the relationship to appear even stronger in turbulent environmental settings. The rationale for their argument is that at the core of market orientation is market intelligence, which entails generation and dissemination of and responsiveness to market information (Kohli and Jaworski, 1990).

Ahituv, Zif and Machlin (1998) note that the key feature of market-oriented business is the interaction with the external environment by capturing the significant signals. They believe environmental dynamism moderates the information and performance relationship. They claim investment in market research may be an effective way to provide timely and relevant information to top managers and thus to help reduce uncertainty. In addition, they note that investment in market research will be effective in a dynamic environment due to its preemptive benefits. Xu (1999) also argues that systematically gaining understanding of the changes in the marketplace can enable a company to adjust its market position and strategy promptly and appropriately to maximise customer satisfaction while maintaining a sustainable and competitive posture in the environment. These findings suggest environmental stability or turbulence affect the manager's need for more information and thereby the managerial propensity to seek and use information.

The literature suggests that the variables underlying environmental characteristics such as - environmental uncertainty, the rate of market growth, market turbulence,



technological turbulence, and competitor hostility affects information use in organisations.

### **1.1.5. Logical Arguments in Support of Market Research Use**

Most writings emphasise a logical link between information collection and good decisions. Support for importance of this link can be traced to the marketing concept. Accordingly, market research is inextricably linked to the adoption of a market orientation. Indeed, Kohli and Jaworski (1990) claim market research is a major element of the “intelligence generation” component of market orientation, reflecting the true customer focus and co-ordination of the firm’s efforts to serve the chosen customer base. This section reviews the logical arguments in favour of the marketing concept and market orientation theory as a preamble to discussing the issues involved with analysing the effect of market research use.

#### **1.1.5.1. The Marketing Concept**

Drucker (1954, p. 37) claims that “there is only one valid definition of business purpose: to create a customer”. According to him, the marketing concept is a key part of the rationale for the importance of market research. Felton (1959, p. 55) defines the marketing concept as “a corporate state of mind that insists on the integration and co-ordination of all the marketing functions which, in turn, are melded with all other corporate functions, for the basic purpose of producing maximum long-range corporate profits”. McNamara (1972, p. 51) takes a broader view and defines the marketing concept as “a philosophy of business management, based upon a company-wide acceptance of the need for customer orientation, profit orientation and recognition of the important role of marketing in communicating the needs of the market to all major corporate departments”.

Drucker (1973) argues that understanding customers and acting to satisfy their needs and wants is the ultimate challenge of modern business organisations. He emphasises that, over the years, businesses have created marketing and market research departments to meet this challenge, investing them with “ownership” of the customer. Companies that are better equipped to respond to market requirements and anticipate changing conditions are expected to enjoy long-run competitive advantage and superior profitability. However, Zaltman and Burger (1975) said the key problem embedded in the marketing concept is to discover what customers’ needs are, and how the company can meet these needs at a profit. According to them, this is the interface with which market research is concerned.

Kotler (1980) regards the marketing concept as determining the needs and wants of target markets, so the firm can adapt itself to delivering the desired satisfaction more effectively and efficiently than its competitors. Houston (1986) also defines the marketing concept as a willingness to recognise and understand consumers’ needs and wants and a willingness to adjust any of the elements of the marketing mix, including product, to satisfy those needs and wants. Boone and Kurtz (1989) define the marketing concept as a company-wide consumer orientation with the objective of achieving long-run success. According to McCarthy and Perreault (1990), the marketing concept is generally thought to consist of three elements:

- *Customer philosophy* - a consumer orientation represented by the ability to recognise targeted consumers’ generic wants, needs and preferences and satisfy them by continuously creating and delivering superior value;
- ▶ *Integrating marketing organisation* - backed by a company-wide integrated effort by all areas of the organisation to satisfy corporate goals by satisfying customer needs and wants; and
- *Goal attainment* - focus on the means by which an organisation can achieve its long-term corporate goals and objectives most efficiently while satisfying customer needs.

McCarthy and Perreault (1990) state that the marketing concept is a distinct organisational culture putting the consumer in the centre of the firm's thinking about strategy and operations. Seen in this light, market research is thought to enable the firm to fulfil the marketing concept, because as an organisation adopts this concept, market research is seen as a way to integrate the organisation's activities and focus them on the needs of the marketplace (Kohli and Jaworski, 1990).

Day (1991) says that recognising the value of the marketing concept and acting effectively on its precepts are two different things. He claims that, in general, companies pursue one of two different approaches, company-driven or market-driven, to mesh themselves with their markets and to develop products and services to profitably meet customer needs. Consistent with the above view, Barabba and Zaltman (1991) argue the company-driven approach begins when one internal voice of the firm develops a product or service concept and then the company's official marketing organisation is asked whether the concept will sell. The marketing organisation then directs research aimed at estimating the commercial viability of the concept and the resulting research is then presented to the other functions within the company. On the other hand, market-driven organisations direct research to gather information from which market requirements will be determined. Based on its analysis of direct market measurements, the marketing organisation looks for meaning through inference. On the basis of these inferences, it presents requirements that the rest of the company should develop in their product to satisfy market requirements.

Barabba and Zaltman further extend the concept of the market-driven and the company-driven organisation in the reconciliation of the "voice of the market" with the "voice of the firm". They argue that it is increasingly important for firms to use the "voice of the market", that is, to discover what customers want and are willing to pay for. Using the "voice of the market" goes far beyond the simple acquisition of data. It requires that the data be integrated into the decision process, determining

what the firm is capable and willing to present to the market. The decision represents, in effect, the “voice of the firm”.

Barabba and Zaltman (1991) distinguish the market-driven firms by their ability to sense events and trends in their markets ahead of their competitors; their ability to anticipate more accurately the responses to actions designed to retain or attract customers, improve channel relations or thwart competitors; and their ability to act on information in a timely, coherent manner because the assumptions about the market are broadly shared. They further point out these capabilities could be achieved through open-minded inquiry, synergistic information distribution, mutually informed interpretations and accessible memories. Barabba (1994) called the market-based concept a “sense and respond” concept, in which strategy has an adaptive design intended to sense and respond to market changes before competitors do.

Accordingly, the most distinctive feature of market-driven organisations is their mastery of market sensing and customer linking capabilities. Firms, which balance these two capabilities will achieve better performance than those which stress either (Day and Nedungadi, 1994). Later Day (1994a) contends that market research has been considered as the traditional sensing mechanism for the enterprise. An important corollary to this idea is that market information is of importance to all major areas of the firm and thus, market research can help a company become market-based and establish customer commitment.

Barabba (1995) also argues that if we were to accept the notion that the marketing organisation “owns the customer”, it would naturally follow that marketing takes responsibility for listening to the outside world, gauging and evaluating customer needs, forecasting demand for current and future products and identifying competitive threats. Accordingly, the mission of market research is to assess market information needs; measure the market place; store, retrieve and display the data; describe and analyse market information; and evaluate the research and assess its

usefulness. According to Stevens, Wrenn, Ruddick and Sherwood (1997), such a focus on market needs is a prerequisite for business success, since saying “close to the customer” is a distinguishing characteristic of successful firms; or, as Peterson (1988, p. 9) put it, “being close to the customer requires creative market research and lots of it”.

#### **1.1.5.2. Market Orientation**

According to the school of thought promoted by the authors under review, market research is inextricably linked to the adoption of a market orientation. Indeed, Kohli and Jaworski (1990) claim market research is a major element of the “intelligence generation” component of market orientation, reflecting the true customer focus and co-ordination of the firm’s efforts to serve the chosen customer base. After an extensive literature search and field interviews with managers in diverse functions and organisations, Kohli and Jaworski define market orientation as the generation and dissemination of market intelligence.

Although having a market orientation is posited to lead to greater satisfaction and organisational commitment of employees, relatively few studies have investigated the extent to which market orientation is associated with success. In a cross-sectional study using a sample of 140 strategic business units of a large forest products firm consisting of commodity, distribution, and speciality businesses, Narver and Slater (1990) developed a measure of market orientation and tested its effect on business performance. They assessed the impact on profitability of having a market orientation and found a positive correlation between their measure of market orientation and managers’ self assessment of profitability, relative to other managers in the same corporation. Narver and Slater define market orientation as “the organisation culture that most effectively and efficiently creates the necessary behaviours for the creation of superior value for buyers and thus, superior

performance for the business” (p. 21). Their measure closely parallels Kohli and Jaworski’s (1990) definition and consists of three behavioural components (customer orientation, competitor orientation and interfunctional co-ordination), each of which involves intelligence generation, dissemination, and managerial action.

Jaworski and Kohli (1993) propose an alternative market orientation measure, following a survey of 222 strategic business units in a sample of 102 companies. After generating a set of items (top management emphasis, top management risk aversion, interdepartmental connectedness, interdepartmental conflict, formalisation, centralisation, reward system orientation, organisational commitment, esprit de corps, market turbulence, technological turbulence and competitive intensity) matching their definition, they select the best items according to the opinions of 206 marketing and 187 non-marketing managers. The findings of their study suggest that market orientation, in this sense, is an important determinant of performance, regardless of the market turbulence, competitive intensity or the technological turbulence of the environment.

The two approaches to defining the market orientation adopted by Narver and Slater (1990) and Jaworski and Kohli (1993) are similar in their emphasis on behavioural issues. Both groups of researchers state that market orientation involves collecting information about the task environment, disseminating the information to all organisational units and readying the organisation to act on the information in order to provide value to customers. Their conclusion is that if market intelligence and market research generated information are to play a critical role in the firm’s quest to become more market-oriented, relevant information must be produced and disseminated to the various departments and managers in the most appropriate form to enhance its use. For instance, some departments or management levels may need market information that is specific and action-oriented, whereas others may need market information that is educational.

Day (1990a) argues market orientation represents superior skills in understanding and satisfying customers as well as understanding competitors. He later argued “a genuine market orientation is reflected in extensive and regular studies about customers, competitors and environmental trends” (Day, 1994b, p. 11) which, when coupled with total quality management, offers a rich array of ways to design change programs that will enhance market orientation (Day and Nedungadi, 1994).

Hooley and West (1984) undertook a survey to examine whether companies with stronger market orientation perform better than companies weaker in market orientation. In order to investigate the relationship, they examined the level of market research use; the types of research conducted; expenditure levels; and the association between the use of market research and company performance among 1651 UK - based companies. They conclude that those companies with zero or low market research usage could significantly improve their performance by making better use of market research.

All the writings reviewed above on market orientation emphasise the importance of the ability of the firm to learn about customers, competitors and channel members in order to continuously sense and act on events and trends in present and prospective markets. Each of these writers has tried to extend the concept of market orientation from being purely a business philosophy to representing the actions an organisation pursues in relation to the marketplace. The common claims of their contributions include (1) market orientation results in actions by individuals toward the markets they serve, (2) such actions are guided by information obtained by the marketplace, (3) such actions should cut across functional and divisional boundaries within the organisation and (4) all this leads to greater customer satisfaction and organisational performance.

### **1.1.5.3. Overview of Arguments in Support of Market Research Use**

References to the notion that market research has a positive impact on the firm's performance abound in marketing literature. For example, it has been stated that market research "increases the probability of successful marketing" (Gandz and Whipple, 1977, p. 203); "facilitates the implementation of profitability" (Zikmund, 1986, p. 9); and "is a key indicator of marketing effectiveness and plays a vital role in ensuring that satisfactory profits are achieved" (McDaniel and Gates, 1991, p. 22). Claims such as these are intuitively appealing given that the basic purpose of market research is to "help the manager make decisions that are more likely to be correct than incorrect" (Peterson, 1988, p. 9) and that "increasing the percentage of good decisions should be manifested in improved bottom-line performance" (Lehman, 1989, p. 14).

There are two streams of research that have tended to focus on the market research-performance relationship: studies relating market research activity to overall business performance and studies examining the impact of market research on specific aspects of performance. Regarding the former studies, commercially successful firms are more likely to gather information from a diversity of sources (John and Martin, 1984); profitability and competitive standing are positively related to the level of use of market research methods and techniques (Hooley and West, 1984); successful companies are more likely to be market research users than less successful ones (Hart, 1987); and the frequency of use of market research information is positively related to marketing effectiveness (Hill, 1988). The collective message sent by this stream of research is that "those companies with zero or low usage could significantly improve their performance by making better use of market research" (Hooley and West, 1984, p. 347).

With regard to the second type of studies (linking market research to particular aspects of business performance), firms strong in innovation and product design are more likely to make systematic use of market research (Urban, Hauser and



Dholakia, 1987) and new product success is positively related to the conduct of market research (Hill, 1988). Conversely, new product failure is frequently associated with lack of market research (Urban and Hauser, 1993). Most of these studies focus on the extent to which market research has been adopted by organisations and fail to provide any empirical support for the claimed relationship.

#### **1.1.6. Reservations on Market Research-performance Relationship**

The mainstream view expressed above has not been without its critics and there is no consensus in the literature on the market research-performance link. Hayes and Abernathy (1980) concede the common sense of conducting market analysis as part of the new product process, but challenge the notion that consumer analysis and formal market analysis should dominate other considerations when allocating resources to product development. Their case against unflinching allegiance to the marketing concept touches a raw nerve in the marketing profession, especially among market researchers. They contend “customers may know what their needs are, but they often define those needs in terms of existing products, processes, markets and prices. Deferring to a market-driven strategy without paying attention to its limitations is, quite possibly, opting for customer satisfaction and lower risk in the short run at the expense of superior products in the future”(p. 68).

Piercy (1987, pp. 207-8) argues that “there is no clear and obvious relationship between the development of the marketing information function and commercial success... To look for immediate “bottom line” impact is to take a simplistic view of how marketing information is used, and to assume that an activity like market research makes decisions rather than simply supporting the decision-making process”. Piercy (1980, 1983, 1985) constructs the above argument in a series of contributions focusing on the “power” and “politics” dimensions of market research within organisations. He concentrates specifically on the organisational environment for market research and maintains that instead of trying to establish a direct link between the conduct of research and business performance, one should examine

intervening variables and “analyse in real terms such factors as: the formulation of problems by those in organisations, the motives and constraints of information seeking, and the organisational use and control of marketing information” (Piercy, 1983, p. 117). This approach and focus is similar to the Deshpande (1982) and Deshpande and Zaltman (1982, 1983, 1984) studies on the organisational influences bearing upon the use of market research information.

Akio Morita (quoted in Barabba and Zaltman, 1991), the founder of the SONY Corporation said “Our plan is to lead the public to new products rather than ask them what they want. The public does not know what is possible, but we do”. But Barabba and Zaltman (1991) claim that market research is being adopted in Japan, and many Japanese companies are joining American and European companies who view marketing as the critical competence for the 1990s and market research as its most important technology.

Barabba and Zaltman (1991) indicate that in today’s complex world it is no longer of value for a manager to seek only the right decision. Rather, the greatest value is in managing the decision-making process in a way that increases the chances of choosing the best decision among the available alternatives and in having that decision effectively implemented. They claim that if market research is to help in this new decision-making process, it must be adaptable to the environment in which it will operate and be considered an appropriate inquiring tool by the decision-maker. They maintain competitive advantage results more from how information is used than from who does or does not have it. Accordingly, market research alone does not guarantee success; intelligent use of market research is the key to business achievement.

The rather obvious point that there may not be a direct link between market research and positive business outcomes is illustrated by Hartley (1992), who examined two commercialisation failures, namely, the Ford Edsel and New Coke. These failures occurred despite been based on extensive, detailed research. In both

cases a weak link was reported between market research and commercial success. Hamlin (1995) also notes that although conducting market research is likely to reduce the chances of making a poor commercial decision, major commercial decisions supported by extensive market research can still fail spectacularly.

Hamlin (2000) claims that his personal observation of many smaller scale research failures indicates that Edsel or New Coke type research failures are common enough to represent a major problem in market research. Beyond case studies of this type, he argued that there are no studies in the literature on the causes of market research failure. The difficulties of defining “failure” and of acquiring accurate data on such failures may explain why this is so.

#### **1.1.7. Empirical Research Into Market Research - Performance Relationship**

The literature shows only one empirical study of the consequences of market research; the Hart and Diamantopoulos (1993) study. They studied a range of industries and classified them into three groups depending on the number of employees. They interviewed 86 managing directors and found that the level of use of market research had no apparent effect on the performance of the organisations. Hart and Diamantopoulos state that “the intervening variables such as the quality of the research conducted and the effectiveness of its utilisation may potentially be the explanation for the null results” (p. 69).

The lack of empirical studies on the contribution of market research to business performance may be due to obvious difficulties in carrying out an empirical investigation of the link between market research and business performance. In particular, three questions need to be resolved:

- It is probably the case that different types of market research have different effects. It is claimed (Holbert, 1974; Gandz and Whipple, 1977; O’Dell,

Rupell, Trent and Kehoe, 1984) that research that focuses on understanding consumers is likely to be ineffective, but research that focuses on evaluating alternative courses of actions may be effective. Hart and Diamantopoulos (1993) did not distinguish between these types. Moreover, there is likely to be “bad” research and “good” research, though this distinction carries with it the seeds of circular reasoning.

- ▶ The measurement of performance is problematical. Return on investment, growth rates and sales expansion are all components of success. A meaningful way to understand the abstract idea of business performance is to consider how researchers have operationalised and measured performance in their work and how respondents consider and assess performance in their organisations (Steers, 1975). This also leads to difficulties in defining and assessing “failure” of market research projects and of acquiring accurate data on such failures (Hamlin, 2000).
- ▶ The question of whether market research expenditure results in changes in performance, or whether changes in performance result in changes in market research expenditure, is a thorny problem with no standard solution.

The difficulties outlined above may seem insurmountable, but, nonetheless, the task of estimating the relationship between market research and business performance remains of the utmost importance. It is one of the crucial questions for marketers.

#### **1.1.8. Section Summary**

This part has discussed prior research on the general topic of market research and performance. The literature recognises the multidimensional nature of research use and suggests that the type of research is based on the objective for which the research is undertaken and on the use to which it is put. This classification of research types proposed the existence of two key dimensions in the evaluation of research: namely, instrumental and conceptual. The literature suggests three areas

of research that explain the underlying variables influencing market research use in organisations (O'Reilly, 1983; Menon and Varadarajan, 1992). These underlying variables measure informational, organisational and environmental characteristics.

Most writings emphasise that market research has a positive impact on the firm's performance (Hooley and West, 1984; Hooley and Lynch, 1985; Baker, Hart, Black and Abdel-Mohsen, 1986; Baker, Hart and Black, 1988; Hill, 1988; Lehman, 1989). The collective message sent by this stream of research is that those companies with zero or low usage could significantly improve their performance by making better use of market research. The mainstream view expressed above has not been without its critics and there is no consensus in the literature on the market research-performance link (Piercy, 1987; Hartley, 1982; Hamlin, 1995).

Support for the importance of the link between market research and business performance was developed on the premise that a "genuine market orientation is reflected in extensive and regular market research studies about customers, competitors and environmental trends" (Day, 1994b, p. 11). Seen in this light, market research is inextricably linked to the adoption of a market orientation (Kohli and Jaworski, 1990; Narver and Slater, 1990; Kheir-El-Din, 1990; Jaworski and Kohli, 1993; Kohli, Jaworski and Kumar, 1993; Cadogan and Diamantopoulos, 1995). These writings have emphasised that a focus on market needs is a prerequisite for company success.

In spite of the generally acknowledged importance of market research in the literature that market research and business performance are positively related, the literature shows only one empirical study of the consequences of market research; the Hart and Diamantopoulos (1993) study. Hart and Diamantopoulos's study could not confirm the link, and ended with a call to extend research in this area. The issue of whether consideration of types of research could modify the result of Hart and Diamantopoulos is addressed in this thesis.

## **1.2. PERFORMANCE MEASUREMENT**

Section 1.2 reviews the literature on the alternative perspectives on performance measurement. The section begins with the identification and development of measures of market research usefulness and continues with a discussion of the evaluation measures of project performance. The section then reviews the literature on the measurement of business performance. Additionally, this section discusses the influence of “firm size” and “market research expenditure” on business performance.

### **1.2.1. Measurement of Market Research Usefulness**

Marketing is considered to be fundamental to the development and performance of firms (Narver and Slater, 1990; Day, 1992; Jaworski and Kohli, 1993). Zikmund (1986) and McDaniel and Gates (1991) claim companies demand and expect future growth and profitability to come from performance gains achieved through continuous investment in market research. While the marketing literature often reports that market research leads to either actual or perceived payoffs, studies have generated controversial or inconsistent results (Hart and Diamantopoulos, 1993). One focus of the research is to assess managers’ perceptions of the individual projects, and this section sets out the justification for the measures used. As with the elicitation of any subjective evaluation the dimensions for assessment are arbitrary but nevertheless important. The literature on the assessment of market research projects identifies four dimensions and these are discussed below.

#### **1.2.1.1. Overall Usefulness**

According to Mackenzie (1983) and Shrivastava (1987), the usefulness of research is its ability to provide decision-makers with a rationale for making decisions, thereby prompting actions in organisations. Building on the work by Thomas and

Tymon (1982), Shrivastava (1987) proposed the following criteria for determining the usefulness of research.

- *Meaningfulness*: Information must be of personal interest and must make sense to the users.
- *Goal relevance*: Information must be related to the tasks facing the users.
- *Operational validity*: Knowledge should be action-oriented and such that something can be done with it.
- *Innovativeness*: The degree of non-obviousness of the information.

With reference to the first criteria of usefulness, Glazer (1991) argues that meaningful information results from the grouping of otherwise discrete items of data into an organised structure or pattern. He believes the challenge for organisations wanting to adopt formal information gathering procedures is the identification of the appropriate level at which to aggregate individual items of information.

With reference to the last criteria of usefulness, namely innovativeness of information, Deshpande and Zaltman (1982) found that innovative information is less likely to be used by managers because it is unexpected and therefore surprising. However, other studies take a contrary position and suggest that innovative information is more likely to be used by managers (Weiss and Bucuvalas, 1980; Wilton and Meyers, 1986). Paradoxically, both sets of findings could be true because it is probable that both non-innovative and innovative research results are used, but differently (Menon and Varadarajan, 1992). Martinez (1998) argues that useful information (i.e., that which possesses “value for action”) emerges when the recipient of information understands, translates and applies it to specific duties.

#### **1.2.1.2. Market Understanding**

This dimension examines the way in which market research projects capture information about the characteristics of the market. It is believed that market

understanding results in the user's improved knowledge and understanding of the issues of the market (Menon and Varadarajan, 1992). It also refers to the lateral application of available research findings which are not directly related to a problem or relevant to a given situation or period in time (Beyer and Trice, 1982). Much of the research providing for general enlightenment can be considered as developing the managerial knowledge base. This use is subtle and indirect and therefore managers may not be able to identify specific effects or "observe" the influence.

#### **1.2.1.3. Actionable**

This dimension measures the usefulness of information provided in terms of the level of direction provided by the research. Actionable research use is demonstrated by changes in the user's activities, practices, policies or decisions that can be directly linked to the findings and implications of a study (Menon and Varadarajan, 1992). In other words, this dimension measures research use as the direct application of research findings and conclusions, to solve a problem.

#### **1.2.1.4. Value**

Glazer (1991) argues that the value of the information is associated with the transactions between the firm and its customers (where the role of information is to increase the firm's revenue), between the firm and its suppliers (where the role of information is input cost reduction) and within the firm (where the goal is generally the reduction in production or operations cost). He claims that aggregating the above three measures associated with different types of transactions gives the total value of information to the firm. Researchers in marketing also suggest that the value of information is the difference in the expected profits that one can achieve with the new information and the expected return one would have achieved with the existing information (Lehmann, 1989; Sarvary and Parker, 1997; Aaker, Kumar and Day, 1998; Raju and Roy, 2000).



John and Martin (1984) proposed the following criteria for determining the value of information provided by the research.

- Realism of research.
- Accuracy.
- Level of specificity of the addressed problem.
- Consistency of the research output and implications.
- Comprehensiveness and completeness of the research.
- Validity of research from both theoretical and methodological standpoints.

Menon and Varadarajan (1992) state that a comprehensive view of perceived value of information would incorporate monetary and non-monetary cost as an additional component to the conceptualisation proposed by John and Martin (1984).

#### **1.2.1.5. Influence of Managers' Involvement on Project Assessment**

The elicitation of subjective assessments may be subject to potential bias. For example, Barnes (1984) states that in the absence of objective and comparative measures, the only source is the knowledge of the business unit managers. However, he points out that their assessments are often subverted by “myopia” and are biased by selective perceptions and dominated by facts and opinion that are easy to retrieve. Barnes also states that objective evidence of the past or current success of a strategy is often given more weight than “soft” assessments of future threats.

In addition, Mackenzie (1983) states that the value of a study to the manager is affected by the costs incurred in conducting the study. The additional costs in terms of time and effort incurred by managers may increase the perceived value of information gathered. Zeithaml (1988) also states studies that are expensive may be perceived to be of higher quality and value. Zeithaml argues that when managers spend more time and effort to conduct a study, they may be more inclined to view the study and its findings as valuable and therefore more likely to use that study.

The value placed on information by the organisation should have a significant influence on the use of the information by the people within that organisation.

The influence of involvement in the assessment of research project by the manager has been emphasised by various writers (Bradley, 1978; Ross and Fletcher, 1985; Deshpande and Zaltman, 1987; Lee, Acito and Day, 1987). These writers speculate that projects in which the respondent was involved might be highly regarded, whilst those commissioned by others might be viewed less favourably. This problem is particularly insidious with performance measures, which reflect the payoff from past competitive advantages (Hogarth and Makridakis, 1981b).

### **1.2.2. Measurement of Business Performance**

The measurement of business performance is complex and multifaceted (Chakravarti, Mitchell and Staelin, 1981; Beal, 2000). Some contend that measurement problems and methodological deficiencies may have contributed to this complexity (Brynjolfsson, 1993; Barua, Kriebel, and Mukhopadhyay, 1995; Li and Ye, 1999). Others suggest that business performance should be studied through considering the use of different research objectives (Mahmood, 1993; Bharadwaj, Varadarajan and Fahy, 1993; Rai, Patnayakuni and Patnayakuni, 1997; Li and Ye, 1999). Despite various attempts to find agreement on how business performance should be measured, there has been little success in reaching consensus. Some researchers even suggest the construct be abandoned altogether (Child, 1974, 1975; Lenz, 1981). It can be argued, however, that without a performance reference, managers cannot objectively or consistently evaluate the quality of market research outcomes.

Performance measurement is a recurrent theme and is of interest to both academic scholars and practising managers. Although the importance of the performance concept is widely recognised (Kirchoff, 1977; Connolly, Conlon and Deutsch,

1980), there is little agreement on a single measure of business performance. Chen and Shimerda (1981) summarise a number of studies which employed different performance measures. The 26 studies analysed use more than 100 financial items, of which 65 are accounting ratios. Forty-one of these are considered useful or used in the final analysis by one or more of the researchers. Given such a diverse set of useful financial ratios, it will be difficult to agree which measures to use. Despite this reservation, they found that many of the ratios included in the studies highly correlate with one other.

The dimensionality issue is addressed more formally in a study by Woo and Willard (1983). They employ a factor-analytic framework using performance data from the PIMS (Profit Impact of Marketing Strategies) programme. An analysis of 14 indicators, covering both financial and operational facets of business performance, yielded four primary dimensions - (a) profitability/cash flow; (b) relative market position; (c) change in profitability and cash flow and (d) growth in sales and market share. Of these, the profitability dimension accounts for the most variation. The primary variables that load on this dimension are return on investment (ROI) and return on sales (ROS). Woo and Willard conclude that profitability measures such as ROI and ROS, despite their many limitations, are important measures of performance.

Hart and Banbury (1994) argue that the primary aim in commissioning any research is to help achieve a profit or competitive advantage. They note profitability measures that indicate economic aspects of business performance and sales-based measures that indicate the degree of power a firm has in the market place, are the most frequently used indicators of performance. Li and Ye (1999) also posit that, for business firms, two groups of measures - growth measures such as sales growth and market share, and profit measures such as return on assets (ROA) and ROS - may serve as basis for performance assessment. Li and Ye contend the former is indicative of how effectively a firm can open up new markets or expand in existing markets; the latter shows the efficiency of its operation.

### **1.2.2.1. Profitability Measures of Performance**

VanHorne, Nicol and Wright (1995) claim profitability measures are of two types - profitability in relation to assets and profitability in relation to sales. They argue that considering these two ratios together provides a good indication of a company's overall effectiveness. Ansoff (1965) states that ROA is a commonly and widely accepted yardstick for measuring business success. Dess and Robinson (1984) also view ROA as a good operational measure of the efficiency of a firm with regard to the profitable use of its total asset base.

Brown, Gatian and Hicks (1995) state that ROA measures a firm's ability to generate profits from assets without regard to how those assets are financed. As a second measure of profitability, they recommend the use of ROS. Even though their study shows a high correlation between ROA and ROS, each is subject to slightly different interpretation. ROS is believed to better support long-term strategies, while ROA is perhaps a better measure of management efficiency (Howell and Sakurai, 1992). Howell and Sakurai (1992) postulate ROS as subject to less manipulation than ROA. For example, they indicate that division managers could achieve a higher year-end ROA by postponing an important capital investment.

Farris, Parry and Webster (1989) suggest that measuring profit as ROS, rather than ROA, understates profits, while others (Ramanujam and Venkatraman, 1984; Jacobson, 1988, 1990) are of the opinion that the differences in effects are just the result of sampling error. According to Szymanski, Bharadwaj and Varadarajan (1993), ROS is basically one component of ROA. Furthermore, they contend that, on average, the cost of goods sold as a percentage of sales is lower for large businesses than for small businesses, which suggests that an increase in firm size will increase ROS. However, they argue that the increase in ROA will be greater than the increase in ROS because of the multiplicative effect of the increase in ROS and the asset turnover ratio. Therefore, they conclude that changes in firm size could have a more pronounced effect on ROA than ROS.

Szymanski, Bharadwaj and Varadarajan (1993) suggest the differences between ROI, ROA and return on total capital (ROTC) are mainly semantic, so they can be viewed collectively as ROA. ROS and return on equity (ROE) can differ from ROA and lead to different performance-profitability findings. Brown, Gatian and Hicks (1995) also state that ROI, ROE and ROA are all closely related and widely accepted profitability measures used by internal management and external analysts to evaluate performance. However, Szymanski, Bharadwaj and Varadarajan state that ROA and ROE could produce different estimates of profitability, because ROE and ROA are equal only when the financial leverage ratio equals one.

Rai, Patnayakuni and Patnayakuni (1997) state that ROE provides a measure of how effectively a firm uses financial capital. They continue that managers are increasingly using this measure because it indicates how well the firm is managing resources invested by stakeholders. They also contend that ROA may be a better indicator of the effectiveness of capital investments than ROE, as the latter combines the effects of capital investments as well as the financial leverage employed by the firm. Stickney (1990) in his evaluation of investment in information systems argues that ROA is a more comprehensive measure than ROI and ROE.

Measures of performance rooted in financial accounting, such as the ones described above, have come in for a lot of criticism (Dearden, 1969; Chakravarthy, 1986). The problems cited with this approach are (1) scope for accounting manipulation; (2) under-valuation of assets; (3) distortions due to depreciation policies and inventory valuation; (4) differences in methods of consolidating accounts; and (5) differences due to lack of standardisation in international accounting conventions. Chorafas (1995) mentions the difficulty with measuring financial performance also includes unavailable results, differing investment/turnover ratios, the confidentiality of such information, differing individual or firm perceptions in measuring performance and differing accounting practices.

### **1.2.2.2. Growth as a Measure of Performance**

Growth measures, such as sales growth and market share growth indicate how effectively a firm is opening up new markets or expanding its existing markets (Li and Ye, 1999) and overcomes some of the measurement problems in profitability measures of performance (Ford and Schellenberg, 1982). Sales growth indicates “how well an organisation reflects its environment” (Hofer and Schendel, 1978, p. 4) by successfully expanding their “product market scope” (Ansoff, 1965, p. 42).

Szymanski, Bharadwaj and Varadarajan (1993) conducted a meta-analysis of studies relating market share growth and profitability. These cross-sectional studies showed positive correlations between market share growth and profitability. Armstrong and Collopy (1996) conclude this relationship may be causal; for example, firms with profits as their sole objective might produce superior products and, as a result, achieve gains in both market share and profits; though others (Jacobson and Aaker, 1985; Prescott, Kohli and Venkatraman, 1986) disagree. Armstrong and Collopy state growth in market share is often used as a relative measure of performance, and it may be a surrogate for the measure of true interest, namely, long-term profit. Moreover, they note that basing decisions on attaining market share can have harmful effects, such as a price war.

Consistent with the above view, Teger (1980, p. 24) concluded that in some situations, “vendors temporarily shift their emphasis away from attaining success (for themselves) and towards preventing the success of rivals”. Similarly, AnterAsian and Graham (1989) found detrimental performance resulted from competitor-oriented objectives (market share) compared to using a self-oriented goal (stability). AnterAsian and Graham found companies that lost market share during the period of market growth tend to be more profitable than firms in the same industry that gained market share. Tschoegl and Yu (1990) also found that current high market share did not help in gaining further market share and did not produce stability in the firm’s sales.

### **1.2.2.3. Influence of Firm Size and Market Research Expenditure**

Several authors argue that the firm size and the level of market research expenditure could be confounding factors of business performance, if not controlled for (Hooley and West, 1984; King, 1985; Hart and Diamantopoulos, 1993). Bellenger (1979) argues that firms with larger market research budgets are likely to be larger and more sophisticated than firms with smaller budgets. He states that larger firms may have more complex market research programmes, higher degrees of formalisation and access to more marketing information. When market research budgets are large managers may use more information to evaluate their performance.

King (1985) argues that failure to account for the impact of size renders such variables as the number of market research personnel or the size of the market research budget inadequate as descriptors of a firm's effective use of market research, since they reflect in the classic phrase, more of the "trappings" than the "substance" of market research. Hart and Diamantopoulos (1993) argue that a potentially serious problem with most of the empirical studies is their failure to control explicitly the influence of firm size in their research design. They point out that the conduct of market research (whether in-house or externally commissioned) is a cost-incurring activity and the differences in firm size (a proxy for company resources) must be taken into account prior to associating performance differences with market research activities.

It is argued that greater firm size may entail a higher level of market research expenditure (Hooley and West, 1984; Hart and Diamantopoulos, 1993). Because of these possibilities, it was believed that these critical covariates might also have influence over the types of firms that undertake different proportions of market research.

#### **1.2.2.4. Self-assessed and Subjective Performance Measures**

Kulda (1980) considers accounting ratios to be inadequate measures of financial performance as they are likely to be influenced by accounting practices and taxation policies. Kulda proposes that in the absence of objective financial measures, the only source is the use of self-assessed performance measures. However, Barnes (1984) cautions that self assessments are often biased by selective perceptions and dominated by facts and opinion that are easy to retrieve. This problem is particularly insidious with performance measures such as sales growth and profitability, which reflect the payoff from past competitive advantages (Hogarth and Makridakis, 1981b). Larrèchè and Moinpour (1983) state that managerial bias in judgements could be overcome when an external measure of expertise is used confidently to pick the best expert for an issue. Unfortunately even the “best” expert is not immune to the biasing effects of selective perception (Day and Wensley, 1988).

Ford and Schellenberg (1982) argue that to overcome measurement problems it is better to use both objective and subjective measures. They use both objective and “self-reported” subjective measures of ROA and sales growth, as well as two measures of what they considered overall or “global” organisational performance in their study. The findings of Ford and Schellenberg’s study suggest the subjective perceptions of relative improvement strongly correlate with objective measures of the absolute changes in ROA and sales over the same time period. In other words, the top management team's perception of how well their firm actually performed - measured in a subjective and relative sense - was consistent with how the firm actually performed vis-à-vis ROA and sales growth. Although the objective measure(s) would be preferred, this finding suggests a researcher might consider using a subjective perceptual measure of at least two aspects of organisational performance (ROA and sales growth) under two specific conditions: (1) accurate objective measures are unavailable, and (2) the alternative is to remove the consideration of performance from the research design.



Hooley and West (1984) employed two measures of company performance in their study. Their study's primary measure of performance was the profit margin for the proceeding financial year. Based on the responses to questions on both profit and turnover, the companies were divided into four categories - "negative margin", "low margin", "average margin" and "high margin". The profit margin performance measure was then supplemented with an assessment, made by the executive completing the questionnaire, of their company performance relative to their major competitors on six five-point scales (from 'much better' to 'much worse'). An aggregate "self assessed performance" was then calculated for each company by summing across the six scales and the respondents were divided into three roughly equal sized groups, with "good", "average" and "poor" performance relative to their major competitors. Hooley and West grouped the companies on both performance measures in relation to other companies in the sample rather than in absolute terms.

Pearce, Robbins and Robinson (1987) solicited information on business performance from firms in two ways. First, each chief executive officer (CEO) was asked to provide information on the firm's sales, ROA and ROS for the beginning and ending years of the 5-year period. Second, each CEO was asked to provide a subjective, numerical evaluation of the firm's performance on four performance dimensions in comparison to its overall industry on a five point scale for each item ranging from 5 (top 20%) to 1 (lowest 20%). These dimensions included the firm's sales, ROA and ROS plus the firms overall performance. The responses of the CEOs that provided objective measures at two points in time were correlated with their responses on the subjective measurement scales, offering a strong support for the validity of the subjective measurement technique as a substitute for objective data. Additionally, their study suggests that the CEOs' perceptions of overall performance were consistent with their responses on the various dimensions on which their perception was based. However, Chakravarthy (1986) notes it is difficult to ensure whether the members of the top management team within a given

firm as well as across firms had a similar “referent” or “peer” set of organisations on which to make a comparison.

Rhyne (1986) claims industry profitability may have a significant influence on business performance and suggests the use of subjective measures over objective measures of performance. Gupta and Govindarajan (1984) state an appropriate way to deal with the issue of non-comparability of financial performance data across industries is to have managers rate their firm’s performance relative to expectations. Such subjective measures, according to Gupta and Govindarajan, are likely to take into account the anticipated impact of the industry on business performance.

Van der Walt, Lyonski, Queree, Harper and Hales (1989) point out that if the self-assessed performance is judged on an absolute basis, then it will lead to difficulties, but, if judged relative to other businesses in the industry, it would be more meaningful. Covin, Selvin and Achultz (1994) also contend that direct comparisons of objective financial data obtained from firms in different industries can be misleading. Some industries simply outperform others.

Hart and Banbury (1994) consider business performance as a multidimensional construct and propose three subjective and objective dimensions of business performance. (1) Financial performance using accounting-based measures such as ROA, ROS and ROE. (2) Market performance using market-based measures such as market share, sales growth and product development. (3) Organisational effectiveness using stakeholder-based measures such as employee satisfaction and social responsibility. Hart and Banbury asked respondents to assess their company's performance on 13 items, compared to other companies in the same market and at a similar stage of development, using a 7-point Likert scale. They factor analysed the 13 items and as a result, five factors emerged: current profitability, growth/share, future positioning, quality and social responsiveness. In addition, they collected objective measures of performance on sales, asset base and profits. Their results also indicate the relationship between subjective and objective performance measures for profitability and sales growth was highly correlated.

Gray, Matear, Boshoff and Matheson's (1998) study used an objective financial measure (ROI), and three subjective measures to find a relationship between market orientation and business performance. Their market orientation measure had a strong correlation with the three subjective measures and a weak correlation with the objective measure. They suggest that subjective measures are a better predictor of superior business performance (relative to nearest competitor) than objectively measured financial performance.

Dess and Robinson (1984) point out there are several good reasons for using subjective measures. First, managers may be reluctant to disclose actual performance data if they consider it commercially sensitive or confidential. Second, subjective measures may be more appropriate than objective measures for comparing profit performance across industries. This is because profit levels can vary considerably across industries, obscuring any relationship between the independent variables and business performance. Third, objective financial measures may not accurately indicate the actual financial position of a company due to reasons such as the level of investment in R&D or marketing activity. Last, several studies show a strong correlation between objective and subjective measures of performance.

### **1.2.3. Section Summary**

The literature on the assessment of market research projects identifies four dimensions - overall usefulness, actionable, market understanding and value. The usefulness of the research could be assessed by managers' perceptions of the individual projects. The influence of involvement in the assessment of research project by the manager has been emphasised by various writers (Bradley, 1978; Ross and Fletcher, 1985; Deshpande and Zaltman, 1987; Lee, Acito and Day, 1987). These writers speculate that projects in which the respondent was involved might be highly regarded, whilst those commissioned by others might be viewed less

favourably. As with the elicitation of any subjective evaluation the dimensions for assessment are arbitrary but nevertheless important.

Regardless of the framework chosen to conceptualise business performance, it is apparent that business performance is a complex and multidimensional phenomenon, and operationalising such a complex concept will be inherently difficult (Venkatraman and Ramanujam, 1986; Beal, 2000). The evidence from Chakravarthy's (1986) study suggests that the use of a single performance criterion, whether it is a measure of profitability or growth, is an unsatisfactory determinant of overall performance. Li and Ye (1999) also assert there is no one single measure that can effectively capture overall performance. Venkatraman and Ramanujam (1986) caution that when considering different measures of performance, proper attention must be given to the conflicting nature of performance dimensions such as long-term growth and short-term profitability and the problems associated with combining them.

The literature suggests that considering two groups of measures - growth measures such as sales growth, and profit measures such as ROA and ROS - could serve as a basis for performance assessment. The former is indicative of how effectively a firm can open up new markets or expand in existing markets and the latter shows the efficiency of its operation. Together, these measures will indicate the company's overall effectiveness or performance of operation. The literature also suggests that objective measures of performance are preferable to those based on managerial perceptions. However, given the general convergence in measures and supporting research, the use of subjective measures of performance in the absence of objective measures was deemed appropriate for this study.

Several authors argue that the firm size and the level of market research expenditure could be confounding factors of business performance, if not controlled for (Hooley and West, 1984; King, 1985; Hart and Diamantopoulos, 1993). It is argued that greater firm size may entail a higher level of market research expenditure (Hooley

and West, 1984; Hart and Diamantopoulos, 1993). Because of these possibilities, it was believed that these critical covariates might also have influence over the types of firms that undertake different proportions of market research.

## **PART II**

### **RESEARCH METHOD**

Part I reviewed the literature on the use of market research and the relationship between market research and business performance. The *Overview of the study*, presented at the beginning of the thesis, suggests that the estimation of the parameters of the relationship between market research and business performance should take into account the type of research that is conducted. This part describes the way in which the data were collected and analysed so as to identify important types of market research and obtain measures of performance so that the parameters of the relationship can be estimated as described in Parts III and IV.

#### **2.1. INTRODUCTION**

The data for the study were obtained through personal interviews and a mail questionnaire. Part II describes the sample selection method and sample characteristics, then documents the interview process and the questionnaire construction process and discusses the rationale for these processes. It also outlines how the questionnaire was pre-tested and how it was finally administered. The data was processed by comparing means, analysing cross-tabulation tables, conducting principal components analyses and using cluster analysis methods.

#### **2.2. OBJECTIVES**

The overall objective of the study is to investigate the relationship between types of market research and business performance. Previous work suggests that type of research may influence performance. The study specifically test two hypotheses: that the type of research makes no difference to the usefulness of research projects as evaluated by the managers; and that business performance is unaffected by the

type of research companies predominantly employ. In order to test these hypotheses, the following research activities were specified:

1. Select a suitable sample, gain respondent participation and develop rapport;
2. Identify the market research projects that participating companies have conducted;
3. Develop and pre-test the questionnaire;
4. Administer the questionnaire and achieve an adequate response;
5. Classify the market research projects and validate the classification;
6. Classify the companies and validate the classification; and
7. Evaluate the usefulness of market research projects and business performance according to the classification achieved in 5 and 6.

## **2.3. SAMPLE**

### **2.3.1. Sample Size and Response Rate**

There are about 21000 companies in New Zealand (*New Zealand Business Who's Who*, 1998), some of them use market research, some do not. To make the study manageable, a convenience sample was drawn from the *New Zealand Market Research Society Directory* (1998) supplemented from the *New Zealand Business Who's Who* (1998). A list of 87 company names was compiled from these sources. Initially, the chief executives of these 87 organisations were sent a letter containing an outline of the intended research, an invitation to participate, and a request for information relating to all market research commissioned or conducted over the past 10 years. The letter was followed by telephone calls to the chief executive officers of these 87 organisations. Chief executive officers who agreed to take part in the study were asked to provide the name of an executive who could provide information on the company's market research information. A sample copy of the initial letter is shown in Appendix 2.1. Maltz and Kohli (1996) claim that they obtained a 74% response rate by first mailing out letters to explain the study, and

then, after obtaining the names of executives, mailing out the main questionnaire, which supports the research design employed in this study.

To achieve an acceptable level of response rates, preliminary notification by letter stating the researcher status and the purpose of research; telephone contact followed by reminders; letters addressed to the specific person; and constant contact with the respondents to develop a rapport were carried out. 50 companies (57%) agreed to take part in the study and provided the names of the managers to be contacted. However, of these 50 companies, 16 companies had not done any formal market research over the past ten years (17% of the sample). This reduced the final sample to 34 companies (40% of the initial sample). Table 2.1 describes the response rates for phase one of the study.

**Table 2.1 - Sample Size and Response Rates**

	n	Percentage
Agreed to participate	34	40
Agreed, but haven't done any research	16	17
Refused to participate	37	43
	87	100

**2.3.2. Non-respondents**

The major issue when analysing non-response was to determine whether potential non-response bias had resulted from the non-response. The characteristics of the non-respondents were analysed with the purpose of checking for two types of non-response bias, namely non-coverage (inability to reach the sample) and non-response (non-respondents being different in some important way from the respondents) (Lehman, Gupta and Steckel, 1998). Regarding non-coverage, all of the companies could be reached. In comparing the industry profile of the non-respondents with the respondents, it was found that no specific areas of non-response could be identified in terms of industry type of the non-respondents compared to the respondents (Table 2.2). Six main reasons for types of non-response were identified (for more details, see Appendix 2.2).



**Table 2.2 - Characteristics of Non-respondents Compared to the Sample**

	Percentages		
	Total Sample	Respondents	Non Respondents
Wholesale, Retail, Distribution	17	14	18
Insurance	16	17	12
Finance, Banking, Banking Services	12	14	8
Agriculture, Mining, Quarrying, Manufacturing	12	10	15
Communication Services	9	11	7
Culture, Recreation Services	7	6	6
Business Services	7	8	10
Government Administration	7	8	7
Electricity, Gas, Services	6	6	4
Health Services	4	3	5
Travel, Transport, Storage	3	3	8
	100	100	100

**2.3.3. Sample Characteristics**

The annual revenues of the companies in the sampling frame ranged from \$10 million to \$1 billion. The company size, measured in number of employees, varied from 25 to more than 5000. The company age spanned from 5 to more than 100 years. The sample covered a wide spectrum of service and manufacturing companies. The industry representations of the 34 companies in the sample are depicted in Table 2.2.

The majority of the companies in the sample were in the service industry. The largest industry representation was “wholesale, retail, distribution”, followed by “insurance”. However, in the final sample, the majority of the largest industry representation was “insurance”, followed by “finance, banking, banking services” and “wholesale, retail, distribution”.

**2.3.4. People**

The contact people from each organisation were provided by management. The management of the participating organisations made it clear from the beginning that

even though nominated, their participation in the research would be completely voluntary. The respondents were engaged in marketing related activities and remained constant for the various stages of the research over the two years. The respondents were very cooperative, provided the necessary information and permitted the researcher to examine all the market research projects that were available.

## 2.4. PROCEDURE

This study addresses the research problems by using both qualitative and quantitative methodologies. The qualitative method is used to capture what Leedy (1989) describes as the emic perspective, that is the participant's own view of reality, and the quantitative method provided the framework for exploring such views (Cooper and Hedges, 1994). The use of in-depth interviews, mailed questionnaires and the use of the SPSS statistical package throughout this research were the primary methods for combining qualitative and quantitative methodologies. The primary research process consisted of five phases:

- ▶ *Rapport Development:* The nominated managers were contacted by telephone, the purpose of the research was detailed, and their cooperation was solicited in obtaining the information.
- ▶ *Confidentiality:* Wherever requested, a confidentiality agreement was signed between Massey University, the Company providing the information, and the Researcher.
- ▶ *In-depth interviews and gathering the Data:* An in-depth interview was scheduled with the 34 managers who were asked to provide information about all research projects commissioned or conducted over last 10 years (1989-1998). All 3018 research projects identified were carefully reviewed and classified as “*Background research*” or “*Decision research*” based on their objective, purpose, methodology and the implementation of research outcomes.

- ▶ *Questionnaire Design and Piloting the Questionnaire*: After a review of all the research projects and follow-up interviews based on the review, a pilot questionnaire was mailed to five managers who took part in the study.
- ▶ *Questionnaire Administration*: Mailing out the final questionnaire to each of the managers who had previously agreed to provide information and gain responses to the statements in the questionnaire.

These five phases are more fully described below.

#### **2.4.1. Rapport Development**

The purpose of phase one was to elicit participation and constant cooperation throughout the project from the nominated respondents. When the respondents were contacted over the telephone, the researcher explained the status of the project and gave brief details about the background and objectives of the project. After this, a package comprising the above details and a signed confidentiality agreement was sent out to all respondents with a personal letter (Appendix 2.3).

#### **2.4.2. Confidentiality**

In line with the New Zealand Market Research Society Code of Ethics (Appendix 2.4), responding organisations and their nominees were assured that the information they provided would be treated as confidential and that no information would be reported in a way that could identify the organisation or the individual who provided it. The confidentiality assurance was included in the initial letters to the chief executive officer and repeated when the nominees were contacted.

The draft confidentiality agreement was prepared by Massey University Research Services and sent out to all organisations with a covering letter stating that they

could make amendments to the draft. Except for three, all the organisations who requested a confidentiality agreement accepted the draft as it was (Appendix 2.5). The other three organisations submitted their own confidentiality agreements which were accepted by Massey University.

### **2.4.3. In-depth Interviews and Gathering the Data**

After a relationship was established with the nominees of the organisations over the telephone, 34 in-depth interviews were undertaken over a six month period between June and November 1999 to obtain detailed information on the functions of the department, the purpose for which market research is commissioned, expectations from the research, criteria for selection and commissioning of research, and also to enumerate the market research projects conducted. After a critical review of all 3018 research projects, follow-up interviews were held with some respondents to confirm and clarify responses, as well as to gather other qualitative data on the operational aspects of research. These follow-up interviews also assisted with the design and development of the mail questionnaire.

### **2.4.4. Initial Questionnaire Design and Piloting the Questionnaire**

In the absence of objective information, a survey method allows for the assessment of the impact of manager's perceptions (O'Reilly, 1982). The literature shows that to get respondents' opinions on the outcome of research data and performance data, structured mailed questionnaires are suitable. Sudman and Bradburn (1984) note that professionals and white-collar workers are generally cooperative and likely to respond to mailed questionnaires. Clover and Balsley (1984) also suggest that it is appropriate to use mailed questionnaires when a population is a relatively homogeneous group of persons with similar interests, education, economic and social background. The respondents in this survey were senior managers, mainly in marketing related positions in their companies, which suggests homogeneity.

The time sufficient to answer a questionnaire allows respondents to formulate more carefully considered answers at their convenience (Nachmias and Nachmias, 1981). In some situations, respondents may feel that they cannot supply the information required to complete the questionnaire. In this case, it allows respondents to seek information from colleagues who are better versed in the relevant subjects (Moser and Kalton, 1971), and can aid in avoiding memory errors and may improve the quality of results (Fowler, 1984; Zikmund, 1991).

Piloting is accomplished by administering the questionnaire to a small sample of respondents whose responses and reactions in general are then examined in more detail (Diamantopoulous, Schlegelmilch and Tse, 1993). The questionnaire was pre-tested on five individuals. Two were pre-tested by telephone and three were pre-tested by personal interviews. Respondents were asked to explain why they responded to each statement as they did, to state what each statement meant to them, and to describe any problems or uncertainties they had in completing the questionnaire.

In relation to the issue of pre-testing, Payne (1951) queries whether respondents are sufficiently knowledgeable about questionnaire design matters to offer insightful feedback. Therefore, as an addition to this type of pre-testing the questionnaire used in this study was subjected to a rigorous “group mind” appraisal, as described by Sudman and Bradburn (1982). The “group mind” used consisted of three senior academics who combined over 50 years of experience in survey research. Their suggestions at early stages of the questionnaire design process and their comments throughout the revision process helped ensure the pre-tested versions were close to the final version. No evidence of statement misunderstanding appeared, and, therefore, wording of the statements was not changed as a result of the pre-test. As a result, the questionnaire was not pre-tested again on a different pilot sample and it was sent to other respondents in the sample.

The questionnaire was divided into two parts. Part I measures company-based information and Part II measures the project-based information. Part I of the

questionnaire contained two sets of statements: 37 statements in the first set (measures research use dimensions) and 6 statements in the second set (measures business performance). The initial set of 37 statements covered a wide range of issues relating to market research use in organisations, whereas the second set of 6 were specific to the organisation's business performance. These measures were discussed below.

The first set in Part I contained 32 statements, based on the questionnaire developed by Diamantopoulos and Souchon (1999). The statements taken from Diamantopoulos and Souchon were modified in terms of language, style and direction to suit the present purpose, and incorporated with an additional five statements measuring aspects of market research information use not captured by Diamantopoulos and Souchon. The rationale for including these additional statements was their relevance to the topic of research use as suggested by the literature. The 37 statements can be seen in Appendix 2.6. these statements were used to validate the classification of research use dimension discussed in the literature. The respondents were asked to indicate whether they agreed or disagreed with each statement. Each statement was rated by the respondents on a five-point scale from 5 'strongly agree' to 1 'strongly disagree'.

The second set in Part I contained a total of six self-reported subjective performance measures. Business performance was evaluated subjectively by four statements covering the '*return on total assets*', '*sales growth*' and '*return on total sales*', as well as '*overall performance*' of the respective organisations. These measures were designed primarily on the basis of an extensive literature review on performance measurement. An additional two measures were incorporated to allow for 'firm size' and 'market research expenditure' effects. The respondents were asked to rate their organisation on the six measures, relative to other similar companies, using the five-point scale (much higher (5) to much lower (1)) attached as Appendix 2.7.

Part II of the questionnaire asked the respondents to evaluate their market research projects on four usefulness dimensions. The total number of projects evaluated was 775, but the actual number varied from organisation to organisation, dependant on the number of projects they had undertaken over the ten year period. The statements used were based on a questionnaire by Deshpande and Zaltman (1982), replicated with some modifications to wording and presentation. The respondents rated their response to the four statements on a five-point scale, ranging from 'strongly agree (5)' to 'strongly disagree (1)'. In addition, in an attempt to control for bias in the rating of the projects, respondents were also asked to rate their level of personal 'involvement' in each project on the same five-point scale (See appendix 2.8).

#### **2.4.5. Final Questionnaire Administration**

The purpose of phase five was to gain responses to the statements in the questionnaire. One week prior to the mail out, the 34 individual senior managers were personally contacted over the telephone to alert them to the purpose of the forthcoming research questionnaire and additionally to request their full support and commitment to the project. The package sent out to all companies in mid-March 2000 contained a personalised letter, the main questionnaire and a freepost envelope. Copies of the phase five cover letter and the questionnaire are in Appendix 2.9.

Berdie, Anderson and Niebuhr (1986) state that covering letters are essential in mail questionnaires to introduce and legitimise interviewers. The covering letter identified the purpose of the study and worked to encourage participation by stating, "the size of the sample is crucial to the accuracy of my research, and your participation is therefore important", and promising to make the research results available to the respondents within a specified period of time. The time commitment required was addressed and assurance of confidentiality reiterated. The cost of returning the questionnaire was minimised through the use of a reply paid envelope.

This was followed two weeks later by follow up telephone calls to the respondents. Finally, all 34 respondents mailed back their questionnaires, all in usable form.

## **2.5. DATA REDUCTION TECHNIQUES**

Analysis of the data was conducted using the Statistical Package for Social Sciences (SPSS). All the statements in the questionnaire were based on a five-point Likert scale format. The Likert scale was first evaluated using normal descriptive statistics to look for any peculiarities in frequencies. Preliminary cross-tabulations were also done. Likert scale codes were treated as metric level data and the mean used as the central tendency measure. Once the type of research has been determined, the information collected through the questionnaire is subjected to data reduction techniques. Whilst a number of data reduction techniques are available for use, two are viewed here in succession; principal components analysis and cluster analysis.

### **2.5.1. Principal Components Analysis**

Principal components analysis is a class of procedures used for reducing and summarising data. Each component can be expressed as a linear combination of the observed variables (Jobson, 1991). Principal components analysis is an interdependent research tool; that is, no constituent variable in the data set predicts any other variable in the same set.

The general purpose of principal components analysis is to find a way of condensing the information contained in a number of original variables into a smaller set of new, composite dimensions with a minimum loss of information - that is, to search for and define the fundamental dimensions assumed to underlie the original variables. More specifically, principal components analysis techniques can meet either of two objectives: identifying the structure of relationships among variables; and creating



an entirely new set of variables, much smaller in number, to partially or completely replace the original set of variables (Arabie and Hubert, 1994; Hoffman, de Leeuw and Arjunji, 1994).

The technique also may be applied to identify the structure of relationships among individual respondents. This is referred to as “Q-type analysis”, a method combining and condensing large numbers of respondents into distinctly different groups within a larger population. In a Q-type analysis, the results would identify similar groups of individuals demonstrating a similar pattern on the variables included in the analysis. Q-type analysis is similar to cluster analysis in its comparison of a series of responses to a number of variables and placement of the respondents in several groups.

Although the initial or unrotated matrix indicates the relationship between the components and individual variables, it seldom results in components which can be interpreted because they are correlated with many variables. Therefore, through rotation, the matrix is transformed into one that is easier to interpret. Rotation of the Principal components solution improves interpretation and can find new components (Chatterjee, Jamieson and Wiseman, 1991; Manly, 1994; Hair, Anderson, Tatham and Black, 1995). The ultimate effect of rotating the matrix is to redistribute the variance from initial solutions to achieve a simpler, theoretically more meaningful pattern (Ganesalingam, 1993). The most commonly used method of rotation is the varimax procedure (Chatterjee, Jamieson and Wiseman, 1991; Manly, 1994; Hair, Anderson, Tatham and Black, 1995).

Several considerations are involved in determining the number of components that should be used in the analysis. Manly (1994) argues that it is the researcher or analyst who should determine the number. Others (Nie, Hull, Jenkins, Steinbrenner and Bent, 1975; Hair, Anderson, Tatham and Black, 1995; Malhotra, Hall, Shaw and Crisp, 1996), in a more conventional manner, suggest that the number of retained components ought to be decided by a combination of procedures such as

eigenvalues, a scree test, percentage of variance accounted for, split-half reliability and significance tests.

Hair, Anderson, Tatham and Black (1995) suggest an assessment of structure is interrelated with selecting the number of retained components. Several solutions with differing numbers of components should be examined before the structure is well defined. There are negative consequences for selecting either too many or too few principal components to represent the data (Stewart, 1981). If too few are used, then the correct structure is not revealed and important dimensions may be omitted. If too many are retained, then the interpretation becomes harder when the matrix is rotated (Manly, 1994). Therefore, the analyst should always strive to have both the most representative and the most parsimonious set of principal components possible.

In addition to factor loadings and eigenvalues, three particular outputs generated by principal components analysis are communalities and two statistics, Bartlett's Sphericity and Kaiser-Myer-Olin (KMO). Communality indicates the extent to which the variance of a variable is accounted for by the retained components. In relative terms, larger values are more desirable than smaller ones in that the latter values are not seen to contribute a great deal to the total solution. Of the two statistics named, Bartlett's test of Sphericity is a statistical test for the presence of correlations among the variables. It provides the statistical probability that the correlation matrix has significant correlations among at least some of the variables (Norusis, 1985). According to Malhotra, Hall, Shaw and Crisp (1996), larger values are more favourable to denying a null hypothesis. The KMO measures sample adequacy, on the other hand, is an index used to examine the appropriateness of principal components analysis. This index compares the magnitudes of observed and partial correlation coefficients. Ideally, larger values of KMO are desired given the explanatory power of correlations between pairs of variables. Malhotra, Hall, Shaw and Crisp indicate values above 0.5 are significant for principal components analysis.

### **2.5.2. Cluster Analysis**

Cluster analysis consists of a class of techniques used to classify objects or cases into relatively homogeneous groups called clusters. Its overall objective is to attain the best achievable grouping of objects, people, markets or variables such that internal (within-cluster) homogeneity and external (between-cluster) heterogeneity are high (Hair, Anderson, Tatham and Black, 1995). In short, a cluster analysis is about searching for and identifying similarities and differences in data sets.

Malhotra, Hall, Shaw and Crisp (1996) point out that cluster analysis has some similarity with principal components analysis regarding the treatment of data. Like principal components analysis, cluster analysis examines an entire set of interdependence relationships but makes no distinction between dependent and independent variables. Rather, interdependence relationships between the whole set of variables are examined. When used in this manner, cluster analysis is analogous to principal components analysis in that it reduces the number of objects (not the number of variables), by grouping them into a much smaller number of clusters (Hair, Anderson, Tatham and Black, 1995).

Sometimes cluster analysis is also used for clustering variables to identify homogeneous groups. In this instance, the units used for analysis are the variables, and the distance measures are computed for all pairs of variables (Hair, Anderson, Tatham and Black, 1995; Malhotra, Hall, Shaw and Crisp, 1996). Clustering of variables can aid in the identification of unique variables that make a unique contribution to the data. A large set of variables can often be replaced by sets of cluster components with little loss of information (Hair, Anderson, Tatham and Black, 1995). However, a given number of cluster components does not generally explain as much variance as the same number of principal components. It has been claimed that cluster components are usually easier to interpret than principal components, even if the latter are rotated (Malhotra, Hall, Shaw and Crisp, 1996).

Since the objective of clustering is to group similar objects together, some measure of resemblance is needed to assess how similar or different the objects are. The common approach to measuring similarity is in terms of distance between pairs of clusters. The commonly used measure of similarity is the euclidean distance or its square. The other measures are city-block distance and the chebychev-distance (Hair, Anderson, Tatham and Black, 1995). Hair, Anderson, Tatham and Black (1995) advise that it is important to employ different measures and compare the results.

Having selected a distance or similarity measure, the next task is the selection of a clustering procedure. The customary manner of examining these procedures is to broadly categorise them as hierarchical and non-hierarchical - the former being the more popular or common. The hierarchical clustering process starts with each objects and groups the two nearest objects into a cluster, thus reducing the number of clusters to  $(n-1)$ . The process is repeated until all objects have been grouped into clusters containing all  $n$ -objects. Hierarchical methods are divided between “agglomerative” and “divisive”. An agglomerative process is one where clusters are developed from single cases (clusters) towards larger groupings, whereas a divisive process is the reverse; that is, movement occurs from one massive cluster towards many clusters (Norusis, 1988; Hair, Anderson, Tatham and Black, 1995; Malhotra, Hall, Shaw and Crisp, 1996). These processes are what Funkhouser (1983) referred to as building up and breaking down methods respectively.

The most common form of clustering method used is agglomerative. Agglomerative method consists of linkage methods, variance methods and centroid methods. Linkage methods include single linkage, complete linkage and average linkage, the main difference between linkage types revolve around the treatment of distance. The single linkage method is based on minimum distance or the shortest distance between points in comparative clusters. It is often referred to as the “nearest neighbour” routine. By contrast, the complete linkage method is based on the maximum distance or furthest neighbour approach. The average linkage method

works similarly. However, in this method, the distance between two clusters is defined as the average of the distances between all pairs of objects, where one member of the pair is from each of the clusters, thus average linkage virtually speaks for itself. For this reason, it is usually preferred to the single and complete linkage methods (Malhotra, Hall, Shaw and Crisp, 1996).

By contrast, the minimum variance methods attempt to form clusters to minimise the within-cluster variance. A commonly used variance method is the Ward's procedure. Ward's method handles distance as a sum of squares across all variables. In the centroid methods, the approach locates objects on the basis of cluster means. Although outliers do not trouble this technique, it does require metric data whereas other linkage methods do not (Morrison, 1967; Hair, Anderson, Tatham and Black, 1995; Malhotra, Hall, Shaw and Crisp, 1996). Every time objects are grouped, a new centroid is computed.

The second group of clustering procedures, the non-hierarchical methods, is frequently referred to as K-means clustering. The issue of non-hierarchical clusters has not received as much attention in the literature as hierarchical clustering. However, its three approaches - sequential threshold, parallel threshold and optimising partitioning - base themselves on the application or selection of a cluster seed, which acts as a specified distance. Items located within a space defined by the specified distance are included in that cluster. The two main disadvantages of non-hierarchical procedures are the number of clusters must be pre-specified and the selection of cluster centres is arbitrary (Wilkinson, 1989; Hair, Anderson, Tatham and Black, 1995).

A "dendrogram" is a commonly used method of representing geometrically or graphically the hierarchical clusters that result when a given clustering procedure operates on a similarity matrix. Vertical lines represent clusters that are joined together. The position of the line on the scale indicates the distances at which clusters are being combined.

A major issue in cluster analysis is deciding on the number of clusters (Hair, Anderson, Tatham and Black, 1995; Malhotra, Hall, Shaw and Crisp, 1996). While there are no hard and fast rules, some guidelines are available: the distances at which clusters are being combined (with the use of dendrogram) is a useful criterion; the intuitive conceptualisation of theoretical relationship may suggest a natural number of clusters; a number of different solutions are computed and the alternative solutions selected by a priori criteria, practical judgement, common sense or theoretical foundation; ratio of total within-group variance to between-group variance (the point at which an elbow or a sharp bend occurs) can identify a certain number of clusters (Hair, Anderson, Tatham and Black, 1995; Malhotra, Hall, Shaw and Crisp, 1996). The cluster solutions could be improved by restricting the solution according to conceptual aspects of the problem.

## **2.6. LIMITATIONS**

This research encompassed certain externally imposed limitations. These limitations involved the amount and extent of contact with respondents; in many companies management insisted that the research not impose excessive demands on respondents' time and energy or distract them in any way from their employment activities. These conditions meant that the research, if it was to be undertaken, had to be compact and not too demanding of respondent time.

The scope of the study is limited to assessing the evaluative process of market research users. No attempt to extend the study to the supply side of the trade or the non-users of market research information was made. Some might regard the sample size used in this study as small. Every effort was made on two separate occasions to involve more organisations and a selection of their research projects. Each effort failed to gain their support or acquire any extra participants. However, a small sample is considered to be feasible to review and evaluate a manageable number of projects from these organisations within the given time frame.

## **2.7. SUMMARY**

This part has outlined and discussed the various decisions made in the design and implementation of the research - decisions ranging from the sample selection procedures to the questionnaire design and data collection. It then reviews the literature pertaining to objective classification procedures. In addition, it has noted the potential errors likely to affect this research.

Participation was sought from 87 client companies, who made up the initial sample. Of the initial 87 contacts, 34 organisations agreed to participate in the research. In comparing the profile of the non-respondents with the respondents, it was found that no specific areas of non-response could be identified. The respondents from the organisations were engaged mainly in marketing related activities and remained fairly static over time. The nominated managers were contacted by telephone, the purpose of the research project was detailed and rapport was developed. Wherever requested, a confidentiality agreement was signed between the University, the Company providing the information and the Researcher.

A combination of qualitative and quantitative research techniques were applied in this research. The primary research tool used was in-depth interviews with the respondents and this was followed by a mail questionnaire to collect the data. The interviews obtained detailed information on the functions of the department responsible for research; the purposes for which the research was carried out; the expectations of what it would achieve; the criteria used to select research projects to commission; and the outcomes of the research. This information was then used by the researcher to classify all 3018 market research projects.

The questionnaire was pre-tested on five individuals. The questionnaire was divided into two parts. Part I collected company-based information and Part II collected project-based information. The questionnaire explored managers' perceptions of market research use; opinions about the usefulness of research projects; and the

financial and market performances of respondents' organisations. The total number of projects evaluated through the questionnaire were 775, but the actual number varied from organisation to organisation, depending on the number of projects they had carried out over the period of ten years.

Once the questionnaire was developed and evaluated in terms of reliability and validity, the information collected through the questionnaire was subjected to data reduction techniques. Within the data reduction section, discussion begins with principal components analysis, its general use as a technique, key acceptance and some limitations. It continues with discussion on the use of cluster analysis, its general use as a technique, key acceptance and some limitations. Overall, discussion

of the topics in this data reduction section has been purposely limited to essentials given the peripheral role both have played as analysis tools.

This research was subject to certain externally imposed limitations. Some of these were outside the control of the researcher in that the management of responding organisations imposed them. Other limitations were conditional in nature; that is, they were created as a direct result of sample size, or the voluntary nature of respondent participation or availability of research reports.



## **PART III**

### **CLASSIFICATION OF PROJECTS AND COMPANIES**

In the *Overview of the study*, it was hypothesised that the type of market research carried out has an effect on what can be achieved by market research. Part I has given a general discussion of market research, the reasons why market research is carried out, and what could be achieved by the application of market research findings. Part II outlined the way the data were collected and analysed in which in this study to find out what is achieved by the application of different types of market research. Part III describes the classification systems of market research projects and companies used in this study and classifies the market research projects identified in Part II, and groups the companies surveyed according to the type of market research projects they predominantly commission. Part III contains three sections.

Section 3.1 develops a classification system that forms the basis for the classification of market research into types. Under this classification, type of market research is based on the objective for which the research is commissioned and on the use to which it is put. The validity of this classification is then examined by considering the underlying attitudes towards market research held by managers.

Section 3.2 describes the classification of companies according to the proportion of market research projects undertaken by the organisations that fall into the classes identified in Section 3.1. The validity of this classification is then examined by using a classification that considered the underlying attitudes held by the organisations' managers towards market research use.

Section 3.3 contains a summary of the material in Part III.

### 3.1. CLASSIFICATION OF MARKET RESEARCH PROJECTS

The literature discussed in Part I recognises the multidimensional nature of research use and suggests that the type of research is based on the objective for which the research is undertaken and on the use to which it is put. This classification of research types proposed the existence of two key dimensions in the evaluation of research: namely, instrumental and conceptual. The reason for the non-consideration of symbolic research use in marketing studies of research use are due to (1) the difficulty in measuring decision-makers' symbolic use of research based on the classification system proposed in the literature and (2) it was considered as one form of instrumental use.

The literature shows that different terms have been used to define the same type of research use. For example, terms such as “instrumental”, “action-oriented” and “decision-oriented” have been used to define one type and “conceptual”, “knowledge-enhancing”, and “understanding” used to define other type, although it is conceded that the demarcation between the classifications is not clear.

For the purpose of this thesis, the name “decision research” will be used to cover instrumental, action-oriented and decision-oriented research and is defined as the direct application of research findings and conclusions to solve a specific problem, or to make a particular decision (Rich, 1977; Deshpande and Zaltman, 1982). In other words, a problem exists and the solution depends on research providing information to fill the information gap. Decision research is pro-active and enables managers to test already thought out ideas and concepts. Research of this type enables managers to choose a specific solution from among alternatives.

For the purpose of this thesis, the name “background research” will be used to cover conceptual, knowledge-enhancing, and understanding research and is defined as the indirect application of research, in the sense that research is used to broaden the managerial knowledge base, without serving any one particular decision

(Moorman, 1995). Background research is commissioned to understand the market with the objective of identifying possible alternative decisions. It can also be used to understand the after-effects of decisions.

Based on the classification system proposed above, the market research projects were classified as “decision research” or “background research” by the researcher reviewing each project. This classification system was derived from six aspects identified by the literature review: (1) the purpose for which the research project was carried out; (2) the prior expectations of what it would achieve (3) the clarification of stated research objectives; (4) the criteria used to select research projects to commission; (5) the methodology employed to collect information; and (6) the outcomes of the research and implementation of recommendations.

Table 3.1 shows that out of the 3018 projects collected from the 34 participating organisations, 2591 (86%) were classified as background research and only 427 (14%) as decision research. Although Holbert (1974), Krum (1978), Bellenger (1979), Deshpande and Jeffries (1981) and Deshpande and Zaltman (1982) state that decision research (instrumental research) is the most common type of research done in marketing, the results show that in this sample background research predominates over decision research as a research activity. However, this result confirms to Weiss (1981, p. 397), who points out that “instrumental use seems in fact to be rare, particularly when the issues are complex, the consequences are uncertain and a multitude of actors are engaged in the decision-making process”.

**Table 3.1 - Details of Projects Collected**

	Classification of Projects		Total Number of Projects
	Background Research	Decision Research	
Number of Projects Collected	2591	427	3018
% of Projects collected	86	14	100

In common with any system of subjective classification some effort must be made to verify that the classification demarcates between projects in some important way. The following section begins with an assessment of the justification for the validation and then discusses the choice of the 37 variables used in the questionnaire to evaluate managers' attitudes towards research use.

### **3.1.1. Validation of the Research Use Dimensions**

The principles used to validate the classification were to achieve a classification by a different method, and then to compare the results of the two methods. If both results were similar, the classification is regarded as valid. The questionnaire on attitudes toward research use was based on that of Diamantopoulos and Souchon (1999). Their questionnaire was used to derive information on various issues related to market research use in organisations.

Diamantopoulos and Souchon's (1999) original questionnaire contains two groups of statements. The first group of statements measures conceptual and instrumental research use in organisations. The second group of statements measures symbolic research use in organisations. Diamantopoulos and Souchon's rationale for including conceptual and instrumental use into the same group and considering them as parts of a single dimension was based on 12 exploratory interviews with export decision-makers, and on Dunn's work (1986). Dunn regarded instrumental use as a particular type of conceptual use. Weiss (1981), on the other hand, places instrumental and conceptual use at two opposite ends of a continuum representing directness of use. Moreover, Menon and Varadarajan (1992) consider instrumental and conceptual uses of information as separate dimensions of research use and consider symbolic use as one form of instrumental use. The two groups of statements were not differentiated in this study's questionnaire.

In order to validate the original classification system and to examine the appropriateness of conceptualising research use along two dimensions - background

and decision research - the information collected through the questionnaire was subjected to a data reduction technique.

### 3.1.1.1. Measures of Research Use Dimensions

This section discusses the 37 statements used to examine managers' attitudes towards a wide range of issues relating to market research use in organisations. Table 3.2 summarises the 37 statements used.

**Table 3.2 - Variables Measuring Managers' Attitudes  
Towards Types of Market Research Use**

Variable title	Questionnaire statements from which variable derived
<i>Post-Decision Research</i>	We sometimes do market research even when the decision has already been made.
<i>Relationship Maintenance</i>	Business to business research is often done as much to maintain relationships as to gather marketing information.
<i>Expectation Confirmation</i>	Managers seem to use market research to confirm their expectations.
<i>Non-consideration</i>	Often, market research results are not considered when making decisions for which they were initially requested.
<i>Intuition &amp; Instinctive Input</i>	Instinct and intuition are often combined with market research when making decisions.
<i>Prior Intuitive Decision</i>	Market research results are often interpreted in such a way as to justify decisions really made on the basis of instinct.
<i>Slant Research Results</i>	Managers often slant market research results when passing them on.
<i>Cost Justification</i>	Market research is sometimes only taken into account to justify the cost of having acquired it.
<i>Backup Hunches</i>	Market research is mainly used to backup hunches.
<i>Use of Guesses</i>	If market research information is difficult to obtain, guesses are often made instead.
<i>Prior 'Other Grounds' Decision Justification</i>	Market research is frequently used to support decisions made on other grounds.
<i>Customer Knowledge Process</i>	We regularly examine the factors that influence the buying decisions of our customers.
<i>Source of Customer Information</i>	We rarely use formal research procedures to gather customer information.
<i>Customer Satisfaction</i>	We systematically measure customer satisfaction.
<i>Poor Integration of Information</i>	Customer information is poorly integrated in our marketing planning activities.
<i>Idea Generation</i>	Market research is usually used to generate new ideas.
<i>Competitor Knowledge Process</i>	We systematically process and analyse information about competitors.
<i>Top Management Emphasis</i>	Top management frequently emphasises that our survival depends on adapting to market trends.
<i>Top Management Support</i>	Top management is willing to allocate resources for market research.
<i>Top Management Control</i>	Top management decides what market research is to be done.
<i>Response Implementation</i>	Our company strategies are firmly based on market research.
<i>Concept Testing</i>	Market research is usually used to screen new ideas and test concepts.
<i>Research for Specific Decision</i>	We carry out market research when there is a specific decision to be made.
<i>Utilisation for Specific Decision</i>	Our main use of market research is to make a specific decision.
<i>Research for Best Decision</i>	We believe that we have a better chance of making the right decision, if we base it on market research rather than
<i>Decision Confidence</i>	Our confidence in making marketing decisions is increased as a result of our market research.
<i>Research Effects</i>	Without market research many of our decisions would have been very different.
<i>Actionability</i>	The results of our market research are translated into significant practical action.
<i>Retention for Future Use</i>	We make sure that market research results are kept so that they are available to the organisation in the future.
<i>Research Non-Use</i>	A lot of our market research is not really used.
<i>Decision Non-Relevance</i>	Much of our market research is not relevant to decisions.
<i>Uncertainty Reduction</i>	Uncertainty associated with marketing activity is greatly reduced by market research.
<i>Gaining Market Understanding</i>	We often use market research to gain understanding rather than to make decisions.
<i>Formality</i>	We often conduct market research as a matter of formality.
<i>Build Knowledge Base</i>	We often do market research simply to update the company knowledge base.
<i>Future Usefulness</i>	Market research conducted for a specific decision is seldom of further use.
<i>Research Importance</i>	No marketing decision would be made without formal market research.

These statements were used to validate the classification of research use dimensions discussed in the literature. These statements were based on those in the questionnaire developed by Diamantopolous and Souchon (1999). The statements used by Diamantopolous and Souchon were modified in terms of language, style and direction based on a literature review discussed in the previous section. Some of these statements were similar to each other and measured the same aspects of research use. An additional five statements measuring aspects of market research use were also included. The rationale for including these additional statements was their relevance to research use and their usefulness as validation items suggested by the literature.

The respondents were asked to indicate whether they agreed or disagreed with each statement on a five-point scale from 5 'strongly agree' to 1 'strongly disagree'. These statements were considered as variables in the classification procedures. These variables measure managers' attitudes towards research, and for the purposes of the assessment of the classification of research projects would in some way be related to the type of research that was carried out. Appendix 3.1 shows frequencies for each variable. A detailed discussion of each statement follows.

### **Post-decision research**

This variable examines whether managers '*do market research even when the decision has already been made*'. Goodman (1993) argues that research used to evaluate alternative strategies, where the manager's objective is to find the suitable solution will typically use post-decision research. He also indicates that most of the research carried out after the decisions have been made is used to support those decisions. According to him, the other reasons for such research are to eliminate some possibilities; to justify decisions made on other grounds; to understand the reason for the success or failure of a decision made; to monitor results for future decisions; and to make the store of pertinent information available for decision-making more complete.

### **Relationship maintenance**

This variable examines whether '*business to business research is often done as much to maintain relationships as to gather marketing information*'. Deshpande and Zaltman (1982) claim that the conduct of market research seldom has only one objective; the same research is often used for a variety of purposes and one of them is to maintain a relationship with research suppliers. Menon and Varadarajan (1992) also state that managers use information provided by the consultants with whom they have had a long-term, positive relationship so as to promote the relationship.

### **Expectation confirmation**

This variable measures whether '*managers use market research to confirm their expectations*'. Searching information for confirmation is traced to the approval-seeking behaviour of managers, as well as the influence of company norms and company history (Lowe and Shaw, 1968). Krum (1969) and Hardin (1969) found that market research has a non-rational information function of reinforcing expectations and decisions already made. Deshpande and Zaltman (1982) state that if managers use confirmation of prior expectations as a criterion to use or not to use research findings, the magnitude of non-confirmation has implications for the behaviour of the manager, especially when confirmatory research was desired by managers and unanticipated findings were produced by researchers.

### **Non-consideration**

This variable examines whether '*market research results are not considered when making decisions for which they were initially requested*'. Market researchers often complain that their findings are ignored or not responded to (Weiss, 1972), and posit that the major reasons for non-consideration are poor analytical skills or lack of coordination to process the information; the wrong kind of information available; studies that are completed too late to be used for making a specific decision; poor quality of the research and political considerations (Patton, Grimes, Guthrie, French and Blyth, 1977; Feldman and March, 1981). Feldman and March (1981) conclude

that much of the information gathered in response to requests for information is not considered in the making of decisions for which it was requested.

### **Intuition and instinctive input**

This variable measures whether '*instinct and intuition are often combined with market research when making decisions*'. Louter, Ouwerkerk and Bakker (1991) mention that as managers develop ideas through instinct and intuition, answers to questions concerning these ideas by the use of market research could contribute to success. Schoemaker and Russo (1993) found that small firms, which lack the resources to invest in extensive market research, test ideas developed through intuition and use market research to validate the decision.

### **Prior intuitive decision justification**

This variable investigates whether '*market research results are often interpreted in such a way as to justify decisions really made on the basis of instinct*'. The variable 'prior intuitive decision justification' refers to the partisan use of research findings to legitimise and sustain previously thought out research outcomes (Beyer and Trice, 1982; Piercy, 1983). Deshpande and Zaltman (1982) state that managers develop their "priors" about what they expect the research to demonstrate before, or even as, the research itself is being contracted. Lee, Acito and Day (1987) state that research confirming decisions tends to be rated higher and is more likely to be used whereas research contrary to prior decisions tends to be evaluated as poor and is less likely to be used.

### **Slant research results**

This variable examines whether '*managers slant market research results when passing them on*'. The variable "slant research results" refers to misuse of research results by taking conclusions out of their context and disclosing only those that confirm an executive's predetermined position, or by consciously ignoring any



accompanying caveats that may weaken the findings (Weiss, 1977). The literature indicates that there are competing pressures on managers leading to: the distortion of information in the ways to meet the expectation of superiors (Lowe and Shaw, 1968; Schiff and Lewin, 1968); introduce purposeful selectivity into the flow of information as a way of shaping the decisions made by others (Pettigrew, 1972); manipulate the way in which the information is used; alter, where possible, the results of the decision process (Piercy, 1983); tend to distort information and delay its use (Huber, 1990); and frequently misrepresent information to superiors in order to enhance their image (Goodman, 1993).

### **Cost justification**

This variable investigates whether '*market research is sometimes only taken into account to justify the cost of having acquired it*'. Cost justification occurs when managers use information to justify the decisions based on the cost of having acquired the information. Pfeffer and Salancik (1978) note "information, regardless of its validity, comes to take on an importance and meaning just because of its cost of collection and availability". Accordingly, the studies that are expensive are more likely to be perceived to be of higher value, and used to justify the collection and the decisions made from the study.

### **Backup hunches**

This variable examines whether '*market research is mainly used to backup hunches*'. Cunningham and Clarke (1975) found that managers use numerous methods to put a decision in a favourable light and gain support, and such behaviour was expected and even desired by their organisational supervisors. Hart, Webb and Jones' (1994) study also found that market research is often used to back up hunches; in particular, they argue smaller companies use market research data in a more subjective fashion than larger companies.

### **Use of guesses**

This variable examines whether *'if market research information is difficult to obtain, guesses are often made instead'*. Schoemaker and Russo (1993) state that the use of guesses is a quick and easy way of making a decision. Dependence on guesswork is highly unreliable, but, because it takes so little effort, it may be appropriate in some decisions. They argue that, in an emergency, there may be no time for a comprehensive assessment, or the decision may be inherently intuitive, such as in artistic judgements.

### **Prior 'other grounds' decision justification**

This variable measures whether *'market research is frequently used to support decisions made on other grounds'*. The variable "prior 'other grounds' decision justification" describes research findings that are either used to justify actions taken for other reasons or are used selectively (Beyer and Trice, 1982). Pettigrew (1972) states that managers sometime take conclusions out of research results, disclosing only those that confirm their predetermined position or introduce purposeful selectivity into the flow of information as a way of shaping the decisions made on other grounds.

### **Customer knowledge process**

This variable examines whether managers *'regularly examine the factors that influence the buying decisions of [their] customers'*. The variable "customer knowledge process" refers to the set of behavioural activities generating customer knowledge pertaining to customers' current and potential needs for new or existing products (Li and Calantone, 1998). Customer-focused assessments start with detailed analysis of customer benefits within end-use segments and work backward from the customer to the company to identify the actions needed to improve performance (Day and Wensley, 1988; Huber, 1990; Sinkula, 1994). Several studies point to "customer demandingness" as a main catalyst for firms to implement processes of market knowledge competence (Gupta, Raj and Wilemon, 1986;

Sanchez and Elola, 1991; Wheelwright and Clark, 1992). As customers become more demanding, firms are prompted to intensify their activities and learn specific customer needs to develop needs-satisfying products with superior value. Porter (1990) offers a proactive reason for firms to link “customer demandingness” and a customer knowledge process. He suggests that firms intentionally seek the most demanding customers, as a motivating factor in their pursuance of knowledge about advanced market needs.

### **Sources of customer information**

This variable examines whether managers ‘*rarely use formal research procedures to gather customer information*’. Maltz and Kohli (1996) found a curvilinear relationship between use of formal research information and perceived quality of market research, which is directly related to information use. They concluded that both formality and informality have their place in encouraging information dissemination and use due to the type of decision being made. Other researchers also conclude that differences in the sources of information use affect the way managers use information (O'Reilly, 1982; Anderson, Koonce and Marchant, 1994; Reimers and Fennema, 1999).

### **Customer satisfaction measurement**

This variable examines whether managers ‘*systematically measure customer satisfaction*’. Satisfaction surveys are typically focussed on assessing overall satisfaction and intention to repurchase and are therefore limited in revealing problems experienced by recent buyers (Churchill and Surprenant, 1982). Lado, Maydeu-Olivares and Rivera (1998) claim that customer satisfaction measures focus only on the brand or product most recently purchased, may not isolate the contribution of each product or service attribute to overall satisfaction, and usually lack relevance to issues of competitive advantage.

### **Poor integration of information**

This variable measures whether '*customer information is poorly integrated in [the respondents'] marketing planning activities*'. Patton, Grimes, Guthrie, French and Blyth (1977) and Feldman and March (1981) suggest that the major reasons for non-integration of information into planning activities include poor analytical skills or lack of coordination to process the information, the wrong kind of information available, studies completed too late to be used for making a specific decision, poor quality of the research, and political considerations. Lee, Acito and Day (1987) state that research information inconsistent with the decision maker's established beliefs will also lead to poor integration of research information.

### **Idea generation**

This variable examines whether '*market research is usually used to generated new ideas*'. Cooper (1986) mentions that idea generation was used by less than half the firms he studied, and there is a preference for evaluating concepts over idea generation activities. Edgett, Shipley and Forbes (1992) claim that when firms succeed, they attribute that success to internally generated ideas rather than customer suggestions. Their findings indicate that only a small percentage of ideas originated from either customers or distributors.

### **Competitor knowledge process**

This variable examines whether managers '*systematically process and analyse information about competitors*'. To emphasize the role of a competitor knowledge process, de Geus (1988) predicts that "the only competitive advantage the company of the future will have is its managers' ability to learn [about their competitors] faster than [their] competitors". Kohli and Jaworski (1990) observe that, in conditions of intensified competition, competitor information gathering is essential for two reasons. First, intensified competition increases market uncertainty and unpredictability and monitoring competition may help firms better anticipate changes in competitors' new product strategies and reduce market unpredictability.

Second, with intensified competition, product advantage and market share become more volatile and neglect of competitors may further erode a firm's market position. Yasai-Ardekani (1993) also argues that frequent scanning of competitive environment positions the firm to stay abreast of environmental events and trends that threaten its existence or offers the firm opportunities to exploit.

### **Top management emphasis**

This variable investigates whether '*top management frequently emphasises that [their] survival depends on adapting to market trends*'. Several authors suggest that top management plays a critical role in shaping an organisation's values and information searching behaviour (Felton, 1959; Hambrick and Mason, 1984; Webster, 1988; Jaworski and Kohli, 1993). The central theme in these writings is that unless an organisation gets signals from top management about the importance of being responsive to customer needs, the organisation is unlikely to be market-oriented (Levitt, 1969). Jaworski and Kohli (1993) found that the amount of emphasis top managers place on market information affects a firm's generation of market information and its responsiveness to market needs.

### **Top management support**

This variable examines whether '*top management is willing to allocate resources for market research*'. Top management plays a key role in providing an environment that is either conducive or inhibitory to market knowledge generation (Gupta, Raj and Wilemon, 1986; Kohli and Jaworski, 1990; Deshpande, Farley and Webster, 1993). Kohli and Jaworski (1990) argue that unless top managers understand and appreciate the value of market information and demonstrate a willingness to carry out an information search, the organization is unlikely to pursue vigorously those activities that generate market information.

### **Top management control**

This variable examines whether '*top management decides what market research is to be done*'. The key variables that affect the extent of top management control are formalisation and centralisation, and their effects on information use within organisations are widely recognised (Deshpande, 1982; Menon and Varadarajan, 1992). Some research suggests that both formalisation and centralisation are inversely related to information use (Hage and Aiken, 1970; Deshpande and Zaltman, 1982). However, Zaltman, Duncan and Holbek (1973) state that formalisation and centralisation may be inversely related to information generation and dissemination, but positively related to response implementation. Some others state that formalisation brings a degree of thoroughness to decision-making processes leading to increased information use (John and Martin, 1984; Avlonitis, 1985; Menon and Varadarajan, 1992; Maltz and Kohli, 1996), but centralisation leads to decreased use of marketing information (John and Martin, 1984). Diamantopoulos and Horncastle (1997) argue that delegation of decision-making on market research matters is one way of improving research use within an organisation. The delegation allows lower level managers to take a greater part in research activities, thus ensuring their commitment to the results of such activities (Deshpande and Zaltman, 1982). Corwin and Louis (1982), on the other hand, found that decentralisation leads to a policy vacuum, in turn leading to less information search and use.

### **Response implementation**

This variable measures whether '*company strategies are firmly based on market research*'. Response implementation reflects the proportion of recommendations generated by the research that was actually followed by the users. Findings of Zaltman, Duncan and Holbek (1973) and Kohli and Jaworski (1990) show that while an organisation can generate intelligence and disseminate it internally, unless it responds to that market information, very little is accomplished.

### **Concept testing**

This variable examines whether '*market research is usually used to screen new ideas and test concepts*'. von Hippel (1986) observes that users' insights into new product needs and potential solutions are inhibited by their own real-world experiences. Accordingly, users steeped in the present are unlikely to generate novel product concepts that conflict with the familiar. A new product development operation that is focused on what consumers think they want is almost bound to spend its time working on minor improvements that have little economic value. Rather, it should be proactive and concentrate on searching for problems and solutions that consumers perhaps have not yet perceived, but will regard as important, once recognised (Cooper, 1986). Sanchez and Elola (1991) also state that firms must be proactive by defining exactly the product concepts before a full-scale information search begins. Otherwise the firm will face a vague product definition, one that provides both a moving target and slow development. According to Day (1991), difficulty in maintaining competitive advantage is often exacerbated by exponential growth in the volume of market data and the imperative "need for shared organisational assumptions about the market to assure the coherency and timeliness of strategies that anticipate rather than react to the market". Davis (1993) also states that market research plays an important role in the development of the elements of new products by testing concepts of advertising, price, product and packaging.

### **Research for specific decision**

This variable examines whether managers '*carry out market research when there is a specific decision to be made*'. Sometimes research is carried out to solve a specific problem where the solution depends on research providing information to fill the information gaps. Chan (1979) states that choice is appropriately informed when the best available information about possible future consequences of present actions is sought.

### **Utilisation for specific decision**

This variable measures the “use” of research by asking whether managers’ *‘main use of market research is to make a specific decision’*. Sometimes research findings and conclusions are directly applied to solve a specific problem or intended to affirm a predetermined direction or course of action. Feldman and March (1981) state that information that is viewed as specific to a decision will tend to be information-intensive.

### **Research for best decision**

This variable examines whether managers *‘believe that [they] have a better chance of making the right decision, if [they] base it on market research rather than intuition’*. One of the most important characteristics determining the degree to which information is used is its credibility (John and Martin, 1984). The credibility of marketing information and the outcome of a best decision refers to the relevance, accuracy, reliability and timeliness of marketing information (John and Martin, 1984; Menon and Varadarajan, 1992; Moorman, Deshpande and Zaltman, 1993). Schoemaker and Russo (1993) state that combining intuitive and analytical techniques by way of importance- weighting techniques is a best way of applying intuitive criteria consistently and effectively. According to them, importance-weighting techniques make intuitive judgments visible and open to examination and allow decision-makers to articulate those weights, test them and use them for future decisions.

### **Decision confidence**

This variable examines whether managers’ *‘confidence in making marketing decisions is increased as a result of [their] market research’*. Decision confidence relates to the decision-maker’s emotional state, reflecting the “change in confidence after receiving market research results” (Lee, Acito and Day, 1987, p. 191). Nisbett and Ross (1980) and Lee, Acito and Day (1987) reasoned that a concrete proposal of alternative decisions by the research facilitates confidence in the judgmental



abilities of the decision-makers and its use. Lord, Lepper and Ross (1979) and Lee, Acito and Day (1987) found that the use of research information and the confidence about the decisions made are more likely to be high if they are consistent with a decision-maker's established beliefs than if they are inconsistent with those beliefs. However, Einhorn and Hogarth (1978) note that prior beliefs reflect and could lead to decision-makers' overconfidence in their own judgements.

### **Research effects**

This variable measures the effect and the use of market research by asking managers whether '*many of [their] decisions would have been very different without market research*'. Weiss and Bucuvalas (1977) state that the effect of research contains two distinct features - an intrinsic contribution to the work of the decision-maker and consideration of research information in decision-making. Martinez (1998) argues that effective information emerges when the recipient of the information understands, translates and applies it to specific duties.

### **Actionability**

This variable examines whether '*the market research results are translated into significant practical actions*'. Weiss and Bucuvalas (1977, 1980) and Rich (1979) state that the use of information is greatly affected by the perceived acceptability of the recommendations and the extent to which the recommendations are perceived to be implementable. Deshpande and Zaltman (1987) also argue that managers prefer to use research information which is perceived to be acceptable and offers actionable recommendations. In addition, Deshpande and Zaltman found that when the research results are largely consistent with prior expectations, the use of information in terms of implementation is expected to be high.

### **Retention for future use**

This variable examines whether managers '*make sure that market research results are kept so that they are available to the organisation in the future*'. Huber (1990)

describes organisational memory as the means by which information is stored for future use. Accordingly, organisations retain or preserve information of how and what they learn about markets (Stewart, 1991) and this memory guides individual and organisational actions (Argyris and Schon, 1978). However, Nystrom and Starbuck (1984) caution that those who do use preserved information must be aware that it serves as a “lens” through which market information is interpreted, potentially biasing the interpretation and decision-making process.

### **Research non-use**

This variable measures whether ‘*a lot of [their] market research is not really used*’. Caplan (1977) states that increased collection of relevant data or further development of information storage and retrieval systems are unlikely to advance use of research information unless accompanied by success in influencing the decision-maker’s understanding of the problem, increasing the awareness of what he or she needs from research and increasing his or her willingness to use research. Feldman and March (1981) state that individuals in organisations often gather more information than expected by the organisations and will attend less to this information. They further state that the reasons for non-use of information are mainly due to factors involving values, ideology and decision-making styles of the decision-makers.

### **Decision non-relevance**

This variable examines whether ‘*much of [their] market research is not relevant to decisions*’. Feldman and March (1981) claim that much of the information gathered and communicated by individuals and organisations has little decision relevance. They say the relevance of the information provided to the decision being made is generally less conspicuous than the insistence on information gathering. Deshpande and Zaltman (1982) state that the relevance of research to decisions relates more to the impact or consequence of research acceptance.

### **Uncertainty reduction**

This variable examines whether '*uncertainty associated with marketing activity is greatly reduced by market research*'. The theory of information economics posits that firms respond to uncertainty by seeking to reduce it through obtaining information (Stigler, 1961). Dickson (1992) states that those companies that monitor and gather more information will have greater ability to detect significant changes and therefore face less uncertainty. However, Morgan (1986) suggests that the quality of decision-making and the implementation of the decisions will only determine the uncertainty reduction. Glazer and Weiss (1993) state that since information becomes outdated quickly in volatile markets, managers in these markets update their information more frequently to stay current with changing market conditions and to increase the likelihood that their decisions will lead to desired results. In relation to a turbulent environment, Glazer and Weiss find that formal information analysis and planning processes hinder business performance. In such an environment, they recommend avoiding high levels of formality in the procedure because it could lead to overanalysing the information and diminishing the return on market analysis.

### **Gaining market understanding**

This variable measures whether managers '*often use market research to gain understanding rather than to make decisions*'. Knorr (1977) states that market research is used to explore insights concerning unexplored possibilities and to generate new avenues and directions that may be exploited by the firm. Knorr suggests either a prior calculation of needed information or a kind of thermostatic linkage between observations and actions. Deshpande and Zaltman (1982) found that research projects used to gain understanding are likely to score high on surprise and genuinely generate "new" knowledge to the firm that goes beyond merely confirming prior beliefs.

### **Formality**

This variable examines whether managers '*often conduct market research as a matter of formality*'. The variable "formality" refers to the gathering of information periodically as a matter of routine. Feldman and March (1981) state that some organisations seem to provide incentives for gathering more information than is optimal from a strict decision perspective. Goodman (1993) states that market research is often commissioned as a matter of formality after the decisions have been made.

### **Build knowledge base**

This variable measures whether managers '*often do market research simply to update the company knowledge base*'. Knorr (1977) states that the building up of information is related to gathering and storing information to fill in the data blanks. The information gained may be used by feeding it into a decision process or by simply distributing the documentation obtained to those who are interested. Much of the research providing for general enlightenment can be considered as developing the managerial knowledge base. Feldman and March (1981) state that managers always gather information that is not needed, or more than is needed, to avoid the criticism of not accessing enough information.

### **Future usefulness**

This variable examines whether '*market research conducted for a specific decision is seldom of further use*'. This variable specifically measures the future usefulness of "decision research" use. The usefulness of a research commissioned for a specific purpose depends on its relevance and application for future decisions (Weitzel, 1987) and how management perceive the project's effect in the future (Diamantopoulos and Horncastle, 1997).

### **Research importance**

This variable measures whether '[any] *marketing decision would be made without formal market research*'. Deshpande and Zaltman (1982) and Hart, Webb and Jones (1994) find that reliance on formal market research is a common, if not the most common, approach to conducting research. These writers point out those firms with in-house research capacity also make frequent use of external researchers for tasks ranging from data collection through to data analysis and presentation. However, Hart, Webb and Jones state that the importance of formal market research is dependant on the extent to which other information sources have been used as input for the final decision.

#### **3.1.1.2. Classification of Research Type by Cluster Solution**

The validity of the original classification is examined by considering a different classification procedure obtained by using a cluster analysis (clustering of variables) based on the above 37 variables to identify similar groups of variables with respect to managers' attitudes towards research types, and then examining the relationship between the two different schema of classification.

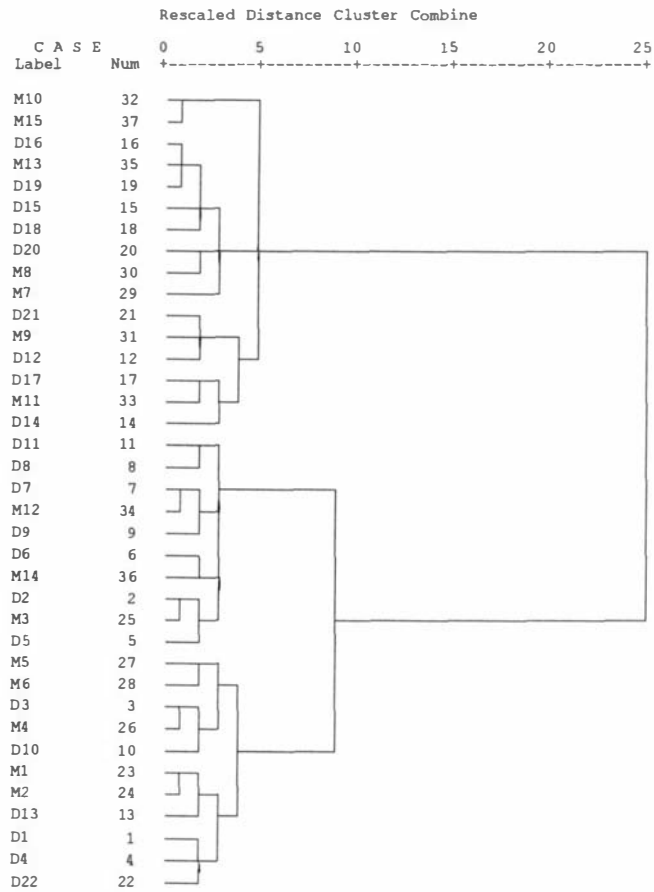
Various clustering algorithms were used with the data set and all reported similar solutions. Only those from Ward's method are reported here. Appendix 3.2 contains the results of the cluster analysis, including the variables being combined at each stage of the process and the clustering coefficient. Table 3.3 shows the percentage change in the clustering coefficient (agglomeration) for five to two clusters, to help identify large relative increases in the cluster homogeneity. A large coefficient indicates the joining of the two distinct clusters. The clustering coefficient shows the largest increase from two clusters to one cluster, the two cluster solution was selected.

Table 3.3 - Analysis of Agglomeration Coefficient for Clusters of Variables

Number of Clusters	Agglomeration Coefficient	Percentage Change to Next Level
5	812.7	8.8
4	884.3	
3	958.4	8.4
2	1095.5	14.3
1	1491.8	36.2

Figure 3.1 shows the dendrogram for this solution. It provides a visual overview of the clustering process and shows which observations are found in each cluster and the distance between the clusters and the stage at which these clusters were combined. It provide information about the appropriate number of clusters to keep.

Figure 3.1 Clusters of Variables using Ward’s Method



Both the agglomeration schedule (Table 3.3) and the dendrogram (Figure 3.1) suggest the two-cluster solution as the best solution based on the dissimilarity. Cluster one includes variables related to “background research” and cluster two includes variables that indicate “decision research” use. The interpretation and labelling of the underlying dimensions of each cluster was straightforward and intuitively appealing. The two clusters are summarised in Table 3.4.

**Table 3.4 - Clusters of Variables Measuring Type of Market Research Use**

<b><u>Cluster 1 - Background Research</u></b>	
<i>Variable No</i>	<i>Summary of questionnaire statements from which variable derived</i>
M 10	<i>Uncertainty Reduction</i> - Uncertainty associated with marketing activity is greatly reduced by market research.
M 15	<i>Research Importance</i> - No marketing decision would be made without formal market research.
D 16	<i>Idea Generation</i> - Market research is usually used to generate new ideas.
M 13	<i>Build Knowledge Base</i> - We often do market research simply to update the company knowledge base.
D 19	<i>Top Management Support</i> - Top management is willing to allocate resources for market research.
D 15	<i>Poor Integration of Information</i> - Customer information is poorly integrated in our marketing planning activities.
D 18	<i>Top Management Emphasis</i> - Top management frequently emphasises that our survival depends on adapting to market trends.
D 20	<i>Top Management Control</i> - Top management decides what market research is to be done.
M 8	<i>Research Non-use</i> - A lot of our market research is not really use.
M 7	<i>Retention for Future Use</i> - We make sure that market research results are kept so that they are available to the organisation in the future.
D 21	<i>Response Implementation</i> - Our company strategies are firmly based on market research.
M 9	<i>Decision Non-relevance</i> - Much of our market research is not relevant to decisions.
D 12	<i>Customer Knowledge Process</i> - We regularly examine the factors that influence the buying decisions of our customers.
D 17	<i>Competitor Knowledge Process</i> - We systematically process and analyse information about competitors.
M 11	<i>Gaining Market Understanding</i> - We often use market research to gain understanding rather than to make decisions.
D 14	<i>Customer Satisfaction Measurement</i> - We systematically measure customer satisfaction.
<b><u>Cluster 2 - Decision Research</u></b>	
<i>Variable No</i>	<i>Summary of questionnaire statements from which variable derived</i>
D 11	<i>Prior 'Other Grounds' Decision Justification</i> - Market research is frequently used to support decisions made on other grounds.
D 8	<i>Cost Justification</i> - Market research is sometimes only taken into account to justify the cost of having acquired it.
D 7	<i>Slant Research Results</i> - Managers often slant market research results when passing them on.
M 12	<i>Formality</i> - We often conduct market research as a matter of formality.
D 9	<i>Backup Hunches</i> - Market research is mainly used to backup hunches.
D 6	<i>Prior Intuitive Decision Justification</i> - Market research results are often interpreted in such a way as to justify decisions really made on the basis of instinct.
M 14	<i>Future Usefulness</i> - Market research conducted for a specific decision is seldom of further use.
D 2	<i>Relationship Maintenance</i> - Business to business research is often done as much to maintain relationships as to gather marketing information.
M 3	<i>Research for Best Decision</i> - We believe that we have a better chance of making the right decision, if we base it on market research rather than intuition.
D 5	<i>Intuition and Instinctive Input</i> - Instinct and intuition are often combined with market research when making decisions.
M 5	<i>Research Effects</i> - Without market research many of our decisions would have been very different.
M 6	<i>Actionability</i> - The results of our market research are translated into significant practical action.
D 3	<i>Expectation Confirmation</i> - Managers seem to use market research to confirm their expectations.
M 4	<i>Decision Confidence</i> - Our confidence in making marketing decisions is increased as a result of our market research.
D 10	<i>Use of Guesses</i> - If market research information is difficult to obtain, guesses are often made instead.
M 1	<i>Research for Specific Decision</i> - We carry out market research when there is a specific decision to be made.
M 2	<i>Utilisation for Specific Decision</i> - Our main use of market research is to make a specific decision.
D 13	<i>Sources of Customer Information</i> - We rarely use formal research procedures to gather customer information.
D 1	<i>Post-Decision Research</i> - We sometimes do market research even when the decision has already been made.
D 4	<i>Non-consideration</i> - Often market research results are not considered when making decisions for which they were initially requested.
D 22	<i>Concept Testing</i> - Market research is usually used to screen new ideas and test concepts.

This solution supports the original classification of research type based on the classification system developed through the literature (Deshpande and Zaltman,

1982; Menon and Varadarajan, 1992; Moorman, 1995). Moreover, inclusion of variables measuring symbolic use into the “decision research” dimension supports Menon and Varadarajan’s (1992) claim that symbolic use is one form of “decision research” use.

### **3.2. CLASSIFICATION OF COMPANIES**

This section describes the classification of companies according to the proportion of research projects undertaken by the organisations that fall into the classes identified in Section 3.1. It then examines the validity of this classification by identifying similar “groups” or “segments” of companies with respect to their managers’ research attitudes.

#### **3.2.1. Classification of Companies by Research Type**

The objective of this section is to classify the companies according to their type of market research use. Based on the information obtained from participating companies, the 3018 research projects were reviewed and classified according to type of research use. The research projects were classified into those which seek to understand what is prevailing in the market and to get a feel for customer satisfaction (background research) and those which seek to evaluate alternative courses of action (decision research). All companies do some research of each type; however, “background research” predominates over “decision research” as a research activity. Having identified the number of background and decision research projects carried out by each organisation, the companies were classified by the researcher into three groups according to the proportion of decision research they had carried out. The reason behind the grouping of companies into three groups was to make the study comparable. This was supported by the literature, where research studies generally divide the companies into three groups for analysis



(Hooley and West, 1984; Hart and Diamantopoulos, 1993). The top 12 companies were labelled '*high*', while the next two groups of 11 were labelled '*moderate*', and '*low*' respectively.

### **3.2.2. Validation of Company Classification**

The purpose of this section is to examine the validity of the classification procedure adopted in the previous section. The original classification was achieved by the researcher examining the research briefs and research reports and making a judgement based on a system developed through the literature review and classification of the companies according to proportion of decision research carried out by each companies. The validity of this classification was examined by considering the underlying attitudes held by the organisations' managers towards market research use.

#### **3.2.2.1. Classification of Companies by Cluster Solution**

The validity of the original classification was examined by using a cluster analysis based on the 37 variables to identify similar groups of companies with respect to attitudes towards market research use held by the respondents employed by the companies. Various clustering algorithms were used on the data set and all came out with similar solutions. Ward's method was chosen for this study. Table 3.5 shows the percentage change in the clustering coefficient for seven to two clusters, to help identify large relative increases in the cluster homogeneity. A large coefficient indicates the joining of the two distinct clusters. Appendix 3.3 contains the results of the cluster analysis.

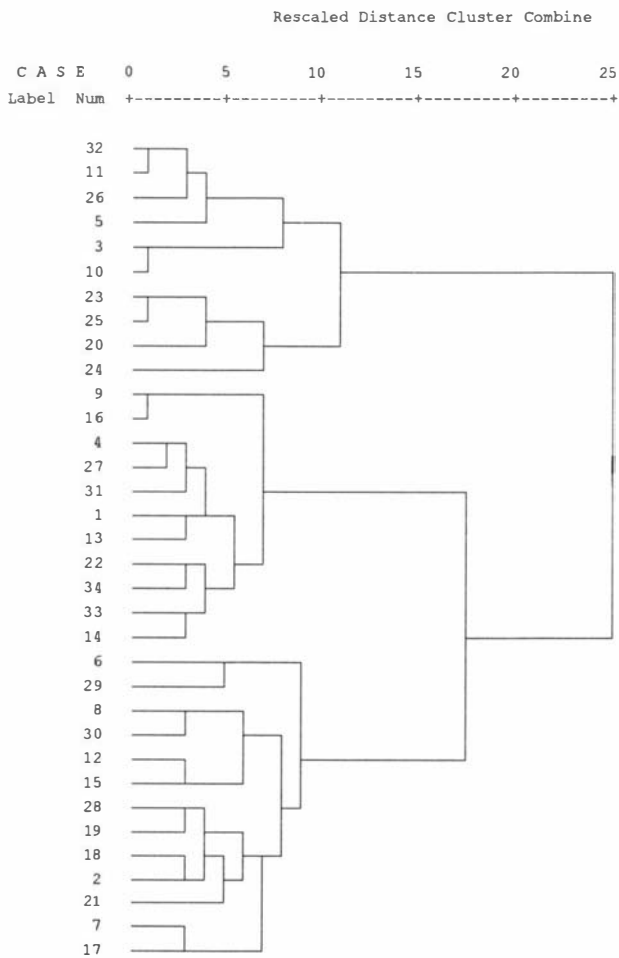
**Table 3.5 - Analysis of Agglomeration Coefficient for  
Clusters of Companies**

Number of Clusters	Agglomeration Coefficient	Percentage Change to Next Level
7	596.1	8.2
6	645.0	7.6
5	693.9	8.6
4	753.6	8.9
3	820.6	15.6
2	948.6	16.1
1	1101.6	

Figure 3.2 shows the dendrogram for this solution. It provides a visual overview of the clustering process and shows which observations are found in each cluster and the distance between the clusters and the stage at which these clusters were combined. Although the agglomeration schedule (Table 3.5) shows the largest increase in going from two clusters to one cluster, the three-cluster solution was selected based on the decision to select three groups of companies and on the observations from the dendrogram, which shows the distance at which the three clusters are combined.

Examining the three-cluster solution, cluster one includes most of the companies that use a “high proportion of decision research” and cluster two includes companies that are related to a “low proportion of decision research” users. The third cluster includes companies that use a “moderate proportion of decision research”. Thus, this solution supports the classification of companies by the researcher based on the proportion of decision research carried out by the organisations.

Figure 3.2 - Clusters of Companies Using Ward's Method



Comparison of Results

Table 3.6 shows that the results from researcher and cluster classification procedures are similar. This analysis gave a practically identical classification to the research classification based on the proportion of decision research commissioned by the organisations. These three groups of companies will be retained and named as, ‘high’, ‘moderate’ and ‘low’ decision research companies.

**Table 3.6 - Comparison of Results From  
Project-based and Cluster Classification Procedures**

		Project-based Classification		
		H	M	L
Cluster Classification	H	9	1	1
	M	2	9	2
	L	1	2	8

The figure on the main diagonal shows nine of the companies classified as “high decision research” based on proportion of decision research, falls into one of the three-cluster solutions. Similarly, nine of the “moderate decision research” companies and eight of the “low decision research” companies fall under other two clusters. 26 of the 34 companies classified according to the original classification system and 8 companies were mis-classified. This supports the original classification of companies by the proportion of decision research undertaken. The validity of this classification was further examined by employing a Q-type factor analysis.

### 3.2.2.2. Classification of Companies by a Q-Type Factor Solution

The following section further examines the validity of the original classification of the companies based on proportion of decision research by using Q-type factor analysis. Appendix 3.4 contains the results of the Q-type factor analysis. Based on the Kaiser criterion, eight significant factors emerged. Table 3.7 shows information regarding 34 factors and their relative explanatory power as expressed by their eigenvalues.

**Table 3.7 - Total Variance Explained**

Factor	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	11.260	33.12	33.12
2	7.917	23.29	56.41
3	2.518	7.41	63.82
4	2.157	6.34	70.16
5	1.628	4.79	74.95
6	1.320	3.88	78.83
7	1.248	3.67	82.50
8	1.059	3.12	85.62
9	.850	2.50	88.12
10	.764	2.25	90.37
11	.615	1.81	92.18
12	.563	1.66	93.84
13	.454	1.33	95.17
14	.346	1.02	96.19
15	.306	.90	97.09
16	.234	.69	97.78
17	.205	.60	98.38
18	.167	.49	98.87
19	.133	.39	99.26
20	.114	.34	99.60
21	8.264E-02	.24	99.84
22	3.241E-02	9.533E-02	99.92
23	2.657E-02	7.814E-02	100.00
24	1.697E-15	4.992E-15	100.00
25	3.343E-16	9.833E-16	100.00
26	2.639E-16	7.763E-16	100.00
27	1.155E-16	3.397E-16	100.00
28	1.107E-16	3.256E-16	100.00
29	1.074E-16	3.159E-16	100.00
30	6.670E-17	1.962E-16	100.00
31	2.471E-17	7.268E-17	100.00
32	1.400E-17	4.118E-17	100.00
33	-1.307E-16	-3.844E-16	100.00
34	-4.710E-15	-1.385E-14	100.00

If the three-factor solution is chosen as in previous procedures, it will produce an optimum number of companies in each group that confirms the original classification procedure. This solution was also supported by a combination of criteria including an examination of the slope of the plot of the characteristic roots in a scree test (Cattell, 1965), the percentage of variance accounted for (Zaltman and Burger, 1975) and ease of interpretation. The three-factor solution emerged as being appropriate for further analysis. Table 3.8 contains the information for the three-factor solution.

**Table 3.8 - Rotated Factor Matrix**

Company	Factor 1	Factor 2	Factor 3
C23	.896		
C11	.896		
C10	.830		
C3	.830		
C5	.790		
C8	.757		
C26	.724	.369	
C20	.723	.479	
C32	.581	.390	
C21	.550		
C25	.495	.491	
C24	.418	.302	.388
C7	.488	.667	
C19	.365	.598	
C30		.595	
C17	.375	.584	
C31		.571	
C2		.567	.515
C6	.312	.551	
C28	.541	.544	
C4	.441	.534	
C12	.384	.523	
C29		.483	
C15	.356	.452	.303
C27		.430	.871
C22		-.375	.871
C1		-.370	.644
C16			.510
C9			.450
C34			.450
C18	.403		.438
C14	.325	.303	.395
C13		.317	.390
C33			.365

Examining the above three-factor rotated factor matrix shows this variable set with Varimax rotation accounted for 64 percent of the variation in the data. According to Zaltman and Burger (1975), if the variance explained by the factor solution is greater than 60 percent, then the factor solution is accepted. The first factor includes 12 companies that commission a ‘high’ proportion of decision research, the next set of 12 companies that fall into factor two includes companies that undertake “moderated decision research” and the third factor consists of 10 “low decision research” companies (Table 3.8).

Comparison of Results

This solution, too, supports the classification based on the proportion of decision research use by the researcher and resulted in a practically identical classification of companies. Table 3.9 shows how the results from the researcher and Q-Type classification procedures are similar.

Table 3.9 - Comparison of results from  
Project-based and Q-Type classification procedures

		Project-based Classification		
		H	M	L
Q-Type Classification	1	10	2	-
	2	1	8	3
	3	1	1	8

The results on the main diagonal show ten of the companies classified as “high decision research” based on proportion of decision research fall under first factor. Similarly, eight of the “moderate decision research” companies and eight of the “low decision research” companies fall under other two factors. This procedure also supports the original classification of companies by the proportion of decision research undertaken. Both clustering procedures similarly classified 26 companies and mis-classified eight companies and gave a practically identical classification to the one based on the proportion of decision research commissioned by the organisations (Appendix 3.4). Thus, the classification based on the proportion of decision research by researchers would be retained and used in the analysis.

3.3. SUMMARY

This part had three basic objectives. First, the market research projects were classified subjectively into types according to the classification system developed

through the literature. Second, the companies were classified into groups according to the proportion of different types of research carried out by them. Third, the validity of these classifications was then examined by clustering procedures.

The market research projects were classified as “decision research” or “background research” by the researcher examining the 3018 research briefs and research reports and making a judgement based on a system developed through the literature review. The companies were then classified by the researcher into three groups according to similarities in terms of the proportion of decision research they had carried out. The top 12 companies were labelled ‘high’, while the next two groups of 11 were labelled ‘moderate’, and ‘low’ respectively.

The validity of this classification was examined by considering the underlying attitudes towards market research use held by the managers. A total of 37 variables were used to understand the research use dimensions by employing a cluster analysis on the variables. This analysis gave a practically identical classification of research type based on the classification system developed through the literature. The same 37 variables were used to classify the companies by a cluster analysis and a Q-type factor analysis. Both clustering procedures gave a practically identical classification to the one based on proportion of decision research commissioned by the organisations.

The validity of both classifications – classification of market research projects into types and of companies into types – supports the classification scheme proposed by the researcher based on the literature review. The responses to the 37 statements about market research are systematically related to the type of market research activity that the organisation conducts. Thus, the classification of the projects by the researcher is retained and used in the assessment of project and business performance.



## **PART IV**

### **PROJECT AND BUSINESS PERFORMANCE**

Part III developed a classification system for market research projects, and a classification system for companies that commission or carry out market research. Part IV examines the relationship between type of research, according to the classifications described in Part III, and the respondents' ratings of the market research projects' usefulness and of the performance of their businesses. Project usefulness and business performance data were obtained from the survey of managers' perceptions described in Part II.

Part IV contains two sections. Section 4.1 evaluates 775 market research projects based on the measures developed in the previous section. Section 4.2 investigates the relationship between the proportion of "decision research" conducted by the companies and the measures of business performance.

#### **4.1. PROJECT PERFORMANCE**

This section explores the relationship between the purpose for which research has been commissioned, which is the basis of the classification of the market research projects discussed in Part III, and the usefulness of the information provided by the research. Managers' perceptions of project usefulness form a major component of this section and are discussed from a number of perspectives. The section evaluates projects with respect to the ratings of different types of research. This section also examines the influence of managers' involvement in particular projects to see if their level of involvement affects their assessment of market research usefulness.

#### 4.1.1. Introduction

Hart and Diamantopoulos (1993) studied a range of industries and found that when company size was taken into account the level of market research use had no apparent effect on the performance of the organisations. Some researchers argue that how information is collected or where it is obtained does not really matter, instead, the crucial question is what type of information is collected, how good is the information gathered and how effectively it is used (Holbert, 1974; Gandz and Whipple, 1977; Barabba and Zaltman, 1991). Hart and Diamantopoulos discussed possible explanations for their findings, but did not consider whether different types of market research have different effects, and it is this question that is investigated here.

The overall objective of the present section is to investigate the usefulness of different types of market research. This section specifically tests the hypothesis that the type of research makes no difference to the usefulness of market research projects. In order to test this hypothesis the following sub-objectives were established as part of the research:

1. The market research projects were classified as “decision research” or “background research” by the researcher based on the classification system developed in Part III.
2. In total, 775 projects were selected from 34 participating organisations. This was an overall sampling ratio of 25% of the total number of projects. Out of the 775 projects selected for evaluation, 342 (44%) were decision research and 433 (56%) were background research. These details are summarized in Table 4.1. The number of projects selected from each organisation was limited to a maximum of 45 decision research projects and an equal number of background research projects. If there was more than 45 projects, then 45 were randomly selected from each organisation. In the absence of any decision research project, a random sample of a maximum of 14 projects was selected.

**Table 4.1 - Details of Projects Collected and Analysed**

	Classification of Projects		Total Projects
	Background Research	Decision Research	
Number of Projects Collected	2591	427	3018
Number of Projects Assessed	433	342	775
Percentage of Projects collected	86	14	100
Percentage of Projects Assessed	17	80	
Percentage each type of Projects Analysed	56	44	100

#### 4.1.2. Measurement of Market Research Usefulness

The literature on the assessment of market research projects identifies four dimensions and these are discussed below. These were operationalised in the present study as ‘*overall usefulness of the project*’, ‘*gave good market understanding*’, ‘*clear indication for action*’ and ‘*value for money*’. Each project was rated by respondents on a five-point scale (strongly disagree (1) to strongly agree (5)) on the dimensions given in Exhibit 4.1.

##### Exhibit 4.1

1.	Overall the project was very useful (Overall usefulness)
2.	The project gave us a good understanding of our market (Market understanding)
3.	After the research it was quite clear what action should be taken (Actionable)
4.	The project was well worth the money spent (Value)

#### 4.1.3. Use of Control Variable - Involvement

The effect of manager involvement in the particular project was examined to investigate the possible bias that this might introduce into the manager’s assessments. The statement on the extent of “involvement” in the projects was used as a fifth dimension to control for possible respondent bias (Curren, Folkes and Steckel, 1992).

**Involvement bias**

To investigate the potential for bias in the responses due to personal involvement in the commissioning of the research, respondents were asked to rate ‘*I personally was involved in the project*’ on the same five-point scale used to elicit the responses to the measures of project usefulness.

Table 4.2 tabulates the ratings of the projects by the respondents’ level of involvement, and the ANOVA results shows a slight but non-significant bias towards decision research projects. The mean scores, given in Table 4.2, on the involvement scale show little difference, with the mean involvement for “decision research” being 2.6, and for “background research” being 2.4. Thus, if the ratings are biased, they are probably biased in the same direction in each category, and the bias can safely be ignored when comparing the results between the different types of research.

**Table 4.2 - Level of Involvement by Research Type**

Type of Research	Respondents’ Ratings on ‘I personally was involved in the project’					Mean Score
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	
Decision Research	15%	23%	10%	12%	40%	2.6
Background Research	13%	20%	12%	8%	47%	2.4

To further investigate the potential for bias in the responses due to personal involvement in the commissioning of the research, Table 4.3 investigates the ratings of the projects by the respondents’ level of involvement with the projects that they were asked to rate. The top two and bottom two ratings have been amalgamated. All the differences between the top two and bottom two ratings were significant at the .01 level.

**Table 4.3 - Mean Scores of Ratings by  
Level of Involvement in Market Research Projects**

Measurement Variables	Level of Involvement		
	Strongly Agree/Agree (1) n=300	Neutral (2) n=69	Disagree/Strongly Disagree (3) n=406
Overall usefulness	4.2	3.6	3.6
Market understanding	3.9	3.8	3.6
Actionable	4.1	3.3	3.5
Value	4.0	3.4	3.4

These results show that respondents rate more favourably the projects in which they were personally involved (Appendix 4.1).

#### **4.1.4. Project Ratings**

##### **4.1.4.1. Distribution of Responses**

Table 4.4 shows the distribution of the responses to the rating questions. Chi-square statistics are also reported to test if the cell counts differed from those expected if there was no relationship between the rating and the type of research (Appendix 4.2). While the chi-square test has limited value for this sort of data, the results of the chi-square test show that the responses depend on the classification.

Examining the managers' responses on project usefulness shows that none of the projects, whether "decision research" or "background research", was rated 'strongly disagree'. This result corresponds with the studies that show that managers express a generally positive, favourable attitude toward market research and consider it to be a valuable tool (Holbert, 1974; Krum, 1978; Bellenger, 1979; Deshpande and Jeffries, 1981; and Deshpande and Zaltman, 1982).

**Table 4.4 - Distribution of Responses by Research Type**

Measurement Variables	Type of Research	Respondents' Ratings of Projects (in percentage)				
		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Overall usefulness	Decision Research	31	62	6	1	-
	Background Research	9	40	44	7	-
	Overall	18	50	28	4	-
Market understanding	Decision Research	6	45	34	14	1
	Background Research	25	51	19	5	-
	Overall	17	48	25	9	1
Actionable	Decision Research	37	54	9	-	-
	Background Research	8	26	45	20	1
	Overall	21	38	29	11	1
Value	Decision Research	24	65	11	-	-
	Background Research	9	27	45	17	2
	Overall	15	44	30	10	1

For the purpose of  $\chi^2$  the top two and bottom two ratings were amalgamated. All the differences are significant at 0.01 level or better.

A visual inspection supports the hypothesis that there is a relationship between the type of project and the rating of that project. This relationship is analysed more fully in the next section.

#### 4.1.4.2. Ratings

Table 4.5 shows the mean scores for the different types of market research and the ratings on “usefulness”, “market understanding”, “actionable” and “value”. This table shows that “decision research” projects scored more highly than “background research” projects on ‘*Overall the project was very useful*’, on ‘*After the research it was quite clear what action should be taken*’ and on ‘*The project was well worth the money spent*’. On the other hand, “background research” scored higher on ‘*Gave us good market understanding*’.

ANOVA results are reported in Table 4.5 to see whether any significant differences exist between the type of research in relation to means of each of the measurement variables. The results indicate that all of the differences in the means were statistically significant at the .01 level (Appendix 4.2).

**Table 4.5 - Mean Project Ratings by Type of Research**

Measurement Variables	Overall n=775	Classification of Projects		Difference*	Eta squared
		Decision Research n=342	Background Research n=433		
Overall usefulness	3.8	4.2	3.5	0.7	.22
Market understanding	3.7	3.4	4.0	-0.6	.10
Actionable	3.7	4.3	3.2	1.1	.32
Value	3.6	4.1	3.2	0.9	.25

\*All the differences between the mean scores of “decision research” and “background research” are significant at 0.01 level.

### Overall Usefulness

The results presented in Table 4.6 show that “decision research” projects scored more highly than “background research” projects on ‘*Overall the project was very useful*’. This supports Shrivastava’s (1987) argument that “usefulness of research is its ability to provide decision-makers a rationale for making decisions, thereby prompting actions in organisations”. Table 4.6 indicates that 93% of the “decision research” projects and 49% of the “background research” projects were rated as useful (agree/strongly agree). This result may be due to the fact that “decision research” includes all or most of the factors proposed by Shrivastava as important criteria for determining the usefulness of research. On the other hand, this result may also just reflect the difficulty in making an assessment of the usefulness for “background research”. Menon and Varadarajan (1992) noted that the effect of “background research” is subtle and indirect, especially in the long-term, and therefore, managers may not be able to identify specific effects or observe the influence.

**Table 4.6 - Overall Usefulness by Research Type**

Type of Research	Respondents’ Ratings on ‘Overall the project was very useful’			Mean Score
	Strongly Agree/Agree	Neutral	Disagree/Strongly Disagree	
Decision Research	93%	6%	1%	4.2
Background Research	49%	44%	7%	3.5

**Market Understanding**

Table 4.7 indicated that “background research” scored higher on ‘*The project gave us a good understanding of our market*’. This is as expected; that is why it is carried out. Such an understanding provides general enlightenment and can be used to develop the managerial knowledge base. Table 4.7 shows that 76% of the “background research” projects were rated as gave good understanding of the market (agree/strongly agree) but only 51% of the “decision research” projects were rated in this way. The results indicate that “background research” is considered as more useful in terms of providing market understanding.

**Table 4.7 - Market Understanding by Research Type**

Type of Research	Respondents' Ratings on 'The project gave us a good understanding of our market'			Mean Score
	Strongly Agree/Agree	Neutral	Disagree/Strongly Disagree	
Decision Research	51%	34%	15%	3.4
Background Research	76%	19%	5%	4.0

**Actionable**

This scale measured the ability of the research to turn the information provided into direct action. Table 4.8 shows that “decision research” projects in general scored more highly than “background research” projects on ‘*After the research it was quite clear what action should be taken*’. The responses indicated that 91% of the “decision research” projects were rated as providing clear direction for action (agree/strongly agree), compared to 34% of the “background research” projects. In terms of level of direction provided by the research as a usefulness measure, “decision research” is considered as a more useful type of research.

**Table 4.8 - Actionable by Research Type**

Type of Research	Respondents' Ratings on 'After the research it was quite clear what action should be taken'			Mean Score
	Strongly Agree/Agree	Neutral	Disagree/Strongly Disagree	
Decision Research	91%	9%	-	4.3
Background Research	34%	45%	21%	3.2



**Value**

The value of a study measured research usefulness in terms of both monetary and non-monetary aspects, such as cost of the study and the time and energy expended in commissioning or conducting the study or in collecting the information. Table 4.9 shows that “decision research” projects scored more highly than “background research” projects on ‘*The project was well worth the money spent*’. This result may be because “decision research” includes all of the aspects proposed by John and Martin (1984) as important criteria for determining the value of research. The results support the findings of Holbert (1974) and Bellenger (1979) in that market research results have less value if they are not actionable or sufficiently convincing to be used in critical decisions.

**Table 4.9 - Value by Research Type**

Type of Research	Respondents' Ratings on 'The project was well worth the money spent'			Mean Score
	Strongly Agree/Agree	Neutral	Disagree/Strongly Disagree	
Decision Research	89%	11%	-	4.1
Background Research	59%	30%	19%	3.2

Mackenzie (1983) and Zeithaml (1988) cautioned that managers may be more inclined to view a study on which they have spent a lot of time and effort as more valuable and therefore may be more likely to use that study. The same is likely to be true when their prior expectations were confirmed by a research outcome (Lee, Acito and Day, 1987). However, the analysis on the level of involvement show that the ratings were not compromised by the extent of manager “involvement”.

**4.1.5. Relationship Between Variables - Multivariate Results**

The univariate results give some measure of difference in the value of research in favour of “decision research”. It is known that the four variables used are not independent. Each variable indicates in some way a “common sense” dimension of

the overall value of research projects. However, it is possible that if the four variables were reduced to one underlying dimension, a greater difference in the evaluation could be found. With that in mind, a MANOVA was performed to show the combined effect of the four variables (excluding involvement). The results are given in Table 4.10 and they indicate a much-enhanced difference in the value of the two types of research. The difference is significant at .01 level and the Eta squared value shows that 98 percent of the variation in the single measure of usefulness is explained by research type (Appendix 4.3).

**Table 4.10 - Usefulness by Type of Research - Multivariate MANOVA Results**

	F	$\eta^2$
Model (Combined)	7529**	0.98

\*\*Significant at 0.01 level or better.

#### 4.1.5.1. Dimensionality of the Project Ratings

The above MANOVA results impose a single dimension on the results. It could be instructive to explore the data in the dimensions suggested by Table 4.11, which gives the correlation coefficients between the original rating variables.

**Table 4.11 - Correlations Between Rating Variables**

	Overall usefulness	Market understanding	Actionable
Overall usefulness	1.00		
Market understanding	0.17**	1.00	
Actionable	0.79**	0.04	1.00
Value	0.80**	0.08*	0.78**

\*\*Significant at 0.01 level.

\*Significant at 0.05 level.

Table 4.11 shows high correlations between “overall usefulness” and “actionable”, and “value”, but low correlations of those three with “market understanding”. To test the relationship further, a paired sample test was conducted, but the results shed no further light on the relationship and are therefore not placed here (Appendix 4.3).

4.1.5.2. Data Reduction

The scales were subjected to a reliability test using the SPSS. The results indicate that the four variable market research usefulness scales (Cronbach alpha = 0.82) have a high degree of internal consistency (Appendix 4.4). As an alternative to the scales tested under reliability, the data set was assessed for the overall significance of the correlation matrix and to determine the level of sample adequacy. The Bartlett test shows that nonzero correlations exist at the significance level of .0001 and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was .769 for the total sample, which is considered to be strong (Appendix 4.4).

Factor Loadings

The data on market research usefulness were subjected to principal components analysis. Using the Kaiser criterion, two significant factors emerged from the principal components analysis. Table 4.12 shows information regarding the four components and their relative information content as expressed by their eigenvalue (See appendix 4.4).

Table 4.12 - Total Variance Explained

Factor	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	2.594	64.85	64.85
2	1.012	24.85	89.70
3	.218	5.46	95.15
4	.194	4.85	100.00

The unrotated two-component principal components solution given in Table 4.13 shows a simple and meaningful grouping of variables. Varimax rotated solution is very similar, and is shown in Appendix 4.4.

Table 4.13 - Un-rotated Factor Matrix

Measurement Variables	Component 1	Component 2
Overall usefulness	.93	.02
Value	.93	-.07
Actionable	.92	-.15
Market understanding	.19	.98

As expected, “market understanding” is the odd one out. With that in mind, the four variables were reduced to two principal components and called “directional measure” and “informational measure”. The three variables “value”, “actionable” and “overall usefulness” loaded strongly on the first component and the variable “market understanding” loaded on the second component. These two new components accounted for 90% of the variation of the original variables. The first component, as expected from the univariate analysis, contains information relating to “decision research” and the second component provides information relating to “background research”. Table 4.14 gives the results of ANOVA on the two-factor solution. This table shows a slight improvement, in terms of the Eta squared values, on the univariate anova using four variables.

Table 4.14 - Mean Factor Scores by Research Type

Measurement Variables	Type of Research (Mean Factor Scores)		Difference between mean scores of decision research & background research	Eta squared
	Decision Research n=342	Background Research n=433		
Directional Measure	.65	-.51	1.16	.33
Informational Measure	-.40	.31	-.71	.12

All the differences are significant at 0.01 level.

4.1.6. Section Summary

The objective of this section was to measure the relationship between the type of market research activities and managers’ ratings of their usefulness. Initially, 3018 market research projects were collected and evaluated to classify them into one of

the two types: “decision research” or “background research”. The research projects were classified into those which seek to understand what is prevailing in the market and to get a feel for customer satisfaction (background research), and those which seek to evaluate alternative courses of action (decision research). A sub-sample of 775 projects was analysed to explore the relationship between the type of research commissioned, and managers’ perceptions of the usefulness of the information provided by the research. The results indicate that “background research” predominates over “decision research” as a research activity, yet is regarded as less useful by managers.

Over the three dimensions (overall usefulness, actionable, value) “background research” was evaluated less favourably than “decision research”. This result was more marked when the dimensionality of the ratings was studied. The fact that “background research” was rated less favourably may be due to the difficulty in measuring the effect of “background research”, especially in the long-term, since this process is subtle and indirect and therefore managers may not be able to identify specific effects or observe the influence.

“Decision research” includes all or most of the criteria proposed by Shrivastava (1987) as important aspects for determining the “usefulness” of research. These aspects include information which is of personal interest and make sense to the users; related to the tasks facing the users; action-oriented; and innovativeness. “Decision research” is also considered “valuable” because it includes the criteria (realism, accuracy, specificity to the addressed problem, consistency of research output, comprehensiveness and completeness and validity of research) proposed by John and Martin (1984) as important aspects for determining the value of a research.

A possible explanation for the apparent contradiction between the managers’ comparatively lower rating of “background research” and the higher proportion of “background research” conducted, is that the convention among research companies

and marketers is to do “background research”, and, they are able, because of their supposed expertise in such matters, to make their views prevail over the views of managers. Why the convention exists is not certain, but it could be challenged by producing a sufficiently robust set of results. If the findings are substantiated by replication over many sets of data, then this challenge will be successful. In light of the heavy predominance of “background research”, this will require a major shift in the thinking of research companies and marketers. In the meantime, managers should be urged to have a greater say in the type of research that is carried out for them, and research companies that accept the findings should put greater emphasis on “decision research” when pitching for business.

## **4.2. BUSINESS PERFORMANCE**

This section explores the relationship between the types of companies, as classified by the research type they predominantly employ, and business performance. Managerial perceptions about business performance form a major component of this section and are discussed from a number of perspectives. This section begins with a discussion on the measures of business performance, and continues with an investigation of the relationship between the types of companies based on the proportion of decision research use and the measures of business performance developed. This section also examines the influence of “firm size” and “market research expenditure” on business performance.

### **4.2.1. Introduction**

Marketing is considered to be fundamental to the development and performance of firms (Narver and Slater, 1990; Day, 1992; Jaworski and Kohli, 1993). Zikmund (1986) and McDaniel and Gates (1991) claim companies demand and expect future growth and profitability to come from performance gains achieved through

continuous investment in market research. While the marketing literature often reports that market research leads to either actual or perceived payoffs, studies have generated controversial or inconsistent results (Hart and Diamantopoulos, 1993).

The overall objective of the present section is to investigate the relationship between the extent of specific research activities and business performance. This section tests whether company performance is affected by the type of research employed by the company. Specifically this section examines whether managers in companies, as classified by the research type they predominantly employ, rated their organisation's performance differently.

#### **4.2.2. Measurement of Business Performance**

The literature suggests that considering two groups of measures - growth measures such as sales growth, and profit measures such as ROA and ROS - could serve as a basis for performance assessment. The former is indicative of how effectively a firm can open up new markets or expand in existing markets and the latter shows the efficiency of its operation. Together, these measures will indicate the company's overall effectiveness or performance of operation. The literature also suggests that objective measures of performance are preferable to those based on managerial perceptions. However, given the general convergence in measures and supporting research, the use of subjective measures of performance in the absence of objective measures was deemed appropriate for this study.

Based on the literature reviewed in Part I, a questionnaire was designed to obtain information from the participating organisations to assess their business performance in relation to their overall industry. The research used self-reported subjective performance measures of '*return on total assets*', '*sales growth*' and '*return on total sales*', as well as an '*overall performance*' of the respective organisations. The respondents were asked to rate their organisation, relative to

other similar firms, on a five-point scale, from much higher (5) to much lower (1), on the four measures. All statements were worded so that the higher the mean score, the higher the perceived business performance.

#### **4.2.3. Use of Control Variables - Size and Expenditure**

Several authors argue that the firm size and the level of market research expenditure could be confounding factors of business performance, if not controlled for (Hooley and West, 1984; King, 1985; Hart and Diamantopoulos, 1993). It was believed that these critical covariates might also have influence over the types of firms that undertake different proportions of market research. This leads to the inclusion of these two critical covariates - “firm size” (Hooley and West, 1984; King, 1985; Hart and Diamantopoulos, 1993) and level of “market research expenditure” (Buzzel and Gale, 1987) in the assessment of business performance.

##### **4.2.3.1. Firm Size Effect**

The literature suggests that firm size is a significant factor influencing marketing practices and business performance. Hooley and West (1984) claim that large companies carry out more market research than smaller companies. Managers in large firms tend to have more resources available for research, may be more technically sophisticated about research, and, with large market research departments, may have a more favourable attitude toward market research than managers in small consumer-oriented companies (Bellenger, 1979).

In spite of the critical role of firm size stressed in these reviews, hardly any research has been conducted into how firm size influences type of research use. To investigate the possible effect of firm size on performance ratings, respondents were asked to rate on ‘*number of employees*’ in their organisation compared to similar firms on a five-point scale (much higher (5) to much lower (1)). The literature



generally divides the companies into three groups for analysis (Hooley and West, 1984; Hart and Diamantopoulos, 1993). The top two and bottom two ratings were amalgamated to form three groups using labels ‘*large*’, ‘*medium*’ and ‘*small*’.

Table 4.15 investigates the potential influence of firm size on the types of companies classified according to the research type they predominantly employ. The mean scores, given in Table 4.15, on the firm size scale show a non-significant difference, with the mean firm size for “high decision research” companies being 3.1, and for “low decision research” companies being 2.5 (Appendix 4.5).

Table 4.15 - Firm Size by Type of Companies

		Respondents' Ratings on 'Number of employees'*			Mean Score Number of employees*
		Large	Medium	Small	
Type of Companies	High decision research	50%	25%	31%	3.1
	Moderate decision research	20%	38%	38%	2.7
	Low decision research	30%	37%	31%	2.5

\*The top two (Large) and bottom two (Small) ratings have been amalgamated  
+Differences between the mean scores are not significant.

Table 4.15 shows that 50% of the “high decision research” companies fall into ‘large’ firms. This might be due to the fact that large companies are more likely to have the management expertise necessary for the effective implementation of the latest methods than small and medium size companies, allegedly because larger companies possess the resources to meet the high capital outlays needed to introduce new systems and to test the ideas developed through expertise (Fletcher, Wright and Desai, 1996).

Table 4.16 - Ratings by Firm Size

Measurement Variables	Number of Employees (Mean Score)			Difference between large & small firms
	Large n=10	Medium n=8	Small n=16	
Market research expenditure	3.2	2.3	2.3	.9
Overall performance	3.9	3.7	3.6	.3
Sales growth	3.6	4.1	3.8	-.2
Return on total assets	4.1	3.6	3.6	.5
Return on total sales	4.0	3.6	3.8	.2

None of the differences was significant, except for market research expenditure at 0.01 level.

Table 4.16 tabulates the ratings of business performance by firm size, and show that respondents of ‘large’ firms rated highly on all except one rating variable: sales growth. The above results indicate a non-significant difference between the ‘large’ and ‘small’ firms on the performance measures, except for market research expenditure at the .01 level.

**4.2.3.2. Market Research Expenditure Effect**

The question of whether market research expenditure results in changes in performance, or whether changes in performance result in changes in market research expenditure, is a disturbing question that has no standard solution (King, 1985).

The possible effect of market research expenditure on the performance ratings of different types of companies was measured by asking the respondents to rate their organisation’s level of ‘*market research expenditure*’ compared to other similar organisations on a five-point scale (much higher (5) to much lower (1)). The literature generally divides the companies into three groups for analysis and therefore, the top two and bottom two ratings were amalgamated to form three groups using labels ‘*high*’, ‘*moderate*’ and ‘*low*’.

Table 4.17 investigates the potential influence of the level of market research expenditure on the types of companies based on the proportion of decision research use. The mean scores, given in Table 4.17, on the market research expenditure scale show a non-significant difference, with the mean market research expenditure for “high decision research” companies being 2.8, and for “low decision research” companies being 2.4 (Appendix 4.6).

Table 4.17 shows that 22% of the “high decision research” companies fall into ‘high’ research expenditure, whereas 56% of the “moderate decision research”

companies also fall into ‘high’ research expenditure. This might be because of their high market research budget, which increases the ability to commission both background type projects as well as carry out the testing of new ideas and concepts than ‘high’ and ‘low’ decision research companies.

**Table 4.17 - Market Research Expenditure by Type of Companies**

		Respondents' Ratings on 'Market Research Expenditure'*			Mean Score Level of Market Research Expenditure <sup>+</sup>
		High	Moderate	Low	
Type of Companies	High decision research	22%	50%	25%	2.8
	Moderate decision research	56%	17%	31%	3.0
	Low decision research	22%	33%	44%	2.4

\*The top two (high) and bottom two (low) ratings have been amalgamated

<sup>+</sup>Differences between the mean scores are not significant.

Table 4.18 tabulates the ratings of business performance by level of market research expenditure, and shows that firms with ‘high’ research expenditure scored highly on all rating variables. However, the difference between ratings of ‘high’ and ‘low’ market research expenditure firms on the four performance measures were non-significant.

**Table 4.18 - Ratings by Market Research Expenditure**

Measurement Variables	Level of Market Research Expenditure			Difference between high & low market research expenditure firms
	High n=7	Moderate n=11	Low n=16	
Overall performance	3.7	3.9	3.4	.3
Sales growth	4.0	3.9	3.8	.2
Return on total assets	4.3	3.7	3.4	.9
Return on total sales	4.0	3.9	3.4	.6
Number of employees	4.0	2.6	2.4	1.6

None of the differences was significant, except for number of employees at 0.01 level.

The results indicates that there is a statistical difference between the ratings of firms of ‘high’ and ‘low’ market research expenditure on the variable measuring firm size at the .01 level. This supports the argument that the ‘larger’ the firm size, the ‘bigger’ the market research expenditure. There are some differences in the mean scores of the ratings of ‘high’ and ‘low’ decision research on the control variables.

However, due to the fact that these differences are not statistically significant, it is assumed that “firm size” and level of “market research expenditure” do not have an important confounding influence on the relationship between types of research undertaken by companies and their business performance.

#### 4.2.4. Performance Ratings

##### 4.2.4.1. Distribution of Responses

Table 4.19 shows the distribution of the responses to the rating questions. Chi-square statistics are also used to test if the cell counts differed from that expected if there was no relationship between the rating and the type of companies, as classified by the research type (Appendix 4.7). While the chi-square test has limited value for this sort of data, the results of the chi-square test show that the responses depend on the classification.

**Table 4.19 - Distribution of Responses by Type of Companies**

Measurement Variables	Type of Companies	Respondents' Ratings of Performance (row percentages rounded)				
		Much higher	Higher	About the same	Lower	Much lower
Overall performance	High decision research	-	75	25	-	-
	Moderate decision research	9	46	45	-	-
	Low decision research	-	55	36	9	-
	Overall	3	59	35	3	-
Sales growth	High decision research	42	33	25	-	-
	Moderate decision research	18	27	55	-	-
	Low decision research	9	55	9	27	-
	Overall	24	38	29	9	-
Return on total assets	High decision research	9	67	24	-	-
	Moderate decision research	18	36	36	-	10
	Low decision research	-	64	9	27	-
	Overall	9	56	23	9	3
Return on total sales	High decision research	8	75	17	-	-
	Moderate decision research	18	36	28	9	9
	Low decision research	-	64	9	27	-
	Overall	9	59	18	11	3

For the purpose of  $\chi^2$  the top two and bottom two ratings were amalgamated. All the differences are significant at 0.01 level or better, except for sales growth, which is significant at 0.05 level.

Table 4.19 indicates that 62% of the companies rated themselves as performing above average (higher/much higher) in comparison to their industry on “overall performance” and the rating patterns for other performance measures also follow a similar pattern. A high percentage of companies (24%) rated themselves as having a ‘much higher’ position relating to “sales growth”. This may be due to low margins and high turnover (van der Walt, Lyonski, Queree, Harper and Hales, 1989). Although 3% of the companies indicated that they have a ‘much lower’ position on profitability measures such as ROA and ROS compared to their industry, none of them has rated themselves under the same category on “overall performance” and “sales growth”.

Table 4.19 indicates that none of the “high decision research” companies has rated themselves under “lower or much lower” on any rating variables. “Moderate decision research” companies on ROA and ROS, and “low decision research” companies on all four rating variables did rate themselves under this category.

**4.2.4.2. Ratings**

Table 4.20 shows the mean scores for companies using different proportions of decision research and their ratings on four performance measures. Table 4.20 shows that “high decision research” companies scored more highly than “low decision research” companies on all four performance measures “*Overall performance*”, on “*Sales growth*”, on “*Return on total assets*” and on “*Return on total sales*”.

ANOVA results are reported in Table 4.20 to see whether any significant differences exist between the type of companies in relation to each of the measurement variables. The results indicate that the differences in the means of all performance measures were statistically significant at the .05 level (Appendix 4.7).

**Table 4.20 - Mean Performance Ratings by Type of Companies**

	Overall Mean Score	Type of Companies			Difference between the mean scores of high & low decision research companies	Eta Squared
		High decision research n=12	Moderate decision research n=11	Low decision research n=11		
Overall performance	3.6	3.9	3.6	3.4	.5	.24
Sales growth	3.8	4.2	3.7	3.5	.7	.23
Return on total assets	3.7	4.0	3.4	3.6	.4	.24
Return on total sales	3.6	3.9	3.4	3.5	.4	.19

All the differences are significant at 0.05 level.

**Overall Performance**

The literature suggest that neither ROS nor ROA by itself provides an adequate measure of overall business performance. ROS ignores the utilisation of assets, while the ROA ignores profitability of sales. Therefore, considering these two measures together might indicate a company’s overall performance by providing a subjective measure to resolve these shortcomings. Table 4.21 shows that “high decision research” companies scored more than “low decision research” companies on “overall performance”. Table 4.21 indicates that 75% of the “high decision research” companies and 55% of the “low decision research” companies rated themselves as in the ‘higher/much higher’ position compared to similar firms in their industry. On the other hand, 9% of the “low decision research” companies considered themselves as faring poorly and rated themselves under ‘lower/much lower’ on “overall performance” compared to other similar firms.

**Table 4.21 - Overall Performance by Type of Companies**

Type of Companies	Respondents’ Ratings on ‘Overall Performance’			Mean Score
	Higher/Much higher	About the same	Lower/Much lower	
High decision research	75%	25%	-	3.9
Moderate decision research	55%	45%	-	3.6
Low decision research	55%	36%	9%	3.4

**Sales Growth**

The “*sales growth*” of the firm was measured by asking the respondents to rate their company’s sales growth in comparison to similar firms using a five-point scale. Table 4.22 indicates that “high decision research” companies scored higher on “sales growth”. Table 4.22 shows that 75% of the “high decision research” companies and 64% of the “low decision research” companies rated themselves in the ‘higher/much higher’ position relating to “sales growth” compared to other firms in their industry. On the other hand, 27% of “low decision research” companies rated themselves as low on growth in sales compared to similar firms.

**Table 4.22 - Sales Growth by Type of Companies**

Type of Companies	Respondents' Ratings on 'Sales Growth'			Mean Score
	Higher/Much higher	About the same	Lower/Much lower	
High decision research	75%	25%	-	4.2
Moderate decision research	45%	55%	-	3.7
Low decision research	64%	9%	27%	3.5

**Return on Total Assets**

The “*return on total assets*” of the firm was measured by asking the respondents to rate their company’s return on total assets in comparison to similar firms using a five-point scale. The results, presented in Table 4.23 show that “high decision research” companies scored more highly than “low decision research” companies on “return on assets”. Table 4.23 indicates that 76% of the “high decision research” companies and 64% of the “low decision research” companies were rated as earning a high return on assets (higher/much higher). However, 27% of the “low decision research” companies considered themselves as experiencing a poor “return on assets” (lower/much lower) compared to similar firms. The results indicate that “high decision research” companies consider themselves more effective in generating profits with available assets.

**Table 4.23 - Return on Total Assets by Type of Companies**

Type of Companies	Respondents' Ratings on 'Return on Total Assets'			Mean Score
	Higher/Much higher	About the same	Lower/Much lower	
High decision research	76%	24%	-	4.0
Moderate decision research	54%	36%	10%	3.4
Low decision research	64%	9%	27%	3.6

### Return on Total Sales

ROS measures profitability with respect to sales generated. When interpreting and comparing the results obtained for ROA and ROS, Szymanski, Bharadwaj and Varadarajan (1993) caution that the cost of goods sold as a percent of sales are lower for large businesses than for small businesses, which suggests that an increase in firm size will increase ROS. However, they argued that the increase in ROA would be greater than the increase in ROS because of the multiplicative effect of the increase in ROS. Table 4.16 indicates such a difference in the ratings between ROA and ROS. However, the difference is not statistically significant.

**Table 4.24 - Return on Total Sales by Type of Companies**

Type of Companies	Respondents' Ratings on 'Return on Total Sales'			Mean Score
	Higher/Much higher	About the same	Lower/Much lower	
High decision research	83%	17%	-	3.9
Moderate decision research	54%	28%	18%	3.4
Low decision research	64%	9%	27%	3.5

The “*return on total sales*” of the firm was measured by asking the respondents to rate their company’s return on total sales in comparison to similar firms using a five-point scale. The results presented in Table 4.24 show that “high decision research” companies scored more highly than “low decision research” companies on “return on total sales”. Table 4.24 indicates that 83% of the “high decision research” companies and 64% of the “low decision research” companies considered themselves to be in a better position (higher/much higher) than similar firms. On the other hand, 27% of the “low decision research” companies rated themselves as being in a weaker position than similar firms in the industry.



**4.2.5. Relationship Between Variables - Multivariate Results**

The univariate results give some measure of difference of higher business performance in favour of “high decision research” companies. It is known that the four measures used are not independent. Each measure indicates in some way a “common sense” dimension of the overall performance. However, it is possible that if the four measures were reduced to one underlying dimension, a greater difference in the evaluation could be found.

With that in mind, a MANOVA was performed to show the combined effect of the four measures (excluding market research expenditure and number of employees). The results are given in Table 4.25 and they indicate a much-enhanced difference in the business performance of companies using different proportions of “decision research”. The difference is significant at .01 level and the Eta squared value shows that 98 percent of the variation in the single measure of business performance is explained by the type of research conducted by organisations (Appendix 4.8).

**Table 4.25 - Business Performance by Type of Companies -  
Multivariate MANOVA Results**

	F	$\eta^2$
Model (Combined)	238**	.98

\*\*Significant at 0.01 level or better.

**4.2.5.1. Dimensionality of the Performance Ratings**

The above MANOVA result imposes a single dimension on the results. It could be instructive to explore the data in the dimensions suggested by Table 4.26, which gives the correlation coefficients between the original rating variables.

**Table 4.26 - Correlations Between Measurement Variables**

	Overall performance	Sales growth	Return on total assets
Overall performance	1.00		
Sales growth	.48*	1.00	
Return on total assets	.41	.29	1.00
Return on total sales	.36	.28	.89**

\*\*Significant at 0.01 level.

\*Significant at 0.05 level.

Table 4.26 shows significant correlations between “overall performance” and “sales growth”, and between “return on total assets” and “return on total sales”(Appendix 4.8). The results also indicate that respondents consider “overall performance” to be a combination of market (sales growth) and financial performance (ROA and ROS).

#### **4.2.5.2. Data Reduction**

The scales were subjected to a reliability test using the SPSS. The results indicate that the four item business performance scale (Cronbach alpha = 0.74) appears to have a high degree of internal consistency (Appendix 4.9). As an alternative to the scales developed and tested under reliability, the data set was used to assess the overall significance of the correlation matrix and the level of sample adequacy. The Bartlett test shows that nonzero correlations exist at the significance level of .0001. Here the KMO measure of sampling adequacy was .614 for the total sample, which is considered to be strong (Appendix 4.9).

#### **Factor Loadings**

The data obtained from respondents on business performance were subjected to principal components analysis. Using the Kaiser criterion two significant components emerged from the principal components analysis. Table 4.27 shows information regarding the four variables and their relative explanatory power as expressed by their eigenvalues (Appendix 4.9).

**Table 4.27 - Total Variance Explained**

Factor	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.316	57.91	57.91	1.868	46.71	46.71
2	1.057	23.14	81.05	1.014	25.35	72.06
3	0.751	16.28	97.33	1.011	25.27	97.33
4	0.107	2.67	100.00			

This factor solution shows that 81 percent of the total variance is explained by two components. However, based on the table of eigenvalue (Table 4.27), the scree test and theoretical consideration, a three-factor solution was retained (Appendix 4.9). In the three-factor solution (Table 4.28), the variance has been redistributed more evenly and factors two and three accounted for equal amount of variance and eigenvalues.

**Table 4.28 - Three-Factor Matrix**

Measurement Variables	component 1	component 2	component 3
Return on total sales	.96	.08	.16
Return on total assets	.95	.16	.16
Overall performance	.15	.98	.16
Sales growth	.19	.16	.97

Based on the factor loadings, the three components were called “profitability measures” for the first component “overall effectiveness” for the second component and “growth measures” for the third component. The two variables “return on total sales” and “return on total assets” loaded significantly onto the first component, the variable “overall performance” onto the second component and the “sales growth” loaded significantly onto the third component. These three components accounted for 97 percent of the variation in the original variables. The “profitability measures”, as expected from the literature and the univariate analysis, contain information relating to financial performance of the organisations and the “growth measures” provide information relating to market performance of the organisations.

Table 4.29 gives the results of an ANOVA on the three-factor solution. This table shows a slight improvement, in terms of the Eta squared values, on the univariate ANOVA using four variables. Table 4.29 shows that the ratings by the companies which use a higher proportion of decision research scored more highly than “low decision research” companies on both “profitability” and “growth” measures. All of the differences in the means were significant at the .05 level. This indicates that companies which commission a higher proportion of decision type market research projects were able to achieve a better financial and market performance than companies which commission a higher proportion of background type market research projects.

**Table 4.29 - Mean Factor Scores by Type of Companies**

Measurement Variables	Type of Companies (Mean Factor Scores)			Difference between 'High' and 'Low' decision research companies
	High decision research n=12	Moderate decision research n=11	Low decision research n=11	
Profitability measures	.25	-.20	-.08	.33
Overall Effectiveness	.12	.08	-.21	.33
Growth measures	.39	-.20	-.23	.62

All the differences are significant at 0.05 level.

Table 4.29 indicates “high decision research” companies scored highly on “profitability measures” and were followed by “low decision research” companies, where “moderate decision research” companies were the ‘poorer performers’ in terms of “profitability”. This result might be confounded by firm size, if small companies outperform ‘medium’ size companies on “profitability measures” because of their nature of operation. With reference to “growth measures”, “high decision research” companies again scored highly and were followed by “moderate decision research” companies, where “low decision research” companies were the ‘poorer performers’ in terms of “growth”. Even though “moderate decision research” companies spend more proportionately on market research compared to other two types of companies, they were rated poorly on “profitability measures”. On the “overall effectiveness measure” too, “high decision research” companies scored

highly and were followed by “moderate decision research” companies, where “low decision research” companies were the ‘poorer performers’ in terms of “overall effectiveness”.

The results show that only the “high decision research” companies had positive ratings on all three measures of performance. “Moderate decision research” companies scored poorly on the profitability measure, but came second to “high decision research” companies on the “growth” and “overall effectiveness” measures. The “low decision research” companies scored second on “profitability measures” but were weak on the other two measures. This leads to the conclusion that the use of a higher proportion of decision research enabled “high decision research” companies to attain positive overall success.

#### **4.2.6. Section Summary**

The objective of this section was to investigate the relationship between types of companies and business performance. The companies were classified into three groups based on the proportion of decision research commissioned by them.

This section began with the review of literature on performance measures which suggested the use of four performance measures: they were sales growth, ROS, ROA, and overall performance of the respondent organisations. In addition, the review also suggested the use of two control variable to understand the effect of firm size and market research expenditure on the types of companies, as classified by the research type they predominantly employ. The results on the relationship between firm size and market research expenditure support the literature that there is a relationship, namely that large firms spend more on research.

The investigation on the relationship between types of research and business performance shows a positive contribution for “decision research” use on business

performance. The results suggest that “high decision research” companies outperform both “moderate” and “low” decision research companies on all measures of business performance. The “moderate decision research” companies perform better than “low decision research” companies on “growth” and “overall effectiveness” measures, however, the latter outperform “moderate decision research” companies on “profitability measures”.

## **PART V**

### **SUMMARY AND CONCLUSIONS**

This thesis has examined the relationship between market research and business performance, giving specific attention to whether business performance is affected by the type of market research undertaken. Part V reviews the justification for the research, summarises the research method and the results of the study, discusses relevant managerial and theoretical implications, points out the study's key limitations and suggests areas for future research.

#### **5.1. OVERVIEW OF THE PROJECT**

Building on the conceptual base provided by the literature on the implementation of the marketing concept and by extension to business performance, this study investigates a fundamental tenet of the marketing concept. The use of market research is inextricably linked to the adoption of a marketing concept (Kohli and Jaworski, 1990; Narver and Slater, 1990; Jaworski and Kohli, 1993; Slater and Narver, 1993). Indeed, Kohli and Jaworski (1990) claim market research is a major element of the “intelligence generation” component of market orientation, reflecting true customer focus and co-ordination of the firm’s efforts to serve the chosen customer base.

Seen in this light, market research is intended to enable the firm to fulfil the marketing concept because as an organisation adopts this concept, market research is seen as a way to focus on the needs and wants of target markets, so enabling the firm to enjoy long-run competitive advantage and superior profitability. According to this school of thought, the primary use of market research is as a tool to understand the target market (e.g., Boone and Kurtz, 1989; Kohli and Jaworski, 1990; Narver and Slater, 1990; Jaworski and Kohli, 1993; Slater and Narver, 1993). An extensive review of the literature reveals an overwhelming acceptance of the

assertion that market research and business performance are positively related (for example, John and Martin, 1984; Hooley and West, 1984; Hart, 1987; and Hill, 1988). Collectively, the received wisdom is that “those companies with zero or low usage could significantly improve their performance by making better use of market research” (Hooley and West, 1984, p. 347).

While most marketers think that market research and business performance are positively related, the sole empirical study (Hart and Diamantopoulos, 1993) could not confirm the link, and ended with a call to extend research in this area. Hart and Diamantopoulos (1993) discussed possible explanations for their findings, but did not consider whether different types of market research have different effects. The issue of whether consideration of types of research could modify the result of Hart and Diamantopoulos is addressed in this thesis.

## **5.2. SUMMARY OF RESEARCH METHODS**

Many authors have recognised a distinction between different types of market research based on the objective for which research is undertaken and on the use to which it is put. A classification scheme based on this idea, suggests the existence of two key dimensions in the evaluation of research: namely, instrumental and conceptual. Instrumental use, or “decision research” in this study, has been defined as the direct application of research findings and conclusions to solve a specific problem, or to make a particular decision (Rich, 1977; Deshpande and Zaltman, 1982). Conceptual research or “background research” in this study, refers to the indirect application of information, in the sense that information is used to broaden the managerial knowledgebase, without serving any one particular decision (Menon and Varadarajan, 1992; Moorman, 1995).

In order to examine managers’ attitudes towards a wide range of issues relating to market research use in organisations, a questionnaire containing 37 statements was



developed primarily on the basis of the 32 statements included in the Diamantopoulos and Souchon's (1999) questionnaire. Their statements were modified in terms of language, style and direction to suit the immediate purpose. The 32 statements were incorporated with 5 additional statements measuring other aspects of market research information use. The rationale for including these additional statements was their relevance to the topic of market research use and their usefulness as validation items as suggested by other literature.

The usefulness of different types of market research projects was assessed by collecting information on four usefulness dimensions. These were "overall usefulness of the project", "gave good market understanding", "clear indication for action" and "value for money". These statements were taken from Deshpande and Zaltman (1982) and were replicated with some modifications to wording and presentation. A fifth dimension, the extent of "involvement" in the projects, was included to control for possible respondent bias (Curren, Folkes and Steckel, 1992).

Business performance for companies was assessed by using self-reported subjective assessment of "return on total assets", "sales growth" and "return on total sales", as well as an overall assessment of business performance. In addition to the above four performance measures, two more measures were used to control for the possible effects of "firm size" and "market research expenditure" in the assessment of business performance.

In order to make the process of respondent selection manageable, a sample was drawn from a list of company names compiled from the *New Zealand Market Research Society Directory* (1998) and *New Zealand Business Who's Who* (1998). Market research companies were excluded and agreement to participate was sought from 87 client companies. Of these, 53 refused to participate or had not done any research, leaving a sample of 34 companies to work with. Chief executive officers who agreed to take part in the study were asked to provide the name of a senior manager who could provide information about the company's market research

information. These nominated managers were contacted, the purpose of the research was explained, and an interview was scheduled to collect information on all research projects commissioned or conducted over the last 10 years (1989-1998).

In the analysis, 3018 research projects were reviewed and classified according to type of research use. A questionnaire based on the review of projects and a follow-up interview, was mailed to each of the managers to gather data on market research use, ratings of usefulness of the projects selected for further analysis and business performance of the companies.

### **5.3. SUMMARY OF RESEARCH RESULTS**

The results of this study are two-fold: (1) classification of the projects into types, and evaluation of those projects' usefulness (project performance), and (2) classification of the companies into types, and assessment of their performance (business performance).

#### **Project Classification and Performance**

Each of the 3018 research projects collected from the participating organisations was classified as being either "background research" or "decision research". The classification was accomplished by the researcher reviewing each project, based on the objective for which the research was undertaken and on the use to which it was put. This classification system was derived from six aspects arising out of the literature review: (1) the purpose for which the research project was carried out; (2) the prior expectations of what it would achieve; (3) the clarification of stated research objectives; (4) the criteria used to select research projects to commission; (5) the methodology employed to collect information; and (6) the outcomes of the research and implementation of recommendations.

The validity of this classification was then examined by considering a different scheme of classification using cluster analysis based on the 37 statements exploring managers' attitudes and expectations about research use. The rationale for using this questionnaire for the validation was that the statements would elicit some views on the types of research used by organisations. This analysis gave a practically identical classification to the initial classification developed by the researcher, which suggests that the initial classification was robust.

In order to evaluate the usefulness of different types of market research projects, a sample of 775 projects (25% of the total) was selected from those analysed in the first stage. These were assessed by managers on four usefulness dimensions - overall usefulness, market understanding, actionable, and value. Of the 775 projects selected for evaluation, 342 (44%) were "decision research" and 433 (56%) were "background research".

The results indicate that "background research" predominates over "decision research" as a research activity, yet is regarded as less useful by managers. This result was not compromised by the extent of manager involvement. Over the three dimensions (overall usefulness, actionable, value), "background research" was evaluated less favourably than "decision research". This result was more marked when the dimensionality of the ratings was studied using a factor analysis of the four variables in which two principal components were extracted and called "directional measure" and "informational measure". The three variables "value", "actionable" and "overall usefulness" loaded significantly in the "directional measure" and the variable "market understanding" loaded significantly on the "informational measure".

**Table 5.1 - Ranking Types of Research on Usefulness Dimensions**

Type of Research	Usefulness Dimensions	
	Directional Measure	Informational Measure
Decision Research	1	2
Background Research	2	1

## Classification of Companies and Business Performance

The companies to whom the respondents were allied were classified into three groups according to the proportion of decision research undertaken by each organisation. The validity of this classification was then examined by considering the underlying attitudes held by the respondents as expressed by ratings on the 37 variables. The same 37 statements were used to classify the companies by Q-type factor analysis and by hierarchical cluster analysis. Both clustering procedures gave a practically identical classification of companies to the one based on proportion of decision research commissioned by the organisations, which again suggests that the initial classification gave a robust result.

Business performance, in the context of this thesis, was assessed by managers on a five-point Likert scale on four measures - overall performance, sales growth, return on assets and return on sales. An attempt was also made to examine the possible effects of “firm size” and the level of “market research expenditure” on business performance. An examination of these control measures showed no significant effect on the performance ratings given by managers of different types of companies, on their measures of business performance.

The results suggest that “high decision research” companies scored more highly across all performance measures. A subsequent factor analysis was performed on the four measures and resulted in three principal components called *profitability*, *growth* and *overall effectiveness*. The results suggest that there is an association between proportion of decision research and all three measures of business performance. The “high decision research” companies scored highly on all three components. The “moderate decision research” companies perform better than “low decision research” companies on “growth” and “overall effectiveness” measures, however, the latter outperform “moderate decision research” companies on the “profitability measure”.

**Table 5.2 - Ranking Types of Companies on  
Business Performance Dimensions**

Type of Companies	Performance Dimensions		
	Profitability	Overall effectiveness	Growth
High decision research	1	1	1
Moderate decision research	3	2	2
Low decision research	2	3	3

The lack of performance by the “low decision research” companies calls for some explanation. That a market orientation requires acting on (i.e., responsiveness to) market intelligence that is generated and disseminated (Kohli and Jaworski 1990) seems to provide one possible explanation for the general lack of performance gains expected for “low decision research” companies. In other words, it might be that the performance benefit of increasing the level of market understanding is limited.

The results of both the project analysis and the company analysis, suggest that the type of market research is likely to have an effect on project usefulness and business performance, and that “decision research” performs better on both measures. Thus, the two research hypotheses tested: that the type of research makes no difference to the usefulness of research projects as evaluated by the managers (H1<sub>o</sub>); and that business performance is unaffected by the type of research companies predominantly employ (H2<sub>o</sub>) are not supported by the findings of this study.

#### **5.4. CONTRIBUTION OF THE RESEARCH**

This study has extended previous research on the evaluation of the benefits of market research by investigating the role of the type of market research on, research project usefulness and on business performance.

Most writings on the benefits of market research emphasise the importance of the role of research in achieving a satisfactory level of market orientation. The writings

emphasise the importance of the ability of the firm to learn about customers, competitors and channel members in order to provide greater customer satisfaction, so the firm can enjoy superior profitability. According to the school of thought promoted by the authors who take this view, market research is a major element of the “intelligence generation” component of market orientation, which focuses on the understanding of the needs and wants of customers. These writings stress the importance of market research as a tool for understanding markets. This understanding will eventually produce greater customer satisfaction and organisational performance.

The results of this research, contrary to the views expressed in the market orientation writings, indicate that “background research” is regarded as less useful by managers. The results also provide support for the contention that using a higher proportion of “decision research” over “background research” will result in greater business success. Yet “background research” predominates over “decision research” as a research activity.

A possible explanation for the apparent contradiction between the comparatively lower rating by managers of “background research”, and the higher proportion of background research conducted, is that the convention among research companies and marketers is to do “background research”, and they are able, because of their supposed expertise in such matters, to make their views prevail over those of managers.

The study showed evidence of a positive contribution to be made by “decision research” on the usefulness of projects and on business performance. This evidence, if repeated, would justify a recommendation to concentrate on the use of “decision research” rather than on “background research”. Although, it will require solid evidence to change the well established convention of concentrating on “background research”.

## **5.5. MANAGERIAL IMPLICATIONS**

The anecdotal evidence that most of the market research that is carried out in New Zealand is background research is confirmed by this study. The background research projects reviewed can be divided up into a number of broad categories, though not with the precision because the purpose for which the projects were designed and the use to which they were put were often ill defined. There were demographic and psychographic segmentation studies. There were studies aimed at assessing customer satisfaction for current products and for products planned for development. There were descriptions of the demographic characteristics of current customers, and of markets targeted for development. The briefs for these background research projects typically asked the researcher to provide summaries of consumer opinion, and were designed to identify alternative courses of action. If the decisions were advertising decisions, the researchers were asked to identify themes which were likely to be most appealing, or which were likely the best recall. Often the projects were not put to any use that could be identified by the documentation, or remembered by the respondents.

The briefs for the decision research projects typically asked the researcher for specific information that would be helpful when making a specific decision. If the decision was an advertising decision, researchers were asked which advertisement among several would generate the highest sales over a defined period. If the decisions were product development decisions, the researchers were asked to assess the likely sales volumes of the alternative products.

The fact that managers found the decision research projects more useful, but continued to commission mostly background research projects, have implications for managerial practice and performance. It is important that managers are able to translate information from background research projects to effective decision-making. Further, there may be a need to be more judicious in commissioning market research.

## **5.6. LIMITATIONS OF THE STUDY AND AREAS FOR FUTURE RESEARCH**

The implications from this study should be considered in light of its main limitations.

This study focuses only on companies using market research without comparison with companies who carry out no market research at all. This limitation was imposed by the need to limit the scope of the research to fit the requirements of PhD study and any replication study should consider this comparison. Future research may therefore be carried out on the use and non-use of market research in New Zealand firms.

A second limitation is the use of perceptual measures of project usefulness and business performance, which forms a major component of this study. Although perceptual measurement methods are frequently used in marketing studies, in measurement of managerial decision-making processes and in market orientation and organisational studies, manager's assessments could be biased by selective perception and may be influenced disproportionately by facts and opinion that are easy to retrieve. The results would be more reliable if it had been possible to use objective measures.

A third limitation is the subjective perception of respondents toward projects in which they were involved might be highly regarded, whilst those commissioned by others might be rated less favourably. However, the survey carefully measured respondents' levels of responsibility for assessing project and business performance and assessed the level of managers' involvement in evaluating performance. It also encouraged careful consideration and allowed respondents time to consult with their colleagues to discuss and clarify information used to formulate opinion on project and business performance.



## **5.7. FINAL REMARKS**

The study's overall objective was to examine the relationship between market research type and usefulness in terms of project and business performance. The study tested two hypotheses: that the type of research makes no difference to the usefulness of research projects as evaluated by the managers; and that business performance is unaffected by the type of research companies predominantly employ.

The research projects were classified as “decision research” or “background research” based on the objective for which the research is undertaken and on the use to which it is put. The companies were then classified according to the proportion of decision research undertaken.

“Background research” predominates over “decision research” as a research activity, yet “background research” projects are regarded as less useful by managers over the three dimensions - overall usefulness, actionable, value - of usefulness. Also, “high decision research” companies score more highly on all performance dimensions assessed.

The study has produced evidence that if the current emphasis on “background research” were to shift to “decision research” then market research projects would be deemed more “useful”, and companies who carry out or commission market research would perform better.

## REFERENCES

## REFERENCES

- Aaker, D., Kumar, V. & Day, G. (1998). *Marketing Research* (6<sup>th</sup> ed.). New York: John Wiley & Sons.
- Ahituv, N., Zif, J. & Machlin, I. (1998). Environmental Scanning and Information Systems in Relation to Success in Introducing New Products. *Information and Management*, 33 (4), 201-211.
- Albaum, G. (1964). Horizontal Information Flow: An Exploratory Study. *Academy of Management*, 7 (1), 21-33.
- Allan, R., Madison, D., Porter, L., Renwick, P. & Mayes, B. (1979). Organisational Politics - Tactics and Characteristics of its Actors. *California Management Review*, 22 (1), 77-83.
- American Marketing Association (1961). *Report of Definitions Committee of the American Marketing Association*. Chicago: American Marketing Association.
- American Marketing Association (1987). *Marketing News*. 21.
- Anderson, U., Koonce, L. & Marchant, G. (1994). The Effects of Source-Competence Information and Its Timing on Auditors' Performance of Analytical Problems. *Auditing: A Journal of Practice and Theory*, 13 (1), 137-148.
- Ansoff, H. (1965). *Corporate Strategy*. New York: McGraw-Hill.
- Anterasian, C. & Graham, J. (1989). When It's Good Management to Sacrifice Market Share. *Journal of Business Research*, 19 (3), 187-213.
- Anthony, F. (1994). Marketing is in Crisis - Can Marketing Research Help? *Journal of Marketing Research Society*, 36 (2), 23-26.
- Arabie, P. & Hubert, L. (1994). Cluster Analysis in Marketing Research. In *Advanced Methods of Marketing Research*. R. P. Bagozzi, (ed.). Cambridge: Blackwell Publishers.
- Argyris, C. & Schon, D. (1978). *Organisational Learning: A Theory of Action Perspective*. Reading, MA: Addison-Wesley.
- Armstrong, J. & Collopy, F. (1996). Competitor Orientation: Effects of Objectives and Information on Managerial Decisions and Profitability. *Journal of Marketing Research*, 33 (2), 188-203.

- Avlonitis, G. (1985). Product Elimination Decision Making: Does Formality Matter? *Journal of Marketing*, 49 (Winter), 41-52.
- Badaracco, J. (1991). *The Knowledge Link: How Firms Compete Through Strategic Alliances*. Boston: Harvard Business School Press.
- Baker, M., Hart, S. & Black, C. (1988). The Competitiveness of British Industry: What Really Makes the Difference? *European Journal of Marketing*, 22 (2), 70-85.
- Baker, M., Hart, S., Black, C. & Abdel-Mohsen, T. (1986). The Distribution Marketing to Competitive Success: A Literature Review. *Journal of Marketing Management*, 2, 39-61.
- Barabba, P. (1994). *Market-Based Decisions*. Chicago: Dartnell Corporation.
- Barabba, P. (1995). *Meeting of the Minds - Creating the Market-based Enterprise*. Boston: Harvard Business School Press.
- Barabba, P. & Zaltman, G. (1991). *Hearing the Voice of the Market - Competitive Advantage Through Creative Use of Market Information*. Boston: Harvard Business School Press.
- Barnes, J. (1984). Cognitive Biases and Their Impact on Strategic Planning. *Strategic Management Journal*, 5 (2), 129-138.
- Barua, A., Kriebel, C. & Mukhopadhyay, T. (1995). Information Technologies and Business Value: An Analytic and Empirical Investigation. *Information Systems Research*, 6 (1), 2-23.
- Barwise, P. (1995). Good Empirical Generalisations. *Journal of Marketing Science*, 14 (3), 6-19.
- Beal, R. (2000). Competing Effectively: Environmental Scanning, Competitive Strategy and Organisational Performance in Small Manufacturing Firms. *Journal of Small Business Management*, 38 (1), 27-47.
- Bellenger, D. (1979). The Marketing Manager's View of Marketing Research. *Business Horizons*, 22 (June), 59-65.
- Bennett, R. & Gabriel, H. (1999). Organisational Factors and Knowledge Management within Large Marketing Departments: An Empirical Study. *Journal of Knowledge Management*, 3 (3), 212-225.
- Bentley, T. (1986). *Management Information Systems and Data Processing*. (2<sup>nd</sup> ed.), London: Holt, Rinehart.

- Berdie, D., Anderson, J. & Niebuhr, M. (1986). *Questionnaires: Design and Use*. New Jersey: Scarecrow Press.
- Beyer, J. & Trice, H. (1982). The Utilisation Process: A Conceptual Framework and Synthesis of Empirical Findings. *Administrative Science Quarterly*, 27 (4), 591-622.
- Bharadwaj, S., Varadarajan, P. & Fahy, J. (1993). Sustainable Competitive Advantage in Service Industries: A Conceptual Model and Research Propositions. *Journal of Marketing*, 57 (4), 83-99.
- Boone, L. & Kurtz, D. (1989). *Contemporary Marketing*, (6<sup>th</sup> ed.). Chicago: Dryden Press.
- Bradley, G. (1978). Self-serving Biases in the Attribution Process: A Reexamination of the Fact Or Fiction Question. *Journal of Personality and Social Psychology*, 36 (1), 56-71.
- British Institute of Management, (1962). *Survey of Marketing Research in Great Britain*. Information Summary, No. 97, London: British Institute of Management Press.
- Brown, R., Gatian, A. & Hicks, J. (1995). Strategic Information Systems and Financial Performance. *Journal of Management Information Systems*, 11 (4), 215-234.
- Bruggen, G., Smidh A. & Wierenga B. (1998). Improving Decision Making by Means of a Marketing Decision Support System. *Management Science*, 44 (5), 645-657.
- Brynjolfsson, E. (1993). The Productivity Paradox of Information Technology. *Communications of the ACM*, 36 (12), 67-77.
- Buzzell, R. (1963). Is Marketing a Science? *Harvard Business Review*, Jan-Feb, 32-36.
- Buzzell, R. & Gale, B. (1987). *The PIMS Principles: Linking Strategy to Performance*. New York: The Free Press.
- Cadogan, J. & Diamantopoulos, A. (1995). Narver and Slater, Kohli and Jaworski and the Market Orientation Construct: Integration and Internationalization. *Journal of Strategic Marketing*, 3 (1), 41-60.
- Caplan, N. (1977). A Minimal Set of Conditions Necessary for the Utilisation of Social Science Knowledge in Policy Formulation At the National Level. In *Using Social Research in Public Policy Making*. Carol H. Weiss (ed.). Lexington, Mass: Lexington Books.

- Caplan, N., Morrison, A. & Stambaugh, R. (1975). *The Use Social Science Knowledge in Policy Decisions at the National Level*. Ann Arbor MI: Institute for Social Research.
- Cattell, R. (1965). Factor analysis: An Introduction to Essentials; (1) the Purpose and Underlying Models, (2) the Role of Factor Analysis in Research. *Biometrics*, 21, 190-215.
- Chakravarti, D., Mitchell, A. & Staelin, R. (1981). Judgement Based Marketing Decision Models: Problems and Possible Solutions. *Journal of Marketing*, 45 (4), 13-23.
- Chakravarthy, B. (1986). Measuring Strategic Performance. *Strategic Management Journal*, 7 (5), 437-458.
- Chan, S. (1979). The Intelligence of Stupidity: Understanding Failures in Strategic Warning. *American Political Science Review*, 73, 171-180.
- Chatterjee, S., Jamieson, L. & Wiseman, F. (1991). Identifying Most Influential Observations in Factor Analysis. *Marketing Science*, 10, 145-160.
- Chen, K. & Shimerda, T. (1981). An Empirical Analysis of Useful Financial Ratios. *Financial Management*, 10 (1), 51-60.
- Child, J. (1974). Management and Organisational Factors Associated with Company Performance - Part I. *Journal of Management Studies*, 11, 175-189.
- Child, J. (1975). Management and Organisational Factors Associated with Company Performance - Part II. *Journal of Management Studies*, 12, 12-27.
- Chorafas, D. (1995). *Financial Models and Simulation*. New York: St. Martin's Press, Inc.
- Churchill, G. (1991). *Marketing Research: Methodological Foundations*, (5<sup>th</sup> ed.). Illinois: Dryden Press.
- Churchill, G. & Surprenant, C. (1982). An Investigation into the Determinants of Customer Satisfaction. *Journal of Marketing Research*, 19 (Nov), 491-504.
- Civi, E. (2000). Knowledge Management as a Competitive Asset: A Review. *Marketing Intelligence and Planning*, 18 (4), 166-174.
- Clover, V. & Balsley, H. (1984). *Business Research Methods*, (3<sup>rd</sup> ed.). Columbus OH: Grid.

- Connolly, T., Conlon, E. & Deutsch, S. (1980). Organisational Effectiveness: A Multiple Constituency Approach. *Academy of Management Review*, 5 (2), 211-217.
- Cooper, R. (1986). *Winning at New Products*. Reading, MA: Addison-Wesley.
- Cooper, H. & Hedges, L. (1994). *The Handbook of Research Synthesis*. New York: Russell Sage Foundation.
- Corwin, R. & Louis, K. (1982). Organizational Barriers to the Utilization of Research. *Administrative Science Quarterly*, 27 (4), 623-640.
- Covin, J., Selvin, D. & Achultz, R. (1994). Implementing Strategic Missions: Effective Strategic, Structural and Tactical Choices. *Journal of Management Studies*, 31 (4), 481-505.
- Cunningham, M. & Clarke, C. (1975). The Product Management Function in Marketing. *European Journal of Marketing*, 9 (2), 129-149.
- Curren, M., Folkes, V. & Steckel, J. (1992). Explanation for Successful and Unsuccessful Marketing Decisions: The Decision Maker's Perspective. *Journal of Marketing*, 56 (April), 18-31.
- Czinkota, M. & Ronkainen, I. (1990). *International Marketing*, (2<sup>nd</sup> ed.). Hinsdale: Dryden Press.
- Daft, R. & Huber, G. (1987). How Organisations Learn: A Communications Framework. In *Research in the Sociology of Organisations*. Nancy Ditomasi and Samuel B. Bacharach, (eds.). Greenwich, CA: JAI Press.
- Daft, R., Lengel, R. & Trevino, L. (1987). Message Equivocality, Media Selection and Manager Performance: Implications for Information Systems. *MIS Quarterly*, 11 (3), 355-366.
- Daft, R. & Macintosh, N. (1981). A Tentative Exploration into the Amount and Equivocality of Information Processing in Organisational Work Units. *Administrative Science Quarterly*, 26 (2), 207-224.
- Davis, R. (1993). From Experience: The Role of Market Research in the Development of New Consumer Products. *Journal of Product Innovation Management*, 10, 309-317.
- Davis, G. & Olson, M. (1985). *Management Information Systems - Conceptual Foundations, Structure and Development*. New York: McGraw Hill.
- Dawes, J., Lee, D & Dowling, G. (1998). Information Control and Influence in Emergent Buying Centers. *Journal of Marketing*, 62 (July), 55-68.

- Day, G. (1990a). Marketing Theory with Strategic Orientation. *Journal of Marketing*, 47, 79-89.
- Day, G. (1990b). *Market-Driven Strategy: Processes for Creating Value*. New York: Free Press.
- Day, G. (1991). Learning About Markets. *Marketing Science Report*, 91-117. Cambridge: Marketing Science Institute.
- Day, G. (1992). Marketing's Contribution to the Strategy Dialogue. *Journal of the Academy of Marketing Science*, 20 (4), 323-329.
- Day, G. (1994a). The Capabilities of Market-Driven Organisations. *Journal of Marketing*, 58 (4), 37-52.
- Day, G. (1994b). Continuous Learning About Markets. *California Management Review*, 36 (4), 9-31.
- Day, G. & Nedungadi, P. (1994). Managerial Representations of Competitive Positioning. *Journal of Marketing*, 58 (2), 31-44.
- Day, G. & Wensley, R. (1988). Assessing Advantage: A Framework for Diagnosing Competitive Superiority. *Journal of Marketing*, 52 (2), 1-20.
- Dearden, J. (1969). The Case Against ROI Control. *Harvard Business Review*, 47 (3), 124-135.
- de Geus, A. (1988). Planning as Learning. *Harvard Business Review*, 66 (March/April), 70-74.
- Deng, S. & Dart, J. (1994). Measuring Market Orientation: A Multi-factor, Multi-item Approach. *Journal of Marketing Management*, 10 (8), 725-742.
- Deshpande, R. (1982). The Organisational Context of Marketing Research Use. *Journal of Marketing*, 46 (4), 91-101.
- Deshpande, R., Farely, J. & Webster, F. (1989). Corporate Culture, Customer Orientation, and Innovativeness in Japanese Firms: a Quadrad Analysis. *Journal of Marketing*, 57 (1), 23-37.
- Deshpande, R. & Jeffries, S. (1981). Attitude Affecting the Use of Marketing Research in Decision Making: An Empirical Investigation. *Educators' Conference Proceedings*, Kenneth L. Brenhardt et al., (eds.). Chicago: American Marketing Association, 1-4.
- Deshpande, R. & Webster, F. (1989). Organisational Culture and Marketing: Defining the Research Agenda. *Journal of Marketing*, 53 (1), 3-16.



- Deshpande, R. & Zaltman, G. (1982). Factors Affecting the Use of Market Research Information: A Path Analysis. *Journal of Marketing Research*, 19 (1), 14-31.
- Deshpande, R. & Zaltman, G. (1983). Patterns of Research Use in Private and Public Sectors. *Knowledge: Creation, Diffusion, Utilization*, 4 (June), 561-575.
- Deshpande, R. & Zaltman, G. (1984). A Comparison of Factors Affecting Researcher and Manager Perceptions of Market Research Use. *Journal of Marketing Research*, 21 (1), 32-38.
- Deshpande, R. & Zaltman, G. (1987). A Comparison of Factors Affecting Use of Marketing Information in Consumer and Industrial Firms. *Journal of Marketing Research*, 24 (1), 114-118.
- Dess, G. & Robinson, B. (1984). Measuring Organisational Performance in the Absence of Objective Measures: The Case of the Privately-Held Firm and Conglomerate Business Unit. *Strategic Management Journal*, 5 (3), 265-273.
- Diamantopoulos, A. & Horncastle, S. (1997). Use of Export Marketing Research by Industrial Firms: An Application of Deshpande and Zaltman's Model. *International Business Review*, 6 (3), 245-270.
- Diamantopoulos, A., Schlegelmilch, B. & Tse, K. (1993). Understanding the Role of Export Marketing assistance: Empirical Evidence and Research Needs. *European Journal of Marketing*, 27 (4), 5-18.
- Diamantopoulos, A. & Souchon, A. (1999). Measuring Export Information Use: Scale Development and Validation. *Journal of Business Research*, 46, 1-14.
- Dickson, P. (1992). Toward a General Theory of Competitive Rationality. *Journal of Marketing*, 56 (1), 69-88.
- Douglas, S. & Craig, S. (1983). *International Marketing Research*. New Jersey: Prentice Hall.
- Drucker P. (1954). *The Practice of Management*. London: Heinemann.
- Drucker P. (1973). *Management Task, Responsibilities, Practices*. New York: Harper and Row.
- Dunn, W. (1986). Studying Knowledge Use: A Profile of Procedures and Issues. In *Knowledge Generation, Exchange and Utilisation*. G. M. Beal et al., eds. Boulder, CO: The Westview Press.

- Edgett, S., Shipley, D. & Forbes, G. (1992). Japanese and British Companies Compared Contributing Factors to Success and Failures in NPD. *Journal of Product Innovation Management*, 9 (1), 3-10.
- Einhorn, H. & Hogarth, R. (1978). Behavioural Decision Theory: Process of Judgement and Choice. *Journal of Accounting Research*, 19 (1), 1-41.
- Ettorre, B. (1995). Managing Competitive Intelligence. *Management Review*, 84 (10), 15-19.
- Farris, P., Parry, M. & Webster, F. (1989). *Accounting For the Market Share-ROI Relationship*. Report No. 89-118, Marketing Science Institute.
- Felton, A. (1959). Making the Marketing Concept Work. *Harvard Business Review*, 37 (July-August), 55-65.
- Fieldman, M. & March, J. (1981). Information in Organisations as Signals and Symbol. *Administrative Science Quarterly*, 26 (2), 171-186.
- Fiol, M. & Lyles, M. (1985). Organisational Learning. *Academy of Management Review*, 10 (4), 803-813.
- Fletcher, K., Wright, G. & Desai, C. (1996). The Role of Organisational Factors in the Adoption and Sophistication of Database Marketing in the UK Financial Services Industry. *Journal of Direct Marketing*, 10 (1), 10-21.
- Ford, J. & Schellenberg, D. (1982). Conceptual Issues of Linkage in the Assessment of Organisational Performance. *Academy of Management Review*, 7 (1), 49-58.
- Fowler, F. (1984). *Survey Research Methods*. Beverley Hills, CA: Sage.
- Funkhouser, G. (1983). A Note on the Reliability of Certain Clustering Algorithms. *Journal of Marketing Research*, 20 (1), 99-102.
- Gandz, J. & Whipple, T. (1977). Making Marketing Research Accountable. *Journal of Marketing Research*, 14 (2), 200-208.
- Ganesalingam, S. (1993). *Understanding Multivariate Statistical Methods*. Massey University, Palmerston North, New Zealand.
- Garvin, A. & Bermont, H. (1983). *How to Win with Information or Lose without It*. Washington: Bermont Books.
- Glazer, R. (1991). Marketing in an Information-Incentive Environment: Strategic Implications of Knowledge as an Asset. *Journal of Marketing*, 55 (4), 1-19.

- Glazer, R., Steckel, J. & Winer, R. (1992). Locally Rational Decision Making: The Distracting Effect of Information on Managerial Performance. *Management Science*, 38 (2), 212-226.
- Glazer, R. & Weiss, A. (1993). Marketing in Turbulent Environments: Decision Processes and the Time-Sensitivity of Information. *Journal of Marketing Research*, 30 (November), 509-521.
- Goodman, S. (1993). Information Needs for Management Decision-Making. *Records Management Quarterly*, 27 (4), 12-23.
- Gray, B., Matear, S., Boshoff, C. & Matheson, P. (1998). Developing a Better Measure of Market Orientation. *European Journal of Marketing*, 32 (9/10), 884-903.
- Green, P., Tull, D. & Albaum, G. (1988). *Research for Marketing Decisions*. New Jersey: Prentice-Hall.
- Gupta, A. & Govindarajan, V. (1984). Business Unit Strategy, Managerial Characteristics and Business Unit Effectiveness at Strategy Implementation. *Academy of Management Journal*, 27 (1), 24-41.
- Gupta, A., Raj, S. & Wilemon, D. (1986). A Model for Studying R & D - Marketing Interface in the Product Innovation Process. *Journal of Marketing*, 50 (2), 7-17.
- Hage, J. & Aiken, M. (1970). *Social Change in Complex Organisations*. New York: Random House.
- Hair, J. Jr., Anderson, R., Tatham, R. & Black, W. (1995). *Multivariate Data Analysis with Readings*, (4<sup>th</sup> ed.). New Jersey: Prentice Hall.
- Hambrick, D. & Mason, P. (1984). Upper Echelons: The Organisation as a Reflection of Its Top Managers. *Academy of Management Review*, 9 (2), 193-206.
- Hamel, G. (1991). Competition for Competence and Interpartner Learning within International Strategic Alliances. *Strategic Management Journal*, 12, 83-102.
- Hamlin, R. (1995). Designing Market Research to Support Marketing Action or How to Ask the Right Questions, Rather than How to Ask the Questions Right. In *Proceedings of the Pan-Pacific Conference*, Queenstown, 349-352.
- Hamlin, R. (2000). A Systematic Procedure for Targeting Market Research. *European Journal of Marketing*, 34 (9/10), 1038-1052.

- Han, J., Kim, N. & Srivastava, R. (1998). Market Orientation and Organisational Performance: Is Innovation a Missing Link. *Journal of Marketing*, 62 (4), 30-45.
- Hardin, D. (1969). Marketing Research - is it Used or Abused? *Journal of Marketing Research*, 6 (5), 239.
- Hart, S. (1987). The Contribution of Marketing to Competitive Success. *Management News*, July, 5.
- Hart, S. & Banbury, C. (1994). How Strategy-Making Processes can Make a Difference. *Strategic Management Journal*, 15 (4), 251-269.
- Hart, S. & Diamantopoulos, A. (1993). Marketing Research Activity and Company Performance: Evidence from Manufacturing Industry. *European Journal of Marketing*, 27(5), 54-72.
- Hart, S., Webb, J. & Jones, M. (1994). Export Marketing Research and the Effect of Export Experience in Industrial SMEs. *International Marketing Review*, 11 (6), 4-22.
- Hartley, R. (1992). *Marketing Mistakes*. (5<sup>th</sup> ed.), New York: John Wiley & Sons.
- Hays, R. & Abernathy, W. (1980). Managing Our Way to Economic Decline. *Harvard Business Review*, 58 (4), 67-71.
- Hill, P. (1988). The Market Research Contribution to New Product Failure and Success. *Journal of Marketing Management*, 3, 269-277.
- Hofer, C. & Schendel, D. (1978). *Strategy Formulation: Analytical Concepts*. St. Paul: West Publishing Company.
- Hoffman, D., de Leeuw, J. & Arjunji, R. (1994). Multiple Correspondence Analysis. In *Advanced Methods of Marketing Research*, R. P. Bagozzi (ed.). Massachusetts: Blackwell Publishers.
- Hogarth, R. & Makridakis, S. (1981a). The Value of Decision Making in a Complex Environment: An Experimental Approach. *Management Science*, 27(1), 93-107.
- Hogarth, R. & Makridakis, S. (1981b). Forecasting and Planning: An Evaluation. *Management Science*, 27 (2), 115-138.
- Holbert, N. (1974). How Managers See Marketing Research. *Journal of Advertising Research*, 14 (6), 41-46.

- Hooley, G. & Lynch, J. (1985). Marketing Lessons From UL's High Flying Companies. *Journal of Marketing Management*, 1 (1), 43-59.
- Hooley, G. & West, C. (1984). The Untapped Markets for Marketing Research. *Journal of the Market Research Society*, 26 (4), 335-352.
- Hosie, J. (1995). *Practical Implications of Non-response Bias in Sample Surveys*. Masterate Thesis, Massey University, New Zealand.
- Houston, F. (1986). The Marketing Concept: What it is and What it is Not. *Journal of Marketing*, 50 (2), 81-87.
- Howell, R. & Sakurai, M. (1992). Management Accounting (and other) Lessons From the Japanese. *Management Accounting*, 74 (6), 28-33.
- Huber, G. (1990). A Theory of the Effects of Advanced Information Technologies on Organizational Design, Intelligence and Decision Making. *Academy of Management Review*, 15 (1), 47-71.
- Huber, G. & Daft, R. (1991). Organisational Learning: The Contributing Processes and the Literatures. *Organisation Science*, 2 (February), 88-115.
- Industrial Marketing Research Association (1969). *Regulations*. Lichfield: IMRA.
- Jacobson, R. (1988). Distinguishing Among Competing Theories of the Market Share Effect. *Journal of Marketing*, 52 (4), 68-80.
- Jacobson, R. (1990). Unobservable Effects and Business Performance. *Marketing Science*, 9 (1), 74-85.
- Jacobson, R. & Aaker, D. (1985). Is Market Share All That It's Cracked Up to Be? *Journal of Marketing*, 49 (4), 11-21.
- Jaworski, B. & Kohli, A. (1993). Market Orientation: Antecedents and Consequences. *Journal of Marketing*, 57 (3), 53-70.
- Jobson, D. (1991). *Applied Multivariate Data Analysis*. New York: Springer-Verlag.
- Johanson, J. & Vahlne, J. (1977). The Internationalization Process of the Firm - A Model of Knowledge Development and Increasing Foreign Market Commitments. *Journal of International Business Studies*, 8 (1), 1-23.
- John, G. & Martin, J. (1984). Effects of Organisational Structure of Marketing Planning on Credibility and Utilisation of Plan Output. *Journal of Marketing Research*, 21 (2), 170-183.

- Kast, F. & Rosenzweig, J. (1979). *Organisation and Management: A Systems and Contingency Approach*, (3<sup>rd</sup> ed.). New York: McGraw Hill.
- Kheir-El-Din, A. (1990). Competitive Marketing Strategies: A survey of Japanese Manufacturing Firms' Competitive Performance in the British Market. *Journal of Marketing Management*, 6 (Summer), 15-45.
- King, S. (1985). Has Marketing Failed or Was it Never Really Tried? *Journal of Marketing Management*, 2, 1-19.
- Kirchoff, B. (1977). Organisation Effectiveness Measurement and Policy Research. *Academy of Management Review*, 2 (3), 347-355.
- Knorr, K. (1977). Policy Maker's Use of Social Science Knowledge: Symbolic or Instrumental? In *Using Social Research in Public Policy Making*. H. Weiss, ed. New York: C H Heath and Company.
- Kohli, A. & Jaworski, B. (1990). Market Orientation: The Construct, Research Propositions and Managerial Implications. *Journal of Marketing*, 54 (2), 1-18.
- Kohli, A., Jaworski, B. & Kumar, A. (1993). MARKKOR: A Measure of Market Orientation. *Journal of Marketing Research*, 30 (4), 467-477.
- Kotler, P. (1966). A Decision for the Marketing Nerve Centre. *Business Horizons*, 9 (Autumn), 63-74.
- Kotler, P. (1967). *Marketing Management: Analysis, Planning and Control*. New Jersey: Prentice-Hall.
- Kotler, P. (1980). *Marketing Management: Analysis, Planning and Control*, (4<sup>th</sup> ed.). New Jersey: Prentice-Hall.
- Kotler, P. (1988). *Marketing Management: Analysis, Planning and Control*, (6<sup>th</sup> ed.). New Jersey: Prentice-Hall.
- Kotler, P. & Armstrong, G. (1997). *Principles of Marketing*. New Jersey: Prentice Hall.
- Krum, J. (1969). Perceptions and Evaluation of the Role of the Corporate Marketing Research Department. *Journal of Marketing Research*, 6 (11), 459-464.
- Krum, J. (1978). B for Marketing Research Departments. *Journal of Marketing*, 42 (4), 8-12.

- Kulda, R. (1980). The effects of Strategic Planning on Common Stock Returns. *Academy of Management Journal*, 23 (1), 5-20.
- Lado, N., Maydeu-Olivares, A. & Rivera, J. (1998). Measuring Market Orientation in Several Populations: A Structural Equation Model. *European Journal of Marketing*, 32 (½), 23-39.
- Larrèchè, J. & Moinpour, R. (1983). Managerial Judgement in Marketing: The Concept of Expertise. *Journal of Marketing Research*, 20 (2), 110-121.
- Larsen, J. (1985). Effect of Time on Information Utilisation. *Knowledge: Creation, Difusion, Utilisation*, 7 (2), 143-159.
- Lee, H., Acito, F. & Day, R. L. (1987). Evaluation and the Use of Marketing Research by Decision Makers: A Behavioural Simulation. *Journal of Marketing Research*, 24 (2), 187-196.
- Leedy, P. (1989). *Practical Research: Planning and Design*. New York: Macmillan.
- Lehman, D. (1989). *Marketing Research and Analysis*, (3<sup>rd</sup> ed.). Illinois: Irwin.
- Lehman, D., Gupta, S. & Steckel, J. (1998). *Marketing Research*. New York: Addison Wesley Longman, Inc.
- Lenz, R. (1981). Determinants of Organisational Performance: An Interdisciplinary Review. *Strategic Management Journal*, 2 (2), 131-154.
- Levitt, T. (1969). *The Marketing Mode*. New York: McGraw-Hill.
- Lewis, B. (1990). Marketing Success in the 1990's: Characteristic of the Intelligent Corporation. *Information Management Review*, 5 (4), 15-22.
- Li, T. & Calantone, R. (1998). The Impact of Market Knowledge Competence on New Product Advantage: Conceptualisation and Empirical Examination. *Journal of Marketing*, 62 (4), 13-29.
- Li, M. & Ye, R. (1999). Information Technology and Firm Performance: Linking with Environmental, Strategic and Managerial Contexts. *Information & Management*, 35 (1), 43-51.
- Lord, C., Lepper, M. & Ross, L. (1979). Biased Assimilation and Attitude Polarization: The Effects of Prior Theories on Subsequently Considered Evidence. *Journal of Personality and Social Psychology*, 37 (5), 2098-2110.

- Louter, P., Ouwerkerk, C. & Bakker, B. (1991). An Inquiry into Successful Exporting. *European Journal of Marketing*, 25 (6), 7-23.
- Lowe, E. & Shaw, R. (1968). An Analysis of Managerial Biasing. *Journal of Management Studies*, 5 (3), 304-315.
- Mackenzie, K. (1983). Some Real World Adventures of a Bench Scientist. In *Producing Useful Knowledge for Organisations*, Ralph Kilmann et al., (eds.). New York: Praeger Publishers.
- Mahmood, M. (1993). Associating Organisational Strategic Performance with Information Technology Investment: An Exploratory Research. *European Journal of Information Systems*, 2 (3), 185-200.
- Malhotra, N., Hall, J., Shaw, M. & Crisp, M. (1996). *Marketing Research: An Applied Orientation*. Australia: Prentice Hall.
- Maltz, E. & Kohli, A. (1996). Market Intelligence Dissemination Across Functional Boundaries. *Journal of Marketing Research*, 33 (1), 47-61.
- Manly, B. (1994). *Multivariate Statistical Methods: A Primer*, (2<sup>nd</sup> ed.). London: Chapman Hall.
- Martinez, M. (1998). The collective Power of Employee Knowledge. *HR Magazine*, 43 (2), 88-94.
- McCarthy, J. & Perreault, W. (1990). *Basic Marketing - A Managerial Approach*, (10<sup>th</sup> ed.). Illinois: Irwin.
- McDaniel, C. & Gates, R. (1991). *Contemporary Marketing Research*. St. Paul: West Publishing.
- McNamara, C. (1972). The Present Status of Marketing Concept. *Journal of Marketing*, 36 (1), 50-57.
- Menon, A. & Varadarajan, R. (1992). A Model of Marketing Knowledge Use Within Firms. *Journal of Marketing*, 56 (4), 53-71.
- Milliken, F. (1987). Three Types of Perceived Uncertainty about the Environment: State, Effect, and Response Uncertainty. *Academy of Management Review*, 12 (1), 133-143.
- Mintzberg, H. (1971). Managerial Work: Analysis From Observation. *Management Science*, 18 (3), 16-21.
- Mintzberg, H. (1975). *Impediments to the Use of Management Information*. New York: National Association of Accountants.



- Mohan, N. (1995). The Influence of Firm's Age and Size on its Environmental Scanning Activities. *Journal of Small Business Management*, 33 (4), 10-21.
- Moorman, C. (1995). Organisational Market Informational Processes: Cultural Antecedents and New Product Outcomes. *Journal of marketing Research*, 32 (3), 318-355.
- Moorman, C., Deshpande, R. & Zaltman, G. (1993). Factors Affecting Trust in Market Research Relationships. *Journal of Marketing*, 57 (1), 81-101.
- Moorman, C., Zaltman, G. & Deshpande, R. (1992). Relationship Between Providers and Users of Market Research: The Dynamics of Trust Within and Between Organisations. *Journal of Marketing Research*, 29 (3), 314-328.
- Morgan, G. (1986). *Images of Organisations*. Beverly Hills: Sage Publications.
- Morrison, D. (1967). Measurement Problems in Cluster Analysis. *Management Science*, 13 (12), 775-780.
- Moser, C. & Kalton, G. (1971). *Survey Methods in Social Investigation*, (2<sup>nd</sup> ed.). London: Heineman.
- Myers, J., Greyser, S. & Massy, W. (1979). The Effectiveness of Marketing's 'R&D' For Marketing Management. *Journal of Marketing*, 43 (1), 17-29.
- Nachmias, D. & Nachmias, C. (1981). *Research Methods in the Social Sciences*, (2<sup>nd</sup> ed.). New York: St Martin's Press.
- Narver, J. & Slater, S. (1990). The Effect of Market Orientation on Business Profitability. *Journal of Marketing*, 54 (4), 21-35.
- New Zealand Market Research Society Directory, 1998.
- New Zealand Business Who's Who, (39<sup>th</sup> ed.). NZ: New Zealand Financial Press. 1998.
- Nie, N., Hull, C., Jenkins, J., Steinbrenner, K. & Bent, D. (1975). *SPSS Statistical Package for Social Sciences*, (2<sup>nd</sup> ed.). New York: McGraw-Hill.
- Nisbett, R. & Ross, L. (1980). *Human Inferences: Strategies and Shortcomings of Social Judgement*. New Jersey: Prentice-Hall.
- Nonaka, I. & Nicosia, F. (1979). Marketing Management, Its Environment and Information Processing. *Journal of Business Research*, 7 (4), 277-301.

- Norusis, M. (1985). *SPSSX: Advanced Statistics Guide*. New York: McGraw Hill.
- Norusis, M. (1988). *SPSS/PC + Advanced Statistics v2.0*. Chicago: Spss Inc.
- Nystrom, P. & Starbuck, W. (1984). To Avoid Organisational Crises, Unlearn. *Organisational Dynamics*, 13 (Spring), 53-65.
- Oasis, (1989). *A Report on the Management of Marketing Information*. UK: Institute of Marketing.
- O'Dell, W., Rupell, A., Trent, R. & Kehoe, W. (1984). *Marketing Decision Making: Analytic Framework and Cases*, (3<sup>rd</sup> ed.). Cincinnati: South-Western Publishing Company.
- O'Reilly, C. (1982). Variations in Decision Makers' Use of Information Sources: The Impact of Quality and Accessibility of Information. *Academy of Management Journal*, 25 (4), 756-771.
- O'Reilly, C. (1983). The Use of Information in Organisational Decision Making: A Model and Some Propositions. *Research in Organisational Behaviour*, 5, 103-139.
- Parthasarathy, M. & Sohi, R. (1997). Salesforce Automation and the Adoption of Technological Innovation by Salespeople: Theory and Implications. *Journal of Business and Industrial Marketing*, 12 (3), 196-208.
- Patton, M., Grimes, P., Guthrie, K., French, B. & Blyth, D. (1977). In Search of Impact: An Analysis of the Utilisation of Federal Health Evaluation Research. In *Using Social Research in Public Policy Making*. Carol H. Weiss (ed.). Lexington, Mass: Lexington Books.
- Payne, S. (1951). *The Art of Asking Questions*. Princeton: Princeton University Press.
- Pearce, J., Robbins, D. & Robinson, R. (1987). The Impact of Grand Strategy and Planning Formality on Financial Performance. *Strategic Management Journal*, 8, 125-134.
- Perkins, S. & Rao, R. (1990). The Role of Experience in Information Use and Decision Making by Marketing Managers. *Journal of Marketing Research*, 27 (1), 1-10.
- Peters, T. & Waterman, R. (1982). *In Search of Excellence: Lessons from America's Best-Run Companies*. New York: Harper & Row.
- Peterson, R. A. (1988). *Marketing Research*, (2<sup>nd</sup> ed.). Texas: Business Publication.

- Pettigrew, A. (1972). Information Control as a Power Source. *Sociology*, 6 (2), 187-204.
- Pfeffer, J. (1981). *Power in Organisations*. Mass: Pitman.
- Pfeffer, J. & Salancik, G. (1978). *The External Control of Organisations*. New York: Harper and Row.
- Piercy, N. (1980). Marketing Information Systems: Theory vs. Practice. *Quarterly Review of Marketing*, 6 (1), 16-24.
- Piercy, N. (1983). A Social Psychology of Marketing Information - Learning to Cope with the Corporate Battleground. *Journal of the Market Research Society*, 25 (2), 103-119.
- Piercy, N. (1985). *Marketing and Organisation: An Analysis of Information Processing, Power and Politics*. London: Allen Unwin.
- Piercy, N. (1987). Developing Marketing Information Systems. In *The Marketing Book*. Baker, M. N. (ed.). London: Heinemann.
- Porter, M. (1990). The Competitive Advantage of Nations. *Harvard Business Review*, 68 (March/April), 73-93.
- Prescott, J., Kohli, A. & Venkatraman, N. (1986). The Market Share-Profitability Relationship: An Empirical Assessment of Major Assertions and Contradictions. *Strategic Management Journal*, 7 (4), 377-394.
- Rai, A., Patnayakuni, R. & Patnayakuni, N. (1997). Technology Investment and Business Performance. *Communications of the Association for Computing Machinery*, 40 (7), 89-97.
- Raju, J. & Roy, A. (2000). Market Information and Firm Performance. *Management Science*, 46 (8), 1075-1084.
- Ramanujam, V. & Venkatraman, N. (1984). An Inventory and Critique of Strategy Research Using the PIMS Database. *Academy of Management Review*, 9 (1), 135-151.
- Reimers, J. & Fennema, M. (1999). The Audit Review Process and Sensitivity to Information Source Objectivity. *Auditing: A Journal of Practice and Theory*, 18 (1), 117-123.
- Rhyne, L. (1986). Relationship of Strategic Planning to Financial Performance. *Strategic Management Journal*, 7 (5), 423-436.

- Rich, R. F. (1977). Uses of Social Science Information by Federal Bureaucrats: Knowledge for Action Versus Knowledge for Understanding. In *Using Social Research in Public Policy Making*. Carol H. Weiss ed. Lexington, Mass: Lexington Books.
- Ross, M. & Fletcher, G. (1985). Attribution and Social Perception. In *Handbook of Social Psychology*, Vol. II, Gardner Lindzey and Robert F. Kidd, (eds.). New York: Random House, Inc.
- Sanchez, A. & Elola, L. (1991). Product Innovation Management in Spain. *Journal of Product Innovation Management*, 8 (1), 49-56.
- Sarvary, M. & Parker, P. (1997). Marketing Information: A Competitive analysis. *Marketing Science*, 16 (1), 24-38.
- Schewe, C. & Smith, R. (1980). *Marketing: Concepts and Applications*. New York: McGraw Hill.
- Schiff, M. & Lewin, A. (1968). Where Traditional Budgeting Fails. *Financial Executive*, 36 (5), 50-62.
- Schoemaker, P. & Russo, J. (1993). A Pyramid of Decision Approaches. *California Management Review*, 36 (1), 9-31.
- Shrivastava, P. (1987). Rigor and Practical Usefulness of Research in Strategic Management. *Strategic Management Journal*, 8 (½), 77-92.
- Sinkula, J. (1994). Market Information Processing and Organisational Learning. *Journal of Marketing*, 58 (1), 35-45.
- Slater, S. & Narver, J. (1995). Market Orientation and the Learning Organisation. *Journal of Marketing*, 59 (2), 63-74.
- Slater, S. & Narver, J. (1997). *Information Search Style and Business Performance in Dynamic and Stable Environments: An Exploratory Study*. Report No. 97-104. Cambridge, MA: Marketing Science Institute.
- Steers, R. (1975). Problems in the Measurement of Organisational Effectiveness. *Administrative Science Quarterly*, 20 (4), 546-558.
- Stevens, R., Wrenn, B., Ruddick, M. & Sherwood, P. (1997). *The Marketing Research Guide*. New York: Haworth Press.
- Stewart, D. (1981). The Application and Misapplication of Factor Analysis in Marketing Research. *Journal of Marketing Research*, 18 (1), 51-62.
- Stewart, T. (1991). Brainpower. *Fortune*, 123 (June-3), 44-60.

- Stickney, C. (1990). *Financial Statement Analysis: A strategic Perspective*. San Diego: Harcourt Brace Jovanovich.
- Stigler, G. (1961). The Economics of Information. *Journal of Political Economy*, 69 (June), 21-25.
- Stoner, J. (1978). *Management*. New York: Prentice Hall.
- Sudman, S. & Bradburn, N. (1982). *Asking Questions: A Practical Guide to Questionnaire Design*. San Francisco: Jossey-Bass.
- Sudman, S. & Bradburn, N. (1984). Improving Mailed Questionnaire Design. In *Making Effective Use of Mailed Questionnaires*. D. Lickhart, (ed.). San Francisco: Jossey-Bass.
- Szymanski, D., Bharadwaj, S. & Varadarajan, P. (1993). An analysis of the Market Share - Profitability Relationship. *Journal of Marketing*, 57 (3), 1-18.
- Teger, A. (1980). *Too Much Invested to Quit*. New York: Pergamon.
- Thomas, K. & Tymon, W. (1982). Necessary Properties of Relevant Research: Lessons from Recent Criticisms of Organisational Sciences. *Academy of Management Review*, 7 (3), 345-352.
- Tschoegl, A. & Yu, C. (1990). Gibrat's Law in Marketing: The Case of Liquor Brand Sales. *International Journal of Research in Marketing*, 7 (4), 24-92.
- Tsu Wee, T. & Ahmed, Z. (1999). Managing Market Intelligence: An Asian Marketing Research Perspective. *Marketing Intelligence and Planning*, 17 (6), 298-306.
- Turner, P. (1991). Using Information to Enhance Competitive Advantage - The Marketing Options. *European Journal of Marketing*, 25 (6), 55-64.
- Urban, L. & Hauser R. (1993). *Design and Marketing of New Products*, (2<sup>nd</sup> ed.). New Jersey: Prentice-Hall.
- Urban, L., Hauser R. & Dholakia, N. (1987). *Essentials of New Product Management*. New Jersey: Prentice-Hall.
- van der Walt, N., Lyonski, S., Queree, B., Harper, J. & Hales, S. (1989). Marketing Planning in NZ: A Survey of Practice and Performance. *New Zealand Journal of Business*, 11 (October), 1-9.
- van Horne, J., Nicol, R. & Wright, K. (1995). *Financial management and policy in Australia*. Sydney: Prentice-Hall.

- Venkatraman, N. & Ramanujam, V. (1986). Measurement of Business Performance in Strategy Research: A Comparison of Approaches. *Academy of Management Review*, 11 (4), 801-814.
- von Hippel, E. (1986). A Source of Novel Product Concepts. *Management Science*, 32 (7), 791-805.
- Webster, F. (1988). Rediscovering the Marketing Concept. *Business Horizons*, 31 (May/June), 29-39.
- Weiss, C. (1972). *Evaluation Research: Methods of Assessing Program Effectiveness*. Englewood Cliffs, New Jersey: Prentice-Hall.
- Weiss, C. (1977). *Using Social Research in Public Policy Making*. New York: D. C. Heath and Company.
- Weiss, C. (1981). Measuring the Use of Evaluation. In *Utilising Evaluation: Concepts and Measurement Techniques*. J. Ciarlo, ed. Beverly Hills: Sage Publications Inc.
- Weiss, C. & Bucuvalas, M. (1977). The challenge of social research to decision making. In *Using Social Research in Public Policy Making*. Carol H. Weiss (ed.). Lexington, Mass: Lexington Books.
- Weiss, C. & Bucuvalas, M. (1980). *Social Science Research and Decision Making*. New York: Columbia University Press.
- Weitzel, J. (1987). Strategic information Management: Targeting Information for Organisational Performance. *Information Management Review*, 3 (1), 9-19.
- Wheelwright, S. & Clark, K. (1992). *Revolutionising Product Development*. New York: Free Press.
- Wierenga, B. & van Bruggen, G. (1997). The Integration of Marketing Problem-Solving Modes and Marketing Management Support Systems. *Journal of Marketing*, 61 (3), 21-37.
- Wilkinson, L. (1989). *SYSTAT: The System for Statistics for the PC*, (2<sup>nd</sup> ed.). Evanston: SYSTAT, Inc.
- Wilton, P. & Myers, J. (1986). Task, Expectancy, and Information Assessment Effects in Information Utilisation Processes. *Journal of Consumer Research*, 12 (4), 469-486.
- Woo, C. & Willard, G. (1983). Performance Representation in Strategic Management Research: Discussions and Recommendations. Paper Presented at the *Annual Meeting of the Academy of Management*, Dallas.

- Woodman, R., Sawyer, J. & Griffin, R. (1993). Toward a Theory of Organisational Creativity. *Academy of Management Review*, 18 (2), 293-321.
- Xu, X. (1999). The strategic orientation of Marketing Information Systems - An Empirical Study. *Marketing Intelligence and Planning*, 17 (6), 262-271.
- Yasai-Ardekani, M. (1993). Effects of Environmental Scarcity and Munificence on the Relationship of Context to Organisational Structure. *Academy of Management Journal*, 32, 131-156.
- Zaltman, G. & Burger, C. (1975). *Marketing Research - Fundamentals and Dynamics*. Illinois: Dryden Press.
- Zaltman, G., Duncan, R. & Holbek, J. (1973). *Innovations and Organisations*. New York: Wiley.
- Zaltman, G. & Moorman, C. (1988). The Importance of Personal Trust in the Use of Research. *Journal of Advertising Research*, 28 (5), 16-24.
- Zeithaml, V. (1988). Consumer Perceptions of Price, Quality and Value: A Means-End Model and Synthesis of Evidence. *Journal of Marketing*, 52 (3), 2-22.
- Zikmund, W. (1986). *Exploring Marketing Research*, (2<sup>nd</sup> ed.). Illinois: Dryden Press.
- Zikmund, W. (1991). *Business Research Methods*, (3<sup>rd</sup> ed.). Chicago: Dryden.
- Zikmund, W. (1996). *Exploring Marketing Research*, (6<sup>th</sup> ed.). Texas: The Dryden Press.
- Zinkhan, G., Joachimsthaler, E. & Kinnear, T. (1987). Individual Differences and Marketing Decision Support System Usage and Satisfaction. *Journal of Marketing Research*, 24 (2), 208-214.

## **APPENDICES**



## **Appendix 2.1**

### **Sample Copy of the Initial Letter**

**15 April 1999**

**Name**

**Address**

**Dear Mr / Ms**

Members of the marketing Department at Massey University have been trying for some time to assess the usefulness of different types of market research. Mr Ganesh Ragu, an experienced academic from Sri Lanka, is now starting work on a PhD thesis on this topic, and we would be very grateful for your help. We would like to assess the details of research projects commissioned by your company, as far back as your records allow, but not including projects completed since the start of 1998.

You may be concerned about confidentiality, and about the amount of effort that is required for an activity that is seen as having little commercial benefit.

On the matter of confidentiality, you have my personal undertaking, but I suggest the university sign a confidentiality agreement, such as that outlined by the enclosed draft, which I would like you alter as you see fit. Also, the Marketing Department at Massey University subscribes to the Code of Practice of the Market Research Society of New Zealand and all information is held in strict confidence.

On the matter of the work involved, Ragu will visit you and delve into your archives so that your own involvement is minimised. Also, you should find some interest in the results, and in comparison of your position with that of the average, which we will offer you.

I enclose a more detailed description of our research to help you with your decision.

Ragu will phone you shortly to discuss this project, and to give you any additional information you may need.

Yours sincerely,

A C Lewis

Associate Professor

# Research into the ability of Market Research in making Business Decisions

Participants: Ganesh Ragu, A C Lewis, and D H B Esslemont

## Objectives of the research

Most market research is carried out in order to increase management's understanding of the environment in which the organisation is operating. The objective may be to understand the motives which lead customers to buy the organisation's products, or to segment the market with a view to selecting a segment to be targeted, or to understand the sources of satisfaction or dissatisfaction among customers.

The detailed objects have tended to vary over time. Forty years ago, when the marketing concept was a new and exciting idea, it was common for research to be directed largely at understanding customers' needs. As substantial computing power became available in the 1960s interest developed in the measurement of images and the construction of perceptual maps. From the early 1970s on, there was increasing interest in segmentation. Since the early 1980s research has often been concerned with measuring customer satisfaction, or perceptions of quality, particularly of services. Recently, considerable efforts have been devoted to investigating the nature of relationships with customers and suppliers.

What is common to all these endeavours is the idea that a sufficiently sound understanding of the customers and their choice processes, will enable marketers to deduce the actions they should take in order to achieve their corporate objectives.

But some market research adopts a more direct approach. In these projects, the objective is not to generate suggestions for effective action, but to predict the result of adopting measures that have been thought of before the research is commissioned. The Department of Marketing in the past has estimated that in New Zealand only a minority of research projects, and a smaller minority of research expenditure, is devoted to this kind of approach.

The overall objective of the present project is to investigate the relative effectiveness of market research of different types, but our first task is to update our earlier findings, and it is for this that we ask your help. We would like to have enough information about the research projects carried out for your organisation, to enable us to classify them in the way described.

Our experience has been that this can sometimes be done on the basis simply of the title of the project, but the proposal and the questionnaire allow us to be sure.

**Appendix 2.2**

**Details of Companies that Refused to Provide Information**

ID No	Reason Provided for Refusing to Take part
R 1	Too much commitment and unable to concentrate on this project.
R 2	Unable to assist, because it the research was commercially sensitive and highly confidential.
R 3	Do not want to participate in the project.
R 4	Unfortunately, we cannot assist you with this request, as we will not share our research investment with outside organisations.
R 5	Currently, significant changes are being promoted in th industry and our attention is being fully focused on these vary important issues.
R 6	We would prefer not to included in the fieldwork due to the nature of the research.
R 7	Not in a position to assist.
R 8	Due to the sensitive and confidential nature of the research undertaken, we are unable to assist.
R 9	We do not wish to participate.
R 10	Did some research, but not kept in written form - unable to help.
R 11	Do not want to take part in the project.
R 12	Because of the recent merger the information you require is no longer available.
R 13	Unfortunately, I am travelling extensively with work at the present time and will not be able to assist.
R 14	We are currently in the process of a merger and as you will appreciate, unfortunately we are not in a position to grant assistance to any third parties for market research at this time.
R 15	Sorry unable to contribute, as we are currently involved in a number of exercises across the organisation.
R 16	We do not wish to participate.
R 17	Unfortunately we cannot consider participation at this time.
R 18	We are in transition at present consequent of the departure of our marketing manager and therefore unable to provide help.
R 19	No benefit to organisation in spending time and effort.
R 20	We doesn't really have backdated research projects to delve into. The research that we do tends to be quite current and if relevant is constantly updated. Where it has served its purpose it tends to be thrown out. What little there is available would take extensive effort to collate and explain, which is something we do not have time or resources to do.
R 21	We do not wish to participate.

R 22	Too much commitment at present - unable to participate.
R 23	We are in the process of moving to new buildings and actually accessing the archived information is a mammoth job for us at this particular time.
R 24	We are in transition at present and our team is fully committed to enter a period of sustained change and growth.
R 25	Our company policy is to generally refrain from participating in outside projects in order to keep our staff members focused on company business.
R 26	We receive so many requests from a wide spectrum of the community, along similar lines to your own, that is just impossible to accommodate everyone.
R 27	We decline your approach to us regarding market research assessment.
R 28	We regularly receive request of this nature, and would therefore be spending considerable amounts of time and effort to retrieve such data without any obvious commercial benefit. We are not prepared to assist with your project.
R 29	Due to the current integration of the company, we do not wish to participate in the project.
R 30	Too much commitment at present - unable to participate.
R 31	We are unable to divert from our policy of not releasing our market research information to any third party.
R 32	We have just now undergone major restructuring and do not have the resources to assist at this time.
R 33	We would like to help, however, to access details of our research projects in a way that would enable him to carry out his research would require quite a lot of explanation, and so time. Unfortunately, we do not have time available in the foreseeable future.
R 34	We would prefer not to included in the fieldwork due to the nature of the research.
R 35	We believe the process in selecting and acting on the research is as commercially sensitive as the results themselves - unable to help.
R 36	Unfortunately we will not be participating in this research.
R 37	Too much commitment at present - unable to participate.

**Appendix 2.3**

**Sample Copy of the Personal Letter Address to the Respondents**



**15 June 1999**

**Name**

**Address**

**Dear Mr / Ms**

I am writing this letter with reference to the conversation you had with me regarding confidentiality agreement of the data information you will supply.

Please review the enclosed confidentiality agreement, and make any alterations you think fit.

Thanking you for your cooperation, I look forward to talking with you again about our data requirement.

Yours sincerely,

Ganesh Ragu

Ganesh Ragu Marketing Department Massey University Palmerston North  
Phone: 06 350 5580 Fax: 06 350 2260 Email: [G.Raguragavan@massey.ac.nz](mailto:G.Raguragavan@massey.ac.nz)

Te Kunenga ki Pūrehuroa

Inception to Infinity: Massey University's commitment to learning as a life-long journey

**28 June 1999**

**Name**

**Address**

**Dear Mr / Ms**

With reference to the conversation I had with you, I enclose three copies of the Confidentiality Agreement as agreed. Please sign and return two of these for our records.

Once again I thank you for agreeing to provide us with the information.

Thank you.

Yours sincerely,

Ganesh Ragu

Ganesh Ragu   Marketing Department   Massey University   Palmerston North  
Phone: 06 350 5579   Fax: 06 350 2260   Email: [G.Raguragavan@massey.ac.nz](mailto:G.Raguragavan@massey.ac.nz)

Te Kūnenga ki Pūrehuroa

Inception to Infinity: Massey University's commitment to learning as a life-long journey

## **Appendix 2.4**

### **New Zealand Market Research Society Code of Ethics**

# CODE OF PRACTICE of the Market Research Society of NZ Inc.

## 1 INTRODUCTION

Effective communication between the suppliers and consumers of goods and services of all kinds is vital to any modern society. Growing international links make this even more essential. For a supplier to provide what customers need in the most efficient way they must understand their differing requirements; how best to meet these requirements; and how they can most effectively communicate the nature of the goods and services they are offering.

Helping a business develop this understanding is the role of Marketing Research. It applies in both private and public sectors of the economy. Similar approaches are also used in other fields of study: for example in the measurement of the public's behaviour and attitudes in respect to social, political and other issues by government and public bodies, the media and academic institutions. Marketing and Social Research have many interests, methods and problems in common although the subjects of study tend to be different.

Such research depends upon public confidence: confidence that it is carried out honestly, objectively, without unwelcome intrusion and without disadvantage to Respondents, and that it is based upon their willing cooperation. This confidence must be supported by an appropriate professional Code of Practice governing the way in which Marketing Research projects are conducted.

The latest 1994 ICC/ESOMAR Code forms the basis of this Code of Practice. This new version of the Code sets out appropriate ethical and business principles as concisely as possible. It specifies the rules which are to be followed in dealing with the general public and with the business community, including Clients and other members of the profession.

The basic principles are relatively unchanging. There may be additional national Codes, or requirements relating to the application of this Code, which may go further in dealing with specific points of practice. These national requirements should in such cases be followed. Research practice must of course in all cases conform to the New Zealand legislation and legal practice and in particular to the requirements of the 1993 Privacy Act.



There are a number of specific ICC/ESOMAR and Market Research Society Guidelines on various topics available from the Society's Secretary which give more detailed guidance on how the Code should be applied. These are not mandatory.

## 2 BASIC PRINCIPLES

This Code sets out the basic principles which must guide the actions of those who carry out or use Marketing Research. No variation in the application of Rules is permissible without express authorisation of the Market Research Society of New Zealand. Individuals and organisations who subscribe to it must follow not just the letter but also the spirit of these rules.

No Code can be expected to provide a completely comprehensive set of rules which are applicable to every situation which might arise. Where there is any element of doubt people should therefore ask for advice and meanwhile follow the most conservative interpretation of these principles.

Individuals do not always have complete responsibility for, or absolute control over, all the activities of the organisation to which they belong. They are however always responsible for ensuring that other people in their organisation are aware of, and understand, the principles laid down in this Code. They must use their best endeavours to ensure that the organisation as a whole conforms to the Code.

## 3 DEFINITIONS

- (a) Marketing Research is the function which links the consumer, customer and public to the marketer through information - information used to identify and define marketing opportunities and problems; generate and refine and evaluate marketing actions; improve understanding of marketing as a process and of the ways in which specific marketing activities can be made more effective.

Marketing Research specifies the information required to address these issues; designs the method for collecting information; manages and implements the data collection process; analyses the results; and communicates the findings and their implications.

Marketing Research includes such activities as quantitative research; qualitative research; media and advertising research; business-to-business and industrial research; research among minority and special groups (such as those involved in pharmaceutical or financial research); and desk research - especially where these activities are concerned with collecting original data and not simply the secondary analysis of already available data.



For the purposes of this Code the term Marketing Research also covers social and opinion research, insofar as these use similar approaches and techniques in the study of issues not directly connected with the marketing of goods and services.

Database marketing and any other activity where the names and addresses of the people contacted are to be used for individual selling, promotional, fund-raising or other non-research purposes can under no circumstances be regarded as marketing research since the latter is based on preserving the complete anonymity of the respondent.

- (b) Researcher is defined as any individual, research agency, organisation, department or division which carries out (or acts as a consultant on) a Marketing Research project or offers their services to do so. The term includes any department etc, which belongs to the same organisation as that of the Client. Such a 'Client-linked' Researcher has the same responsibilities under this Code vis-à-vis other sections of the Client organisation as does one who is completely independent of the Client organisation.

The term also covers responsibility of the procedures followed by any subcontractor from whom the Researcher commissions any work (data collection or analysis, printing, professional consultancy, etc) which forms any part of the research project. In such cases the Researcher is responsible for ensuring that any such subcontractor fully conforms to the provisions of this Code.

- (c) Client is defined as any individual, organisation, department or division (including one which belongs to the same organisation as the Researcher) which requests, commissions or subscribes to all or any part of a Marketing Research project.
- (d) Respondent is defined as any individual, group or organisation from whom any information is sought by the Researcher for the purposes of a Marketing Research project, regardless of the type of information sought or the method or technique used to obtain it. The term therefore covers not only cases where information is obtained by verbal interviewing techniques but also cases where other methods such as observation, postal and other self-completion questionnaires, mechanical/electronic equipment, observation and any other method where the identity of the provider of the information may be recorded or otherwise traceable.
- (e) Interview is defined as any form of direct or indirect contact (including the use of non-verbal methods such as those referred to above) with Respondents where the objective is to acquire data or information which could be used in whole or in part for the purposes of a Marketing Research project.

- (f) Record is defined as any brief, proposal, contact sheet, questionnaire, respondent identification, check list, record sheet, audio or audio-visual recording or film, tabulation or computer print-out, computer data storage system or other storage medium, formula, diagram, report, etc, in respect of any Marketing Research project, whether in whole or in part. It covers records produced by the Client as well as by the Researcher.

It includes not only original data records but also anything needed to evaluate those records such as quality control documents.

## 4 RULES

### A. General

- Article 1 Marketing Research must always be carried out objectively and in accordance with established scientific principles.
- Article 2 Marketing Research must always conform to the national and international legislation including data protection and the privacy of the individual, which may apply in any of the countries involved in a given research project.

### B. The Rights of Respondents

All Respondents must be sure when they agree to take part in any Marketing Research project they are fully protected by the provisions of this Code and that the Researcher will conform to its requirements. This applies to Respondents interviewed as private individuals and to those interviewed as representatives of organisations.

- Article 3 Respondents' cooperation in a Marketing Research project is entirely voluntary at all stages. They must not be misled when being asked for their cooperation.
- Article 4 With the exception noted below, further interviews within the context of a particular research project or survey with the same Respondents shall be carried out only if:
- The Respondent's permission has already been obtained at a previous interview; or
  - It is pointed out to Respondents at the time they are re-contacted that this interview is consequent upon one they have previously given and they then give their permission before the collection of further data.

The only exception to this procedure is in the case where it is an essential feature of the research technique involved that Respondents do not realise that this further interview is consequent upon one they have previously given.



- Article 5** If the Respondent is supplying information not in a private capacity but as an officer of an organisation or firm then it may be desirable to list the Respondent's organisation in the report. The report shall not, however, enable any particular piece of information to be related to any particular organisation or person, except with prior explicit permission from the relevant Respondent, who shall be told of the extent to which it will be communicated. This requirement does not apply in the case of secondary analysis of published data.
- Article 6** The Researcher must avoid unnecessary intrusions on Respondents' privacy.
- Article 7** Respondents' anonymity must always be strictly preserved unless they have explicitly agreed to the contrary. The Researcher must ensure that the information they provide cannot be linked to specific individuals or organisations without such permission. It is the Researcher's responsibility to inform Clients of Respondents' anonymity rights.
- Article 8** In any case where Respondents are asked for permission to disclose their name and/or address to anyone outside the research agency:
- the Respondents must first be told to whom the information would be supplied and the purposes for which it will be used, and also
  - the Researcher must ensure that:
    - the information will not be used for any non-research activity
    - the information will not be published in a form that could reasonably be expected to identify the Respondents; and
    - the recipient of the information has agreed to conform to the requirements of this Code.
- Article 9** The Researcher must take all reasonable precautions to ensure that Respondents are in no way directly harmed or adversely affected as a result of their participation in a research project.
- In the case of product trials, the Researcher must in particular ensure that arrangements are agreed with the Client regarding the responsibilities for product safety and for dealing with any complaints or damage arising from faulty products or product misuse. Such responsibilities will normally rest with the Client, but the Researcher must ensure that products are correctly stored and handled while in the Researcher's charge and that Respondents are given appropriate instructions for their use.
- Article 10** Respondents must be told at the time of the interview when observation or recording techniques are to be used, except where these are used in a public place. If a Respondent so wishes, the record or relevant section of it must be destroyed or deleted. Respondents' anonymity must not be infringed by the use of such methods.



- Article 11** Respondents must be able to check without difficulty the identity and bona fides of the Researcher and to obtain an answer to any reasonable query about the purposes and content of the research.
- Each interviewer must be able to be identified in a way that specifies his or her name and organisation. The name and address/telephone number of the Research Company must be made available to the Respondent at the time of the interview.
- Article 12** The Researcher must take special care and precautions when interviewing children and young people under 15 years of age. The informed consent of the parent or responsible adult must first be obtained for interviews with children. In obtaining this permission, the Interviewer shall describe the nature of the interview in sufficient detail to enable the responsible person to reach an informed decision. The responsible person shall also be specifically informed if it is intended to ask children to test any products or samples.
- C. The Professional Responsibilities of Researchers**
- This Code is not intended to restrict the rights of Researchers to undertake any legitimate Marketing Research activity and to operate competitively in so doing. However, it is essential the general public's confidence in the integrity of Marketing Research is not eroded in any way.
- Article 13** Researchers must not knowingly or negligently act in any way which could bring discredit on the Marketing Research profession or lead to a loss of public confidence in it.
- Article 14** Researchers must not make false claims about their skills and experience or about those of their organisation.
- Article 15** Researchers must not unjustifiably criticise or disparage other Researchers.
- Article 16** Researchers must always strive to design research which is cost effective and of a quality adequate to meet the Client's needs, and then to carry this out to the specifications agreed with the Client.
- Article 17** Researchers must at all times ensure the security of all research records in their possession.
- Article 18** Researchers must not knowingly allow the dissemination of conclusions from a research project which are not adequately supported by the data. They must always be prepared to make available the technical information necessary to assess the validity of any published findings.
- Article 19** No activity shall be deliberately or inadvertently mis-represented as Marketing Research. Specifically, the following activities shall in no way be associated, directly or indirectly or by implication, with Marketing Research interviewing or activities. Any such activities must always be clearly separated and differentiated from the organisation and the conduct of Marketing Research.



- (a) Enquiries whose objectives are to obtain personal information about private individuals per se, whether for legal, political, supervisory, private or other purposes
- (b) The compilation, updating or enhancement of lists, registers or databases which are not exclusively for research purposes
- (c) The acquisition of information for use for credit-rating or similar services
- (d) Sales or promotional approaches to Respondents
- (e) The collection of debts
- (f) Fund-raising
- (g) Director indirect attempts to influence a Respondent's opinions, attitudes or behaviour on any issue.

**MRS CODE**

#### D. The Mutual Rights and Responsibilities of Researchers and Clients

The Code is not intended to regulate the details of business relationships between Researchers and Clients except insofar as these may involve principles of general interest and concern.

- Article 20** These rights and responsibilities will normally be governed by a written contract between the Researcher and the Client. By prior written agreement the parties may amend the provisions of Articles 23-27 below but the other requirements of this Code may not be altered in this way. Marketing Research must also always be conducted according to the principles of fair competition, as generally understood and accepted.
- Article 21** The Researcher must inform the Client in advance if the work to be carried out for that Client is to be combined or syndicated in the same project with work for other Clients, but does not disclose the identity of such clients. The Client shall not give any of the results of a multiclient study to other potential purchasers of the study unless the Researcher's permission to do this has first been obtained.
- Article 22** The Researcher must inform the Client as soon as possible in advance when any part of the work for that Client is to be subcontracted outside the Researcher's own organisation (including the use of any outside consultants). On request the Client must be told the identity of any such subcontractor.
- Article 23** The Client does not have the right, without prior arrangement between the parties involved, to exclusive use of the Researcher's services or those of his organisation, whether in whole or in part. The Researcher must not disclose the identity of any Client, or any confidential information about the latter's business to any third party without the Client's permission.



**MRS CODE**

#### Article 24

The following Records remain the property of the Client and the Researcher may not disclose (unless required to do so under the Privacy Act 1993) such data or findings to any third party without Client permission:

- (a) Marketing Research briefs, specifications and other information provided by the Client
- (b) the research data and findings from a Marketing Research project (except in the case of syndicated or multi-Client projects or services where the same data are available to more than one Client).

Respondents have a right of access, under the Privacy Act 1993, to personal information held about them. This refers to identifiable individuals and Researchers must disclose this information to Respondents who make a proper access request. Respondents must also be allowed to correct identifiable information if they so desire.

The Client has however no right to know the names or addresses of Respondents unless the latter's explicit permission for this has first been obtained by the Researcher (this particular requirement cannot be altered under Article 20).

#### Article 25

The research techniques and methods used in a Marketing Research project do not become the property of the Client, who has no exclusive right to their use. The following Records remain the property of the Researcher:

- (a) Marketing Research proposals, discussion papers and quotations (unless these have been paid for by the Client). They must not be disclosed by the Client to any third party, other than to a consultant working for the Client on that project (with the exception of any consultant working also for a competitor of the researcher). In particular, they must not be used by the Client to influence proposals or cost quotations from other Researchers.
- (b) the contents of a report in the case of syndicated or multi-Client projects or services where the same data are available to more than one Client and where it is clearly understood that the resulting reports are available for general purchase or subscription. The Client may not disclose the findings of such research to any third party (other than to his own consultants and advisers for use in connection with his business) without the permission of the Researcher.
- (c) all research records prepared by the Researcher (with the exception of the report to the Client in the case of non-syndicated projects and also the research design and questionnaire where the costs of developing these are covered by the charges paid by the Client).



**Article 26** The Researcher must conform to currently agreed professional practice relating to the keeping of such Records for an appropriate period of time after the end of the project. The requirements of the Privacy Act 1993 that personal information not be kept longer than is properly required should be borne in mind. On request the Researcher must supply the Client with duplicate copies of such records provided that such duplicates do not breach anonymity and confidentiality requirements; that the request is made within the agreed time limit for keeping the records; and that the Client pays the reasonable costs of providing the duplicates. (The provision of duplicate records does not apply in the case of a project or service where it is clearly understood that the resulting reports are to be available for general purchase on a syndicated or subscription basis).

Original records must be kept for a minimum of six months and secondary records/stored research data for a minimum of two years after completion of the study, unless explicitly agreed with the Client. If no secondary records exist, then the original records must be kept for a minimum of two years, unless explicitly agreed with the Client.

**Article 27** The Researcher must not disclose the identity of the Client, or any confidential information about the latter's business to any third party without the Client's permission.

**Article 28** The Researcher must on request allow the Client to arrange for checks on the quality of the fieldwork and data preparation, provided that the Client pays any additional costs involved in this. Any such checks must conform to Respondent anonymity requirements of Article 7. In the case of a multi-client study, the Researcher may require that the observer in charge of checking the quality of fieldwork (and/or data preparation) is independent of any of the Clients.

**Article 29** The Researcher must always provide the Client with all appropriate technical details of any research project carried out for that Client. The Client is entitled to the following information about any Marketing Research project to which they have subscribed:

(1) Background

- organisation for whom and organisation by whom the study was conducted
- the purpose of the study
- names of subcontractors and consultants performing any substantial part of the work

(2) Sample

- a description of the intended and actual universe covered
- the size, nature and geographical distribution of the sample (both planned and achieved); and where relevant, the extent to which any of the data collected were obtained from any part of the sample
- details of the sampling method, any weighting methods used and/or quota sampling used
- where technically relevant, a statement of response rates and a discussion of any possible bias due to non-response

(3) Data collection

- a description of the method by which the information was collected
- a description of the field staff, briefing and field quality control methods used
- the method of recruiting Respondents; and the general nature of any defrayment of expenses offered to secure their cooperation
- when the fieldwork was carried out
- (in the case of "desk research") a clear statement of the sources of the information and their likely reliability

(4) Presentation of results

- the relevant factual findings obtained
- bases of percentages (both weighted and unweighted, unless the results of weighting is referred to elsewhere in the report)
- general indications of the probable statistical margins of error to be attached to the main findings, and of the levels of statistical significance of differences between key figures
- questionnaires and other relevant documents and materials used (or, in the case of a shared project, that portion relating to the matter reported on).

The report on a project should normally cover the above points or provide a reference to a readily available separate document which contains the information.

An exception to this Article is in the case where it is agreed in advance between the Client and the Researcher that it is unnecessary to include all the listed information in the formal report or other document. Any such agreement shall in no way remove the entitlement of the Client to receive any and all of the information freely upon request. Also this exception shall not apply in the case where any or all of the research report or findings are to be published or made available to recipients in addition to the original Client.





**Article 30** When reporting on the results of a Marketing Research project the Researcher must make a clear distinction between the findings as such, the Researcher's interpretation of these and any recommendations based on them.

**Article 31** Where any of the findings of a research project are published by the Client the latter has a responsibility to ensure these are not misleading. The Researcher must be consulted and agree in advance the form and content for publication. Where this does not happen the Researcher is entitled to:

- (a) refuse permission for his/her name to be used in connection with the published findings.
- (b) publish the appropriate technical details of the project
- (c) correct any misleading aspects of the published presentation of the findings.

**Article 32** Researchers must not allow their names to be used in connection with any research project, as an assurance that the latter has been carried out in conformity with this Code, unless they are confident that the project has in all respects met the Code's requirements.

**Article 33** Researchers must ensure that Clients are fully aware of the existence of this Code and of the need to comply with its requirements.

**E. Implementation of the Code**

**Article 34** Any person or organisations involved in, or associated with, a Marketing Research project and/or proposal is responsible for actively applying the Rules and this Code in the spirit as well as the letter.

Breaches of the Code may result in membership being withdrawn by the National Council.



## **Appendix 2.5**

### **Confidentiality Agreement**

## CONFIDENTIALITY AGREEMENT

**THIS AGREEMENT** is made the \_\_\_\_ Day of \_\_\_\_\_ 1999.

**BETWEEN** NAME OF RESPONDENT ORGANISATION, a duly registered company, of  
Address, New Zealand ("the Company")

**AND** **MASSEY UNIVERSITY**, a body corporate established under the Massey University Act 1963 and the Education Amendment Act 1990, of Palmerston North, New Zealand ("the University")

**WHEREAS** The Company has agreed to supply certain information to the University and the parties wish to record the terms and conditions of supply,

### **IT IS HEREBY AGREED THAT**

The Company will supply the University with details of market research projects carried out by or on behalf of the Company during the years 1989-1998 inclusive ("the Information").

The University may use the Information for the purposes of investigating theories relating to usefulness of different types of marketing research, measurement of the outcome of marketing research, and related issues, and for the preparation and production of reports and publications related thereto.

The University acknowledges that the Information is confidential and that if released to a third party such action could cause damage to the business of the Company.

The University agrees to indemnify the Company for any damage the Company may suffer as a result of the release of the Information to a third Party without the prior written consent of the Company, provided that such indemnity shall be limited to a maximum amount of NZ\$50,000. Notwithstanding the foregoing, the University shall not be liable for any loss of profit, loss of business or consequential loss of the Company, howsoever caused.

The University warrants that the Information will be retained in secure storage which can be accessed only by the researchers working on the study. The names and signatures, respectively, of those whom it is expected will be sub-recipients of the Information which is to be provided to the University, and who individually and collectively agree to keep to the terms and conditions of this Agreement are included at the foot hereof.

The University agrees that the Information will be used for purpose of statistical analysis only, and that there will be no disclosure of any Information in a form that identifies the Company.

The University may not assign or otherwise transfer its duties or obligations under this Agreement without the prior written consent of the Company.

The laws of New Zealand shall govern the validity of this Agreement, the construction of its terms, and the interpretation and enforcement of the rights and duties of the parties hereto.

This Agreement constitutes the entire agreement and understanding of the parties hereto with respect to the subject matter hereof and supersedes all prior and contemporaneous agreements or understandings, inducements or conditions, expressed or implied, written or oral between the Parties to be bound thereby.

This Agreement shall continue to be in force and effect for a period of five (5) years from the date hereof, unless the Parties previously agree in writing that the obligations of Parties under this Agreement should cease or be extended for a further period. The agreement of the Party being requested to so extent this Agreement shall not be unreasonably withheld.

**SIGNED** for and on behalf of  
NAME OF RESPONDENT ORGANISATION by  
(Name) \_\_\_\_\_  
(Designation) \_\_\_\_\_ (Date) \_\_\_\_\_

**SIGNED** for and on behalf of  
**MASSEY UNIVERSITY** by  
Dr C M Kirk, \_\_\_\_\_  
Director, Research Policy & Strategy (Date) \_\_\_\_\_

**ACKNOWLEDGMENT-**

We, the undersigned, having read this Agreement, agree individually and collectively to act in accordance with all terms and conditions herein and further agree to ensure that any other Massey personnel who may become sub-recipients of the Information are informed of their obligations under such terms and conditions and that they acknowledge the terms and conditions of this Agreement in writing accordingly.

Associate Professor Tony Lewis  
(Date) \_\_\_\_\_

Mr Don Esslemont  
(Date) \_\_\_\_\_

Mr Ganeshasundaram Raguragavan  
(Date) \_\_\_\_\_

**Appendix 2.6**

**Variables Measuring Market Research Use in Organisations**

Variable title	Questionnaire statements from which variable derived
<i>Post-Decision Research</i>	We sometimes do market research even when the decision has already been made
<i>Relationship Maintenance</i>	Business to business research is often done as much to maintain relationships as to gather marketing information
<i>Expectation Confirmation</i>	Managers seem to use market research to confirm their expectations
<i>Non-consideration</i>	Often, market research results are not considered when making decisions for which they were initially requested
<i>Intuition &amp; Instinctive Input</i>	Instinct and intuition are often combined with market research when making decisions
<i>Prior Intuitive Decision Justification</i>	Market research results are often interpreted in such a way as to justify decisions really made on the basis of instinct
<i>Slant Research Results</i>	Managers often slant market research results when passing them on
<i>Cost Justification</i>	Market research is sometimes only taken into account to justify the cost of having acquired it
<i>Backup Hunches</i>	Market research is mainly used to backup hunches
<i>Use of GUESSES</i>	If market research information is difficult to obtain, guesses are often made instead
<i>Prior 'Other Grounds' Decision Justification</i>	Market research is frequently used to support decisions made on other grounds
<i>Customer Knowledge Process</i>	We regularly examine the factors that influence the buying decisions of our customers
<i>Source of Customer</i>	We rarely use formal research procedures to gather customer information
<i>Customer Satisfaction</i>	We systematically measure customer satisfaction
<i>Poor Integration of Information</i>	Customer information is poorly integrated in our marketing planning activities
<i>Idea Generation</i>	Market research is usually used to generate new ideas
<i>Competitor Knowledge Process</i>	We systematically process and analyse information about competitors
<i>Top Management Emphasis</i>	Top management frequently emphasises that our survival depends on adapting to market trends
<i>Top Management Support</i>	Top management is willing to allocate resources for market research
<i>Top Management Control</i>	Top management decides what market research is to be done
<i>Response Implementation</i>	Our company strategies are firmly based on market research
<i>Concept Testing</i>	Market research is usually used to screen new ideas and test concepts
<i>Research for Specific Decision</i>	We carry out market research when there is a specific decision to be made
<i>Utilisation for Specific Decision</i>	Our main use of market research is to make a specific decision
<i>Research for Best Decision</i>	We believe that we have a better chance of making the right decision, if we base it on market research rather than intuition
<i>Decision Confidence</i>	Our confidence in making marketing decisions is increased as a result of our market research
<i>Research Effects</i>	Without market research many of our decisions would have been very different
<i>Actionability</i>	The results of our market research are translated into significant practical action
<i>Retention for Future Use</i>	We make sure that market research results are kept so that they are available to the organisation in the future
<i>Research Non-Use</i>	A lot of our market research is not really used
<i>Decision Non-Relevance</i>	Much of our market research is not relevant to decisions
<i>Uncertainty Reduction</i>	Uncertainty associated with marketing activity is greatly reduced by market research
<i>Gaining Market Understanding</i>	We often use market research to gain understanding rather than to make decisions
<i>Formality</i>	We often conduct market research as a matter of formality
<i>Build Knowledge Base</i>	We often do market research simply to update the company knowledge base
<i>Future Usefulness</i>	Market research conducted for a specific decision is seldom of further use
<i>Research Importance</i>	No marketing decision would be made without formal market research

**Appendix 2.7**

**Variables Measuring Business Performance**

Variable Title	Questionnaire statement from which variable derived
<i>Market Research Expenditure</i>	Market research expenditure
<i>Overall Performance</i>	Overall performance
<i>Sales Growth</i>	Sales growth
<i>ROA</i>	Return on total assets
<i>ROS</i>	Return on total sales
<i>Number of Employees</i>	Number of Employees



**Appendix 2.8**

**Variables Measuring Market Research Usefulness**

Variable Title	Questionnaire statement from which variable derived
<i>Overall Usefulness</i>	Overall the project was very useful
<i>Provided Good Market Understanding</i>	The project gave us a good understanding of our market
<i>Indicated Clear Action</i>	After the research it was quite clear what action should be taken
<i>Value for Money</i>	The project was well worth the money spent
<i>Involvement</i>	I personally was involved in the project

## **Appendix 2.9**

### **Sample Copy of the Questionnaire and Cover Letter**

**23 March 2000**

**Name**

**Address**

**Dear Mr / Ms**

The information you and my other informants have given me has been invaluable; I now have a clear picture of the pattern of market research activity in many kinds of New Zealand organisations.

I am now starting the last stage of my PhD research. For this I need to try to assess just how useful the different kinds of research project have been, to different kinds of organisations. For this I would like to ask for your help again - I hope for the last time. I enclose a short questionnaire, and I would be really grateful if you could complete it for me.

The first part asks for information about how your organisation regards and uses research. It is your personal opinion that I need, not an official view. In the second part, I have asked for your opinions about a number of specific research projects.

I hate bothering you again, but this is a really vital part of my project. Please call or email me if you would like to ask any questions. When the analysis is complete - which I hope will be in about three months - I shall send you a summary of the results.

Thank you again for your help.

Yours sincerely,

Ganesh Ragu

**Questionnaire**

**Massey University**  
**DEPARTMENT OF MARKETING**

**Market Research and Organisational Performance**  
**March 2000**

I would like you to think about the way that your organisation uses market research. Thinking about the market research activity of your organisation in the last few years how strongly would you agree or disagree with the following statements.

		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
D1	We sometimes do market research even when the decision has already been made	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D2	Business to business research is often done as much to maintain relationships as to gather marketing information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D3	Managers seem to use market research to confirm their expectations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D4	Often, market research results are not considered when making decisions for which they were initially requested	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D5	Instinct and intuition are often combined with market research when making decisions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D6	Market research results are often interpreted in such a way as to justify decisions really made on the basis of instinct	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D7	Managers often slant market research results when passing them on	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D8	Market research is sometimes only taken into account to justify the cost of having acquired it	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D9	Market research is mainly used to back up hunches	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D10	If market research information is difficult to obtain, guesses are often made instead	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D11	Market research is frequently used to support decisions made on other grounds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D12	We regularly examine the factors that influence the buying decisions of our customers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D13	We rarely use formal research procedures to gather customer information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D14	We systematically measure customer satisfaction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D15	Customer information is poorly integrated in our marketing planning activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D16	Market research is usually used to generate new ideas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D17	We systematically process and analyse information about competitors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D18	Top management frequently emphasises that our survival depends on adapting to market trends	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D19	Top management is willing to allocate resources for market research	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D20	Top management decides what market research is to be done	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D21	Our company strategies are firmly based on market research	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D22	Market research is usually used to screen new ideas and test concepts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
M1	We carry out market research when there is a specific decision to be made	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
M2	Our main use of market research is to make a specific decision	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
M3	We believe that we have a better chance of making the right decision, if we base it on market research rather than intuition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
M4	Our confidence in making marketing decisions is increased as a result of our market research	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
M5	Without market research many of our decisions would have been very different	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
M6	The results of our market research are translated into significant practical action	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
M7	We make sure that market research results are kept so that they are available to the organisation in the future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
M8	A lot of our market research is not really used	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
M9	Much of our market research is not relevant to decisions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
M10	Uncertainty associated with marketing activity is greatly reduced by market research	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
M11	We often use market research to gain understanding rather than to make decisions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
M12	We often conduct market research as a matter of formality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
M13	We often do market research simply to update the company knowledge base	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
M14	Market research conducted for a specific decision is seldom of further use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
M15	No marketing decision would be made without formal market research	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

In comparison to competitive organisations how would you rate your own organisation on the following dimensions.

		Much Higher	Higher	About the Same	Lower	Much Lower
O1	Market research expenditure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
O2	Overall performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
O3	Sales growth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
O4	Return on total assets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
O5	Return on total sales	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
O6	Number of employees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



**Part II**

Now I would like you to think about some specific projects that your organisation has commissioned recently. For each of the following projects please indicate how you would rate the project.

For the project identified as -----  
-----

		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
P1	Overall the project was very useful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P2	The project gave us a good understanding of our market	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P3	After the research it was quite clear what action should be taken	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P4	The project was well worth the money spent	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P5	I personally was involved in the project	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

For the project identified as -----  
-----

		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
P1	Overall the project was very useful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P2	The project gave us a good understanding of our market	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P3	After the research it was quite clear what action should be taken	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P4	The project was well worth the money spent	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P5	I personally was involved in the project	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Appendix 3.1**

Frequency Tables

	POST-DECISION RESEARCH	RELATIONS HIP MAINTENAN CE	EXPECTATI ON CONFIRMATI ON	RESEARCH NON-UTILIS ATION	INTUITION & INSTINCTIVE INPUT	PRIOR INTUITIVE DECISION JUSTIFICATI ON
	%	%	%	%	%	%
STRONGLY DISAGREE	8.8%	8.8%	2.9%	11.8%		2.9%
DISAGREE	41.2%	44.1%	26.5%	47.1%	5.9%	29.4%
NEUTRAL	5.9%	35.3%	38.2%	2.9%	14.7%	29.4%
AGREE	41.2%	11.8%	29.4%	35.3%	55.9%	32.4%
STRONGLY AGREE	2.9%		2.9%	2.9%	23.5%	5.9%

	SLANT RESEARCH RESULTS	COST JUSTIFICATI ON	BACKUP HUNCHES	USE OF GUESSES	PRIOR 'OTHER GROUNDS' DECISION JUSTIFICATI ON	CUSTOMER KNOWLEDG E PROCESS	SOURCE OF CUSTOMER INFORMATI ON
	%	%	%	%	%	%	%
STRONGLY DISAGREE	5.9%	20.6%		5.9%	2.9%	2.9%	
DISAGREE	38.2%	55.9%	58.8%	23.5%	32.4%	17.6%	23.5%
NEUTRAL	11.8%	5.9%	17.6%	23.5%	26.5%	14.7%	5.9%
AGREE	41.2%	17.6%	23.5%	38.2%	38.2%	52.9%	29.4%
STRONGLY AGREE	2.9%			8.8%		11.8%	41.2%

	CUSTOMER SATISFACTI ON MEASUREM ENT	NON-RESPO NSIVENESS TO INFORMATI ON	IDEA GENERATIO N	COMPETITO R KNOWLEDG E PROCESS	TOP MANAGEME NT EMPHASIS	TOP MANAGEME NT SUPPORT	TOP MANAGEME NT CONTROL
	%	%	%	%	%	%	%
STRONGLY DISAGREE	2.9%	8.8%					8.8%
DISAGREE	23.5%	61.8%	52.9%	38.2%	11.8%	2.9%	41.2%
NEUTRAL	14.7%	8.8%	32.4%	14.7%	14.7%	14.7%	17.6%
AGREE	26.5%	20.6%	14.7%	38.2%	50.0%	58.8%	32.4%
STRONGLY AGREE	32.4%			8.8%	23.5%	23.5%	

	RESPONSE IMPLEMENT ATION	CONCEPT TESTING
	%	%
STRONGLY DISAGREE	2.9%	2.9%
DISAGREE	23.5%	14.7%
NEUTRAL	32.4%	20.6%
AGREE	29.4%	47.1%
STRONGLY AGREE	11.8%	14.7%

	RESEARCH FOR SPECIFIC DECISION	UTILISATION FOR SPECIFIC DECISION	RESEARCH FOR BEST DECISION	DECISION CONFIDENC E	USEFULNES S	ACTIONABILI TY
	%	%	%	%	%	%
STRONGLY DISAGREE					2.9%	
DISAGREE	14.7%	32.4%	2.9%		8.8%	14.7%
NEUTRAL	26.5%	41.2%	20.6%	8.8%	29.4%	26.5%
AGREE	55.9%	23.5%	61.8%	79.4%	41.2%	50.0%
STRONGLY AGREE	2.9%	2.9%	14.7%	11.8%	17.6%	8.8%

	RETENTION FOR FUTURE USE	RESEARCH USE	DECISION NON-RELEV ANCE	UNCERTAIN TY REDUCTION	GAINING MARKET UNDERSTA NDING	FORMALITY	BUILD DATABASE
	%	%	%	%	%	%	%
STRONGLY DISAGREE		8.8%	14.7%			11.8%	11.8%
DISAGREE	14.7%	47.1%	58.8%	14.7%	23.5%	50.0%	41.2%
NEUTRAL		17.6%	14.7%	23.5%	14.7%	23.5%	23.5%
AGREE	44.1%	23.5%	8.8%	52.9%	52.9%	14.7%	23.5%
STRONGLY AGREE	41.2%	2.9%	2.9%	8.8%	8.8%		

	FUTURE USEFULNES S	RESEARCH IMPORTANC E
	%	%
STRONGLY DISAGREE	17.6%	
DISAGREE	41.2%	23.5%
NEUTRAL	29.4%	5.9%
AGREE	8.8%	29.4%
STRONGLY AGREE	2.9%	41.2%

## **Appendix 3.2**

Proximities

Case Processing Summary<sup>a,b</sup>

Cases					
Valid		Missing		Total	
N	Percent	N	Percent	N	Percent
34	91.9	3	8.1	37	100.0

- a. Squared Euclidean Distance used
- b. Ward Linkage

Cluster

Ward Linkage

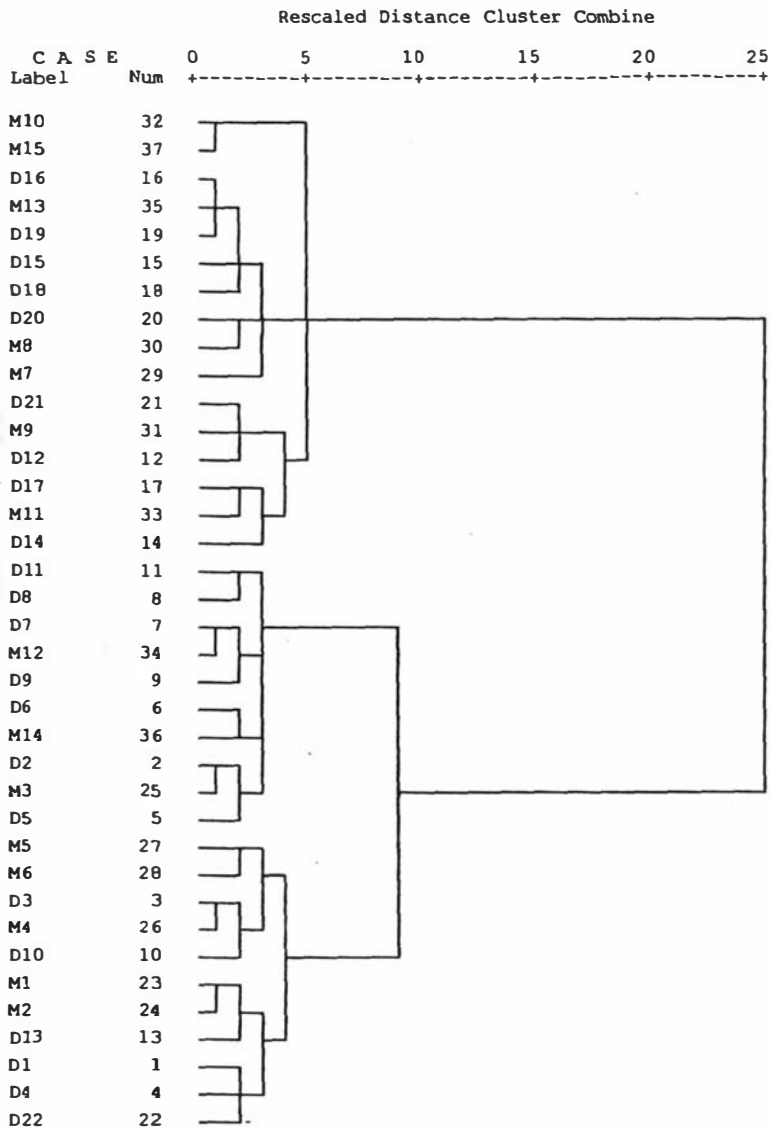
Agglomeration Schedule

Stage	Cluster Combined		Coefficients	Stage Cluster First Appears		Next Stage
	Cluster 1	Cluster 2		Cluster 1	Cluster 2	
1	13	37	.000	0	0	33
2	25	26	6.500	0	0	5
3	31	34	18.000	0	0	18
4	3	9	29.500	0	0	20
5	19	25	41.667	0	2	11
6	23	24	55.167	0	0	16
7	21	28	71.167	0	0	9
8	2	16	88.167	0	0	12
9	12	21	106.167	0	7	31
10	30	36	124.667	0	0	19
11	5	19	143.250	0	5	14
12	2	15	162.917	8	0	19
13	6	7	182.917	0	0	26
14	5	18	203.667	11	0	25
15	22	27	224.667	0	0	25
16	23	32	246.500	6	0	30
17	1	11	269.500	0	0	22
18	31	35	293.333	3	0	24
19	2	30	321.367	12	10	24
20	3	10	349.867	4	0	26
21	17	33	378.867	0	0	29
22	1	20	407.867	17	0	30
23	4	8	437.367	0	0	27
24	2	31	470.333	19	18	27
25	5	22	508.190	14	15	28
26	3	6	546.190	20	13	32
27	2	4	584.690	24	23	35
28	5	29	623.833	25	0	33
29	14	17	664.833	0	21	31
30	1	23	706.333	22	16	32
31	12	14	755.500	9	29	34
32	1	3	812.667	30	26	35
33	5	13	884.267	28	1	34
34	5	12	958.438	33	31	36
35	1	2	1095.509	32	27	36
36	1	5	1491.784	35	34	0

# Dendrogram

\*\*\*\*\* H I E R A R C H I C A L C L U S T E R A N A L Y S I S \*\*\*\*\*

Dendrogram using Ward Method



**Appendix 3.3**



Proximities

Case Processing Summary<sup>a,b</sup>

Cases					
Valid		Missing		Total	
N	Percent	N	Percent	N	Percent
34	94.4	2	5.6	36	100.0

- a. Squared Euclidean Distance used
- b. Ward Linkage

Cluster

Ward Linkage

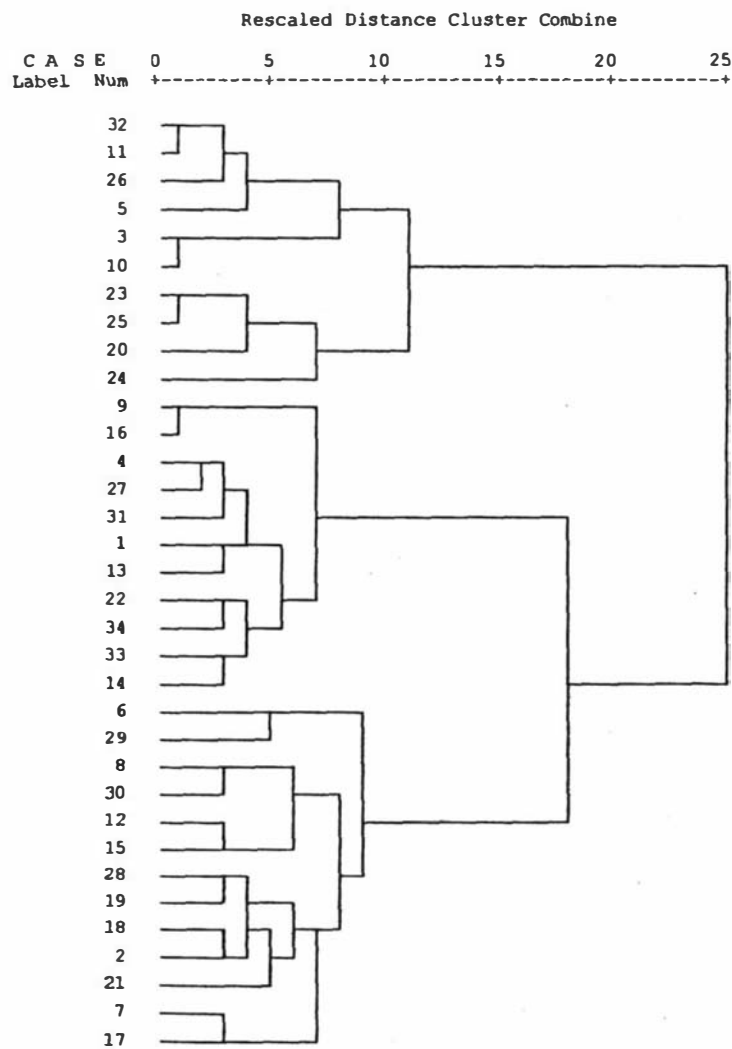
Agglomeration Schedule

Stage	Cluster Combined		Coefficients	Stage Cluster First Appears		Next Stage
	Cluster 1	Cluster 2		Cluster 1	Cluster 2	
1	19	28	.000	0	0	11
2	23	25	.000	0	0	19
3	9	16	.000	0	0	26
4	3	10	.000	0	0	28
5	4	27	11.000	0	0	6
6	4	31	25.333	5	0	15
7	7	32	40.333	0	0	14
8	1	30	55.833	0	0	24
9	12	15	71.833	0	0	12
10	5	13	87.833	0	0	22
11	19	26	105.833	1	0	16
12	12	14	123.833	9	0	22
13	22	34	142.833	0	0	18
14	7	11	162.500	7	0	17
15	2	4	185.167	0	6	20
16	8	19	208.667	0	11	28
17	7	18	232.500	14	0	23
18	22	33	258.833	13	0	24
19	20	23	285.500	0	2	25
20	2	21	314.300	15	0	23
21	6	29	346.300	0	0	30
22	5	12	382.300	10	12	29
23	2	7	418.333	20	17	27
24	1	22	461.100	8	18	26
25	20	24	503.933	19	0	31
26	1	9	549.762	24	3	32
27	2	17	596.129	23	0	29
28	3	8	644.962	4	16	31
29	2	5	693.929	27	22	30
30	2	6	753.615	29	21	32
31	3	20	820.581	28	25	33
32	1	2	948.592	26	30	33
33	1	3	1101.618	32	31	0

# Dendrogram

\*\*\*\*\* HIERARCHICAL CLUSTER ANALYSIS \*\*\*\*\*

Dendrogram using Ward Method



**Appendix 3.4**

**Comparison of Results Subjective and Objective Classification Procedures**

# Q-Type Factor Analysis

## Communalities

	Extraction
C1	.204
C2	.386
C3	.819
C4	.495
C5	.734
C6	.238
C7	.653
C8	.671
C9	.785
C10	.819
C11	.498
C12	.395
C13	.429
C14	.400
C15	.417
C16	.785
C17	.490
C18	.515
C19	.820
C20	.796
C21	.414
C22	.499
C23	.635
C24	.423
C25	.635
C26	.661
C27	.404
C28	.820
C29	.261
C30	.174
C31	.363
C32	.491
C33	.203
C34	.658

Extraction Method: Principal Component Analysis.

# Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	11.260	33.119	33.119	11.260	33.119	33.119	10.334	30.393	30.393
2	7.917	23.286	56.405	7.917	23.286	56.405	8.712	25.623	56.016
3	2.518	7.407	63.812	2.518	7.407	63.812	2.651	7.796	63.812
4	2.157	6.343	70.155						
5	1.628	4.788	74.943						
6	1.320	3.882	78.825						
7	1.248	3.670	82.495						
8	1.059	3.115	85.610						
9	.850	2.499	88.109						
10	.764	2.248	90.357						
11	.615	1.807	92.164						
12	.563	1.656	93.820						
13	.454	1.336	95.156						
14	.346	1.017	96.173						
15	.306	.900	97.073						
16	.234	.688	97.762						
17	.205	.602	98.364						
18	.167	.491	98.855						
19	.133	.392	99.247						
20	.114	.337	99.583						
21	8.264E-02	.243	99.827						
22	3.241E-02	9.533E-02	99.922						
23	2.657E-02	7.814E-02	100.000						
24	1.697E-15	4.992E-15	100.000						
25	3.343E-16	9.833E-16	100.000						
26	2.639E-16	7.763E-16	100.000						
27	1.155E-16	3.397E-16	100.000						
28	1.107E-16	3.256E-16	100.000						
29	1.074E-16	3.159E-16	100.000						
30	6.670E-17	1.962E-16	100.000						
31	2.471E-17	7.268E-17	100.000						
32	1.400E-17	4.118E-17	100.000						
33	-1.307E-16	-3.844E-16	100.000						
34	-4.710E-15	-1.385E-14	100.000						

Extraction Method: Principal Component Analysis.

Component Matrix<sup>a</sup>

	Component		
	1	2	3
C20	.891		
C10	.839		-.332
C3	.839		-.332
C5	.822		
C25	.789		
C23	.789		
C26	.773		
C8	.730	-.312	
C28	.708	-.325	-.462
C19	.708	-.325	-.462
C7	.702		-.397
C4	.692		
C32	.685		
C11	.651		
C13	.623		
C24	.615		
C17	.604		
C15	.599		
C31	.582		
C27	.573		
C21	.571		
C18	.550	.367	
C14	.543	.322	
C12	.486	.334	
C2	.481		.375
C6	.355		.318
C30			
C16		.833	
C9		.833	
C22	.386	.571	
C33		.421	
C1		.301	
C34		.495	.592
C29			.424

Extraction Method: Principal Component Analysis.

a. 3 components extracted.

Rotated Component Matrix<sup>a</sup>

	Component		
	1	2	3
C23	.896		
C11	.896		
C10	.830		
C3	.830		
C5	.790		
C8	.757		
C26	.724	.369	
C20	.723	.479	
C32	.581	.390	
C21	.550		
C25	.495	.491	
C24	.418	.302	.388
C7	.488	.667	
C19	.365	.598	
C30		.595	
C17	.375	.584	
C31		.571	
C2		.567	.515
C6	.312	.551	
C28	.541	.544	
C4	.441	.534	
C12	.384	.523	
C29		.483	
C15	.356	.452	.303
C27		.430	.871
C22		-.375	.871
C1		-.370	.644
C16			.510
C9			.450
C34			.450
C18	.403		.438
C14	.325	.303	.395
C13		.317	.390
C33			.365

Extraction Method: Principal Component Analysis.  
Rotation Method: Varimax with Kaiser Normalization.  
a. Rotation converged in 5 iterations.

Component Transformation Matrix

Component	1	2	3
1	.774	.577	.259
2	-.237	-.115	.965
3	-.587	.808	-.047

Extraction Method: Principal Component Analysis.  
Rotation Method: Varimax with Kaiser Normalization.

## **Appendix 3.5**



Type of Companies	Classification of Companies by		
	Cluster Solution	Proportion of Decision Research	Q-Type Factor Solution
HIGH	C 32	C 3	C 23
	C 11	C 5	C 11
	C 26	C 10	C 10
	C 5	C 11	C 3
	C 3	C 15	C 5
	C 10	C 20	C 8
	C 23	C 21	C 26
	C 25	C 23	C 20
	C 20	C 24	C 32
	C 24	C 25	C 21
		C 32	C 25
		C 34	
MODERATE	C 6	C 2	C 7
	C 29	C 4	C 19
	C 8	C 6	C 30
	C 30	C 7	C 17
	C 12	C 8	C 31
	C 15	C 12	C 2
	C 28	C 17	C 6
	C 19	C 18	C 28
	C 18	C 26	C 4
	C 2	C 30	C 12
	C 21	C 31	C 29
	C 7		C 15
	C 17		
LOW	C 9	C 1	C 27
	C 16	C 9	C 22
	C 4	C 13	C 1
	C 27	C 14	C 16
	C 31	C 16	C 9
	C 1	C 19	C 34
	C 13	C 22	C 18
	C 22	C 27	C 14
	C 34	C 28	C 13
	C 33	C 29	C 33
	C 14	C 33	

**Appendix 4.1**

Means

LEVEL OF INVOLVEMENT		OVERALL USEFULNESS	PROVIDED GOOD MARKET UNDERSTANDING	INDICATED CLEAR ACTION	VALUE FOR MONEY
HIGH	Mean	4.16	3.93	4.07	4.03
	N	300	300	300	300
	Std. Deviation	.72	.85	.88	.86
MODERATE	Mean	3.57	3.75	3.30	3.35
	N	69	69	69	69
	Std. Deviation	.70	.65	.88	.76
LOW	Mean	3.61	3.56	3.46	3.37
	N	406	406	406	406
	Std. Deviation	.74	.87	.88	.82
Total	Mean	3.82	3.72	3.68	3.63
	N	775	775	775	775
	Std. Deviation	.78	.86	.93	.89

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
OVERALL USEFULNESS	Between Groups	58.448	2	29.224	55.175	.000
	Within Groups	408.899	772	.530		
	Total	467.347	774			
PROVIDED GOOD MARKET UNDERSTANDING	Between Groups	23.497	2	11.748	16.541	.000
	Within Groups	548.302	772	.710		
	Total	571.799	774			
INDICATED CLEAR ACTION	Between Groups	74.576	2	37.288	48.133	.000
	Within Groups	598.064	772	.775		
	Total	672.640	774			
VALUE FOR MONEY	Between Groups	80.819	2	40.409	58.594	.000
	Within Groups	532.412	772	.690		
	Total	613.231	774			

Means

PROJECT TYPE		OVERALL USEFULNESS	PROVIDED GOOD MARKET UNDERSTANDING	INDICATED CLEAR ACTION	VALUE FOR MONEY
DECISION RESEARCH	Mean	4.07	3.23	4.11	3.93
	N	192	192	192	192
	Std. Deviation	.54	.82	.60	.54
BACKGROUND RESEARCH	Mean	3.28	3.83	2.98	2.99
	N	283	283	283	283
	Std. Deviation	.67	.77	.74	.74
Total	Mean	3.80	3.59	3.44	3.37
	N	475	475	475	475
	Std. Deviation	.73	.84	.88	.81

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
OVERALL USEFULNESS	Between Groups	70.495	1	70.495	181.707	.000
	Within Groups	183.505	473	.388		
	Total	254.000	474			
PROVIDED GOOD MARKET UNDERSTANDING	Between Groups	40.636	1	40.636	64.866	.000
	Within Groups	296.312	473	.626		
	Total	336.947	474			
INDICATED CLEAR ACTION	Between Groups	146.216	1	146.216	310.725	.000
	Within Groups	222.576	473	.471		
	Total	368.792	474			
VALUE FOR MONEY	Between Groups	99.822	1	99.822	225.952	.000
	Within Groups	208.965	473	.442		
	Total	308.787	474			

Crosstab

			PROJECT TYPE		Total
			DECISION RESEARCH	BACKGROUND RESEARCH	
INVOLVEMENT	STRONGLY DISAGREE	Count	135	205	340
		% within INVOLVEMENT	39.7%	60.3%	100.0%
		% within PROJECT TYPE	39.5%	47.3%	43.9%
		% of Total	17.4%	26.5%	43.9%
	DISAGREE	Count	42	34	76
		% within INVOLVEMENT	55.3%	44.7%	100.0%
		% within PROJECT TYPE	12.3%	7.9%	9.8%
		% of Total	5.4%	4.4%	9.8%
	NEUTRAL	Count	35	51	86
		% within INVOLVEMENT	40.7%	59.3%	100.0%
		% within PROJECT TYPE	10.2%	11.8%	11.1%
		% of Total	4.5%	6.6%	11.1%
	AGREE	Count	77	88	165
		% within INVOLVEMENT	46.7%	53.3%	100.0%
		% within PROJECT TYPE	22.5%	20.3%	21.3%
		% of Total	9.9%	11.4%	21.3%
	STRONGLY AGREE	Count	53	55	108
		% within INVOLVEMENT	49.1%	50.9%	100.0%
		% within PROJECT TYPE	15.5%	12.7%	13.9%
		% of Total	6.8%	7.1%	13.9%
Total		Count	342	433	775
		% within INVOLVEMENT	44.1%	55.9%	100.0%
		% within PROJECT TYPE	100.0%	100.0%	100.0%
		% of Total	44.1%	55.9%	100.0%

Chi-Square Test

Test Statistics

	INVOLVEMENT
Chi-Square <sup>a,b</sup>	306.684
df	4
Asymp. Sig.	.077

- a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 193.8.
- b. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 155.0.

Mean

PROJECT TYPE		INVOLVEMENT
DECISION RESEARCH	Mean	2.60
	N	316
	Std. Deviation	1.60
BACKGROUND RESEARCH	Mean	2.39
	N	416
	Std. Deviation	1.55
Total	Mean	2.48
	N	732
	Std. Deviation	1.57

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
INVOLVEMENT	Between Groups	8.117	1	8.117	3.294	.070
	Within Groups	1798.686	730	2.464		
	Total	1806.803	731			

**Appendix 4.2**

Crosstab

			PROJECT TYPE		Total
			DECISION RESEARCH	BACKGROUND RESEARCH	
OVERALL USEFULNESS	DISAGREE	Count	2	32	34
		% within OVERALL USEFULNESS	5.9%	94.1%	100.0%
		% within PROJECT TYPE	.6%	7.4%	4.4%
		% of Total	.3%	4.1%	4.4%
	NEUTRAL	Count	23	192	215
		% within OVERALL USEFULNESS	10.7%	89.3%	100.0%
		% within PROJECT TYPE	6.7%	44.3%	27.7%
		% of Total	3.0%	24.8%	27.7%
	AGREE	Count	212	172	384
		% within OVERALL USEFULNESS	55.2%	44.8%	100.0%
		% within PROJECT TYPE	62.0%	39.7%	49.5%
		% of Total	27.4%	22.2%	49.5%
	STRONGLY AGREE	Count	105	37	142
		% within OVERALL USEFULNESS	73.9%	26.1%	100.0%
		% within PROJECT TYPE	30.7%	8.5%	18.3%
		% of Total	13.5%	4.8%	18.3%
Total	Count	342	433	775	
	% within OVERALL USEFULNESS	44.1%	55.9%	100.0%	
	% within PROJECT TYPE	100.0%	100.0%	100.0%	
	% of Total	44.1%	55.9%	100.0%	

Crosstab

			PROJECT TYPE		Total
			DECISION RESEARCH	BACKGROUND RESEARCH	
PROVIDED GOOD MARKET UNDERSTANDING	STRONGLY DISAGREE	Count	2	1	3
		% within PROVIDED GOOD MARKET UNDERSTANDING	66.7%	33.3%	100.0%
		% within PROJECT TYPE	.6%	.2%	.4%
		% of Total	.3%	.1%	.4%
	DISAGREE	Count	48	21	69
		% within PROVIDED GOOD MARKET UNDERSTANDING	69.6%	30.4%	100.0%
		% within PROJECT TYPE	14.0%	4.8%	8.9%
		% of Total	6.2%	2.7%	8.9%
	NEUTRAL	Count	119	80	199
		% within PROVIDED GOOD MARKET UNDERSTANDING	59.8%	40.2%	100.0%
		% within PROJECT TYPE	34.8%	18.5%	25.7%
		% of Total	15.4%	10.3%	25.7%
	AGREE	Count	152	222	374
		% within PROVIDED GOOD MARKET UNDERSTANDING	40.6%	59.4%	100.0%
		% within PROJECT TYPE	44.4%	51.3%	48.3%
		% of Total	19.6%	28.6%	48.3%
	STRONGLY AGREE	Count	21	109	130
		% within PROVIDED GOOD MARKET UNDERSTANDING	16.2%	83.8%	100.0%
		% within PROJECT TYPE	6.1%	25.2%	16.8%
		% of Total	2.7%	14.1%	16.8%
Total	Count	342	433	775	
	% within PROVIDED GOOD MARKET UNDERSTANDING	44.1%	55.9%	100.0%	
	% within PROJECT TYPE	100.0%	100.0%	100.0%	
	% of Total	44.1%	55.9%	100.0%	

Crosstab

			PROJECT TYPE		Total
			DECISION RESEARCH	BACKGROUND RESEARCH	
INDICATED CLEAR ACTION	STRONGLY DISAGREE	Count		2	2
		% within INDICATED CLEAR ACTION		100.0%	100.0%
		% within PROJECT TYPE		.5%	.3%
		% of Total		.3%	.3%
	DISAGREE	Count		87	87
		% within INDICATED CLEAR ACTION		100.0%	100.0%
		% within PROJECT TYPE		20.1%	11.2%
		% of Total		11.2%	11.2%
	NEUTRAL	Count	31	196	227
		% within INDICATED CLEAR ACTION	13.7%	86.3%	100.0%
		% within PROJECT TYPE	9.1%	45.3%	29.3%
		% of Total	4.0%	25.3%	29.3%
	AGREE	Count	186	114	300
		% within INDICATED CLEAR ACTION	62.0%	38.0%	100.0%
		% within PROJECT TYPE	54.4%	26.3%	38.7%
		% of Total	24.0%	14.7%	38.7%
	STRONGLY AGREE	Count	125	34	159
		% within INDICATED CLEAR ACTION	78.6%	21.4%	100.0%
		% within PROJECT TYPE	36.5%	7.9%	20.5%
		% of Total	16.1%	4.4%	20.5%
Total	Count	342	433	775	
	% within INDICATED CLEAR ACTION	44.1%	55.9%	100.0%	
	% within PROJECT TYPE	100.0%	100.0%	100.0%	
	% of Total	44.1%	55.9%	100.0%	

Crosstab

			PROJECT TYPE		Total
			DECISION RESEARCH	BACKGROUND RESEARCH	
VALUE FOR MONEY	STRONGLY DISAGREE	Count		7	7
		% within VALUE FOR MONEY		100.0%	100.0%
		% within PROJECT TYPE		1.6%	.9%
		% of Total		.9%	.9%
	DISAGREE	Count		76	76
		% within VALUE FOR MONEY		100.0%	100.0%
		% within PROJECT TYPE		17.6%	9.8%
		% of Total		9.8%	9.8%
	NEUTRAL	Count	38	197	235
		% within VALUE FOR MONEY	16.2%	83.8%	100.0%
		% within PROJECT TYPE	11.1%	45.5%	30.3%
		% of Total	4.9%	25.4%	30.3%
	AGREE	Count	222	116	338
		% within VALUE FOR MONEY	65.7%	34.3%	100.0%
		% within PROJECT TYPE	64.9%	26.8%	43.6%
		% of Total	28.6%	15.0%	43.6%
	STRONGLY AGREE	Count	82	37	119
		% within VALUE FOR MONEY	68.9%	31.1%	100.0%
		% within PROJECT TYPE	24.0%	8.5%	15.4%
		% of Total	10.6%	4.8%	15.4%
Total	Count	342	433	775	
	% within VALUE FOR MONEY	44.1%	55.9%	100.0%	
	% within PROJECT TYPE	100.0%	100.0%	100.0%	
	% of Total	44.1%	55.9%	100.0%	

Chi-Square Test

### Test Statistics

	OVERALL USEFULNESS	PROVIDED GOOD MARKET UNDERSTANDING	INDICATED CLEAR ACTION	VALUE FOR MONEY
Chi-Square <sup>a,b</sup>	334.683	522.723	350.052	447.290
df	3	4	4	4
Asymp. Sig.	.000	.000	.000	.000

- a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 193.8.  
b. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 155.0.

### Mean

PROJECT TYPE		OVERALL USEFULNESS	PROVIDED GOOD MARKET UNDERSTANDING	INDICATED CLEAR ACTION	VALUE FOR MONEY
DECISION RESEARCH	Mean	4.21	3.40	4.25	4.12
	N	316	316	316	316
	Std. Deviation	.59	.83	.62	.58
BACKGROUND RESEARCH	Mean	3.47	3.94	3.19	3.19
	N	416	416	416	416
	Std. Deviation	.75	.81	.87	.87
Total	Mean	3.79	3.70	3.65	3.59
	N	732	732	732	732
	Std. Deviation	.78	.86	.93	.89

### ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
OVERALL USEFULNESS	Between Groups	97.732	1	97.732	208.689	.000
	Within Groups	341.869	730	.468		
	Total	439.601	731			
PROVIDED GOOD MARKET UNDERSTANDING	Between Groups	52.128	1	52.128	77.957	.000
	Within Groups	488.134	730	.669		
	Total	540.262	731			
INDICATED CLEAR ACTION	Between Groups	203.944	1	203.944	345.329	.000
	Within Groups	431.122	730	.591		
	Total	635.066	731			
VALUE FOR MONEY	Between Groups	152.787	1	152.787	264.365	.000
	Within Groups	421.896	730	.578		
	Total	574.683	731			



**Appendix 4.3**

Multivariate Tests<sup>b</sup>

Effect		Value	F	Hypothesis df	Error df	Sig.	Eta Squared
Intercept	Pillai's Trace	.975	7529.059 <sup>a</sup>	4.000	770.000	.000	.975
	Wilks' Lambda	.025	7529.059 <sup>a</sup>	4.000	770.000	.000	.975
	Hotelling's Trace	39.112	7529.059 <sup>a</sup>	4.000	770.000	.000	.975
	Roy's Largest Root	39.112	7529.059 <sup>a</sup>	4.000	770.000	.000	.975
PROTYPE	Pillai's Trace	.462	165.218 <sup>a</sup>	4.000	770.000	.000	.462
	Wilks' Lambda	.538	165.218 <sup>a</sup>	4.000	770.000	.000	.462
	Hotelling's Trace	.858	165.218 <sup>a</sup>	4.000	770.000	.000	.462
	Roy's Largest Root	.858	165.218 <sup>a</sup>	4.000	770.000	.000	.462

- a. Exact statistic  
b. Design: Intercept+PROTYPE

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Eta Squared
Corrected Model	OVERALL USEFULNESS	102.901 <sup>a</sup>	1	102.901	218.256	.000	.220
	PROVIDED GOOD MARKET UNDERSTANDING	57.349 <sup>b</sup>	1	57.349	86.171	.000	.100
	INDICATED CLEAR ACTION	216.601 <sup>c</sup>	1	216.601	367.145	.000	.322
	VALUE FOR MONEY	153.986 <sup>d</sup>	1	153.986	259.190	.000	.251
Intercept	OVERALL USEFULNESS	11394.762	1	11394.762	24168.597	.000	.969
	PROVIDED GOOD MARKET UNDERSTANDING	10402.061	1	10402.061	15629.892	.000	.953
	INDICATED CLEAR ACTION	10705.272	1	10705.272	18145.761	.000	.959
	VALUE FOR MONEY	10349.537	1	10349.537	17420.334	.000	.958
PROTYPE	OVERALL USEFULNESS	102.901	1	102.901	218.256	.000	.220
	PROVIDED GOOD MARKET UNDERSTANDING	57.349	1	57.349	86.171	.000	.100
	INDICATED CLEAR ACTION	216.601	1	216.601	367.145	.000	.322
	VALUE FOR MONEY	153.986	1	153.986	259.190	.000	.251
Error	OVERALL USEFULNESS	364.446	773	.471			
	PROVIDED GOOD MARKET UNDERSTANDING	514.450	773	.666			
	INDICATED CLEAR ACTION	456.039	773	.590			
	VALUE FOR MONEY	459.244	773	.594			
Total	OVERALL USEFULNESS	11765.000	775				
	PROVIDED GOOD MARKET UNDERSTANDING	11304.000	775				
	INDICATED CLEAR ACTION	11168.000	775				
	VALUE FOR MONEY	10809.000	775				
Corrected Total	OVERALL USEFULNESS	467.347	774				
	PROVIDED GOOD MARKET UNDERSTANDING	571.799	774				
	INDICATED CLEAR ACTION	672.640	774				
	VALUE FOR MONEY	613.231	774				

- a. R Squared = .220 (Adjusted R Squared = .219)  
b. R Squared = .100 (Adjusted R Squared = .099)  
c. R Squared = .322 (Adjusted R Squared = .321)  
d. R Squared = .251 (Adjusted R Squared = .250)

### Correlations

		OVERALL USEFULNESS	PROVIDED GOOD MARKET UNDERSTANDING	INDICATED CLEAR ACTION	VALUE FOR MONEY
OVERALL USEFULNESS	Pearson Correlation	1.000	.169**	.785**	.798**
	Sig. (2-tailed)	.	.000	.000	.000
	N	732	732	732	732
PROVIDED GOOD MARKET UNDERSTANDING	Pearson Correlation	.169**	1.000	.037	.081*
	Sig. (2-tailed)	.000	.	.313	.029
	N	732	732	732	732
INDICATED CLEAR ACTION	Pearson Correlation	.785**	.037	1.000	.781**
	Sig. (2-tailed)	.000	.313	.	.000
	N	732	732	732	732
VALUE FOR MONEY	Pearson Correlation	.798**	.081*	.781**	1.000
	Sig. (2-tailed)	.000	.029	.000	.
	N	732	732	732	732
Pearson Correlation		**	**	**	**

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

### T-Test

#### Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	OVERALL USEFULNESS - PROVIDED GOOD MARKET UNDERSTANDING	8.47E-02	1.06	3.90E-02	8.09E-03	.16	2.171	731	.030
Pair 2	OVERALL USEFULNESS - INDICATED CLEAR ACTION	.14	.58	2.14E-02	.10	.18	6.637	731	.000
Pair 3	OVERALL USEFULNESS - VALUE FOR MONEY	.20	.54	1.99E-02	.16	.24	9.891	731	.000

#### Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	PROVIDED GOOD MARKET UNDERSTANDING - INDICATED CLEAR ACTION	5.74E-02	1.24	4.60E-02	-3.29E-02	.15	1.248	731	.213
Pair 2	PROVIDED GOOD MARKET UNDERSTANDING - VALUE FOR MONEY	.11	1.18	4.38E-02	2.61E-02	.20	2.560	731	.011
Pair 3	INDICATED CLEAR ACTION - VALUE FOR MONEY	5.46E-02	.60	2.23E-02	1.09E-02	1.E-01	2.452	731	.014

## **Appendix 4.4**

Reliability

RELIABILITY ANALYSIS - SCALE (ALPHA)

1.	P1	OVERALL USEFULNESS
2.	P2	PROVIDED GOOD MARKET UNDERSTANDING
3.	P3	INDICATED CLEAR ACTION
4.	P4	VALUE FOR MONEY

		Mean	Std Dev	Cases
1.	P1	3.8181	.7771	775.0
2.	P2	3.7213	.8595	775.0
3.	P3	3.6800	.9322	775.0
4.	P4	3.6271	.8901	775.0

Covariance Matrix				
	P1	P2	P3	P4
P1	.1274			
P2	.0791	.1960		
P3	.1430	.0812	.2157	
P4	.0820	.0331	.1135	.1276

Correlation Matrix				
	P1	P2	P3	P4
P1	1.0000			
P2	.5005	1.0000		
P3	.8625	.3951	1.0000	
P4	.6432	.2091	.6841	1.0000

N of Cases = 775.0						
Item Means	Mean	Minimum	Maximum	Range	Max/Min	Variance
	3.7211	3.5297	3.8579	.3282	1.0930	.0257
Item Variances	Mean	Minimum	Maximum	Range	Max/Min	Variance
	.1667	.1274	.2157	.0883	1.6928	.0021
Inter-item Covariances	Mean	Minimum	Maximum	Range	Max/Min	Variance
	.0886	.0331	.1430	.1099	4.3259	.0012
Inter-item Correlations	Mean	Minimum	Maximum	Range	Max/Min	Variance
	.5491	.2091	.8625	.6535	4.1259	.0486

Reliability Coefficients	4 items
Alpha = .8196	Standardized item alpha = .8297

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.769
Bartlett's Test of Sphericity	Approx. Chi-Square	1838.682
	df	6
	Sig.	.000

# Factor Analysis

## Communalities

	Initial	Extraction
OVERALL USEFULNESS	1.000	.871
PROVIDED GOOD MARKET UNDERSTANDING	1.000	.997
INDICATED CLEAR ACTION	1.000	.858
VALUE FOR MONEY	1.000	.862

Extraction Method: Principal Component Analysis.

## Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.594	64.845	64.845	2.594	64.845	64.845	2.571	64.286	64.286
2	1.012	24.850	89.695	1.012	24.850	89.695	1.046	25.409	89.695
3	.218	5.457	95.152						
4	.194	4.848	100.000						

Extraction Method: Principal Component Analysis.

## Component Matrix<sup>a</sup>

	Component	
	1	2
OVERALL USEFULNESS	.933	2.089E-02
VALUE FOR MONEY	.926	-7.719E-02
INDICATED CLEAR ACTION	.915	-.148
PROVIDED GOOD MARKET UNDERSTANDING	.191	.980

Extraction Method: Principal Component Analysis.

a. 2 components extracted.

## Rotated Component Matrix<sup>a</sup>

	Component	
	1	2
VALUE FOR MONEY	.928	4.852E-02
INDICATED CLEAR ACTION	.925	-2.382E-02
OVERALL USEFULNESS	.921	.147
PROVIDED GOOD MARKET UNDERSTANDING	5.748E-02	.997

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

## Component Transformation Matrix

Component	1	2
1	.993	.118
2	-.118	.993

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Means

	PROJECT TYPE	Mean	Std. Deviation
Factor 1	DECISION RESEARCH	.6478422	.6650501
	BACKGROUND RESEARCH	-.5116906	.9207864
	Total	3.498304E-17	1.0000000
Factor 2	DECISION RESEARCH	-.3978122	.9441969
	BACKGROUND RESEARCH	.3142073	.9293620
	Total	6.955620E-17	1.0000000

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Factor 1	Between Groups	256.908	1	256.908	384.052	.000
	Within Groups	517.092	773	.669		
	Total	774.000	774			
Factor 2	Between Groups	96.872	1	96.872	110.587	.000
	Within Groups	677.128	773	.876		
	Total	774.000	774			

**Appendix 4.5**



Report

NUMBER OF EMPLOYEES

RANK MOSTLY ON	Mean	N	Std. Deviation
HIGH	3.08	12	1.08
LOW	2.45	11	.93
Total	2.78	23	1.04

ANOVA

NUMBER OF EMPLOYEES

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.269	1	2.269	2.202	.153
Within Groups	21.644	21	1.031		
Total	23.913	22			

Report

ORGANISATION SIZE		MARKET RESEARCH EXPENDITURE	OVERALL PERFORMANCE	SALES GROWTH	RETURN ON TOTAL ASSETS	RETURN ON TOTAL SALES
LARGE	Mean	3.20	3.90	3.60	4.10	4.00
	N	10	10	10	10	10
	Std. Deviation	1.03	.32	.97	.57	.82
MEDIUM	Mean	2.33	3.73	4.11	3.59	3.63
	N	8	8	8	8	8
	Std. Deviation	.98	.58	1.03	.75	.82
SMALL	Mean	2.25	3.64	3.83	3.60	3.81
	N	16	16	16	16	16
	Std. Deviation	.77	.60	.64	.91	.91
Total	Mean	2.60	3.75	3.84	3.77	3.83
	N	34	34	34	34	34
	Std. Deviation	.97	.61	.87	.83	.87

ANOVA - SIZE

		Sum of Squares	df	Mean Square	F	Sig.
MARKET RESEARCH EXPENDITURE	Between Groups	11.215	1	11.215	17.479	.000
	Within Groups	15.400	24	.642		
	Total	26.615	25			
OVERALL PERFORMANCE	Between Groups	1.616	1	1.616	5.512	.057
	Within Groups	7.038	24	.293		
	Total	8.654	25			
SALES GROWTH	Between Groups	1.696	1	1.696	2.877	.103
	Within Groups	14.150	24	.590		
	Total	15.846	25			
RETURN ON TOTAL ASSETS	Between Groups	3.347	1	3.347	5.009	.079
	Within Groups	16.038	24	.668		
	Total	19.385	25			
RETURN ON TOTAL SALES	Between Groups	1.178	1	1.178	1.576	.221
	Within Groups	17.938	24	.747		
	Total	19.115	25			

RANK MOSTLY ON DECISION RESEARCH (1/3) \* ORGANISATION SIZE Crosstabulation

		ORGANISATION SIZE			Total	
		LARGE	MEDIUM	SMALL		
RANK MOSTLY ON DECISION RESEARCH (1/3)	HIGH	Count	5	2	5	12
		% within RANK MOSTLY ON DECISION RESEARCH (1/3)	41.7%	16.7%	41.7%	100.0%
		% within ORGANISATION SIZE	50.0%	25.0%	31.3%	35.3%
		% of Total	14.7%	5.9%	14.7%	35.3%
	MODERATE	Count	2	3	6	11
		% within RANK MOSTLY ON DECISION RESEARCH (1/3)	18.2%	27.3%	54.5%	100.0%
		% within ORGANISATION SIZE	20.0%	37.5%	37.5%	32.4%
		% of Total	5.9%	8.8%	17.6%	32.4%
	LOW	Count	3	3	5	11
		% within RANK MOSTLY ON DECISION RESEARCH (1/3)	27.3%	27.3%	45.5%	100.0%
		% within ORGANISATION SIZE	30.0%	37.5%	31.3%	32.4%
		% of Total	8.8%	8.8%	14.7%	32.4%
Total	Count	10	8	16	34	
	% within RANK MOSTLY ON DECISION RESEARCH (1/3)	29.4%	23.5%	47.1%	100.0%	
	% within ORGANISATION SIZE	100.0%	100.0%	100.0%	100.0%	
	% of Total	29.4%	23.5%	47.1%	100.0%	

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.684 <sup>a</sup>	4	.794
Likelihood Ratio	1.706	4	.790
Linear-by-Linear Association	1.005	1	.316
N of Valid Cases	34		

a. 6 cells (66.7%) have expected count less than 5. The minimum expected count is 2.59.

**Appendix 4.6**

# Mean

## MARKET RESEARCH EXPENDITURE

RANK MOSTLY ON	Mean	N	Std. Deviation
HIGH	2.83	12	.72
MODERATE	3.00	11	1.10
LOW	2.43	11	1.21
Total	2.76	34	1.02

# ANOVA

## MARKET RESEARCH EXPENDITURE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.823	1	.823	.848	.368
Within Groups	20.394	21	.971		
Total	21.217	22			

# Report

LEVEL OF EXPENDITURE		OVERALL PERFORMANCE	SALES GROWTH	RETURN ON TOTAL ASSETS	RETURN ON TOTAL SALES	NUMBER OF EMPLOYEES
HIGH	Mean	3.67	4.00	4.33	4.00	4.00
	N	6	6	6	6	6
	Std. Deviation	.52	.89	.52	1.10	.89
MODERATE	Mean	3.91	3.90	3.70	3.90	2.55
	N	11	11	11	11	11
	Std. Deviation	.54	.99	.67	.57	.93
LOW	Mean	3.41	3.75	3.44	3.44	2.41
	N	17	17	17	17	17
	Std. Deviation	.62	.86	.89	.89	.94
Total	Mean	3.62	3.84	3.69	3.69	2.74
	N	34	34	34	34	34
	Std. Deviation	.60	.88	.82	.86	1.08

# ANOVA - EXPENDITURE

		Sum of Squares	df	Mean Square	F	Sig.
OVERALL PERFORMANCE	Between Groups	1.639	1	1.639	2.114	.161
	Within Groups	16.275	21	.775		
	Total	17.913	22			
SALES GROWTH	Between Groups	.552	1	.552	.649	.430
	Within Groups	17.882	21	.852		
	Total	18.435	22			
RETURN ON TOTAL ASSETS	Between Groups	3.766	1	3.766	5.880	.063
	Within Groups	13.451	21	.641		
	Total	17.217	22			
RETURN ON TOTAL SALES	Between Groups	1.535	1	1.535	1.779	.197
	Within Groups	18.118	21	.863		
	Total	19.652	22			
NUMBER OF EMPLOYEES	Between Groups	11.187	1	11.187	12.966	.002
	Within Groups	18.118	21	.863		
	Total	29.304	22			

RANK MOSTLY ON DECISION RESEARCH (1/3) \* LEVEL OF EXPENDITURE Crosstabulation

		LEVEL OF EXPENDITURE			Total	
		HIGH	MODERATE	LOW		
RANK MOSTLY ON DECISION RESEARCH (1/3)	HIGH	Count	1	6	5	12
		% within RANK MOSTLY ON DECISION RESEARCH (1/3)	16.7%	50.0%	33.3%	100.0%
		% within LEVEL OF EXPENDITURE	22.2%	50.0%	25.0%	35.3%
		% of Total	5.9%	17.6%	11.8%	35.3%
	MODERATE	Count	4	2	5	11
		% within RANK MOSTLY ON DECISION RESEARCH (1/3)	36.4%	18.2%	45.5%	100.0%
		% within LEVEL OF EXPENDITURE	56.6%	16.7%	31.2%	32.4%
		% of Total	11.8%	5.9%	14.7%	32.4%
	LOW	Count	1	4	6	11
		% within RANK MOSTLY ON DECISION RESEARCH (1/3)	16.2%	27.2%	56.6%	100.0%
		% within LEVEL OF EXPENDITURE	22.2%	33.3%	43.8%	32.4%
		% of Total	5.9%	11.8%	20.6%	32.4%
Total	Count	6	12	16	34	
	% within RANK MOSTLY ON DECISION RESEARCH (1/3)	17.6%	35.3%	47.1%	100.0%	
	% within LEVEL OF EXPENDITURE	100.0%	100.0%	100.0%	100.0%	
	% of Total	17.6%	35.3%	47.1%	100.0%	

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.912 <sup>a</sup>	4	.141
Likelihood Ratio	8.440	4	.077
Linear-by-Linear Association	2.113	1	.146
N of Valid Cases	34		

a. 6 cells (66.7%) have expected count less than 5. The minimum expected count is 1.94.

**Appendix 4.7**

**Crosstab**

			RANK MOSTLY ON DECISION RESEARCH (1/3)			Total
			HIGH	MODERATE	LOW	
OVERALL PERFORMANCE	LOWER	Count			1	1
		% within OVERALL PERFORMANCE			100.0%	100.0%
		% within RANK MOSTLY ON DECISION RESEARCH (1/3)			9.1%	2.9%
		% of Total			2.9%	2.9%
	ABOUT THE SAME	Count	3	5	4	12
		% within OVERALL PERFORMANCE	25.0%	41.7%	33.3%	100.0%
		% within RANK MOSTLY ON DECISION RESEARCH (1/3)	25.0%	45.5%	36.4%	35.3%
		% of Total	8.8%	14.7%	11.8%	35.3%
	HIGHER	Count	9	5	6	20
		% within OVERALL PERFORMANCE	45.0%	25.0%	30.0%	100.0%
		% within RANK MOSTLY ON DECISION RESEARCH (1/3)	75.0%	45.5%	54.5%	58.8%
		% of Total	26.5%	14.7%	17.6%	58.8%
	MUCH HIGHER	Count		1		1
		% within OVERALL PERFORMANCE		100.0%		100.0%
		% within RANK MOSTLY ON DECISION RESEARCH (1/3)		9.1%		2.9%
		% of Total		2.9%		2.9%
Total	Count		12	11	11	34
	% within OVERALL PERFORMANCE		35.3%	32.4%	32.4%	100.0%
	% within RANK MOSTLY ON DECISION RESEARCH (1/3)		100.0%	100.0%	100.0%	100.0%
	% of Total		35.3%	32.4%	32.4%	100.0%

**Crosstab**

			RANK MOSTLY ON DECISION RESEARCH (1/3)			Total
			HIGH	MODERATE	LOW	
SALES GROWTH	LOWER	Count			3	3
		% within SALES GROWTH			100.0%	100.0%
		% within RANK MOSTLY ON DECISION RESEARCH (1/3)			27.3%	9.1%
		% of Total			9.1%	9.1%
	ABOUT THE SAME	Count	3	6	1	10
		% within SALES GROWTH	33.3%	55.6%	11.1%	100.0%
		% within RANK MOSTLY ON DECISION RESEARCH (1/3)	25.0%	54.6%	9.1%	29.5%
		% of Total	8.8%	17.6%	3.1%	29.5%
	HIGHER	Count	4	3	6	13
		% within SALES GROWTH	30.8%	23.1%	46.2%	100.0%
		% within RANK MOSTLY ON DECISION RESEARCH (1/3)	33.3%	27.3%	54.5%	38.2%
		% of Total	11.8%	8.8%	17.6%	38.2%
	MUCH HIGHER	Count	5	2	1	8
		% within SALES GROWTH	62.5%	25.0%	12.5%	100.0%
		% within RANK MOSTLY ON DECISION RESEARCH (1/3)	41.7%	18.2%	9.1%	23.5%
		% of Total	14.7%	5.9%	2.9%	23.5%
Total	Count		12	11	11	34
	% within SALES GROWTH		35.3%	32.4%	32.4%	100.0%
	% within RANK MOSTLY ON DECISION RESEARCH (1/3)		100.0%	100.0%	100.0%	100.0%
	% of Total		35.3%	32.4%	32.4%	100.0%

Crosstab

			RANK MOSTLY ON DECISION RESEARCH (1/3)			Total
			HIGH	MODERATE	LOW	
RETURN ON TOTAL ASSETS	MUCH LOWER	Count		1		1
		% within RETURN ON TOTAL ASSETS		100.0%		100.0%
		% within RANK MOSTLY ON DECISION RESEARCH (1/3)		9.1%		2.9%
		% of Total		2.9%		2.9%
	LOWER	Count			3	3
		% within RETURN ON TOTAL ASSETS			100.0%	100.0%
		% within RANK MOSTLY ON DECISION RESEARCH (1/3)			27.3%	8.8%
		% of Total			8.8%	8.8%
	ABOUT THE SAME	Count	3	4	1	8
		% within RETURN ON TOTAL ASSETS	37.5%	50.0%	12.5%	100.0%
		% within RANK MOSTLY ON DECISION RESEARCH (1/3)	25.0%	36.4%	9.1%	23.5%
		% of Total	8.8%	11.8%	2.9%	23.5%
	HIGHER	Count	8	4	7	19
		% within RETURN ON TOTAL ASSETS	42.1%	21.1%	36.8%	100.0%
		% within RANK MOSTLY ON DECISION RESEARCH (1/3)	66.7%	36.4%	63.6%	55.9%
		% of Total	23.5%	11.8%	20.6%	55.9%
	MUCH HIGHER	Count	1	2		3
		% within RETURN ON TOTAL ASSETS	33.3%	66.7%		100.0%
		% within RANK MOSTLY ON DECISION RESEARCH (1/3)	8.3%	18.2%		8.8%
		% of Total	2.9%	5.9%		8.8%
Total		Count	12	11	11	34
		% within RETURN ON TOTAL ASSETS	35.3%	32.4%	32.4%	100.0%
		% within RANK MOSTLY ON DECISION RESEARCH (1/3)	100.0%	100.0%	100.0%	100.0%
		% of Total	35.3%	32.4%	32.4%	100.0%

Crosstab

			RANK MOSTLY ON DECISION RESEARCH (1/3)			Total
			HIGH	MODERATE	LOW	
RETURN ON TOTAL SALES	MUCH LOWER	Count		1		1
		% within RETURN ON TOTAL SALES		100.0%		100.0%
		% within RANK MOSTLY ON DECISION RESEARCH (1/3)		9.1%		2.9%
		% of Total		2.9%		2.9%
	LOWER	Count		1	3	4
		% within RETURN ON TOTAL SALES		25.0%	75.0%	100.0%
		% within RANK MOSTLY ON DECISION RESEARCH (1/3)		9.1%	27.3%	11.8%
		% of Total		2.9%	8.8%	11.8%
	ABOUT THE SAME	Count	2	3	1	6
		% within RETURN ON TOTAL SALES	33.3%	50.0%	16.7%	100.0%
		% within RANK MOSTLY ON DECISION RESEARCH (1/3)	16.7%	27.3%	9.1%	17.6%
		% of Total	5.9%	8.8%	2.9%	17.6%
	HIGHER	Count	9	4	7	20
		% within RETURN ON TOTAL SALES	45.0%	20.0%	35.0%	100.0%
		% within RANK MOSTLY ON DECISION RESEARCH (1/3)	75.0%	36.4%	63.6%	58.8%
		% of Total	26.5%	11.8%	20.6%	58.8%
	MUCH HIGHER	Count	1	2		3
		% within RETURN ON TOTAL SALES	33.3%	66.7%		100.0%
		% within RANK MOSTLY ON DECISION RESEARCH (1/3)	8.3%	18.2%		8.8%
		% of Total	2.9%	5.9%		8.8%
Total		Count	12	11	11	34
		% within RETURN ON TOTAL SALES	35.3%	32.4%	32.4%	100.0%
		% within RANK MOSTLY ON DECISION RESEARCH (1/3)	100.0%	100.0%	100.0%	100.0%
		% of Total	35.3%	32.4%	32.4%	100.0%



# Chi-Square Test

Test Statistics

	OVERALL PERFORMANCE	SALES GROWTH	RETURN ON TOTAL ASSETS	RETURN ON TOTAL SALES
Chi-Square <sup>a,b,c</sup>	30.235	7.750	36.125	38.313
df	3	3	4	4
Asymp. Sig.	.000	.041	.000	.000

- a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 8.5.  
b. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 8.0.  
c. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 6.4.

Mean

RANK MOSTLY ON DECISION		OVERALL PERFORMANCE	SALES GROWTH	RETURN ON TOTAL ASSETS	RETURN ON TOTAL SALES
HIGH	Mean	3.85	4.17	3.98	3.92
	N	12	12	12	12
	Std. Deviation	.45	.83	.58	.51
MODERATE	Mean	3.64	3.70	3.44	3.43
	N	11	10	11	11
	Std. Deviation	.67	.82	1.13	1.21
LOW	Mean	3.35	3.53	3.57	3.49
	N	11	10	9	9
	Std. Deviation	.69	.97	.71	.71
Total	Mean	3.61	3.80	3.66	3.61
	N	34	32	32	32
	Std. Deviation	.60	.88	.82	.86

ANOVA - Performance measures

		Sum of Squares	df	Mean Square	F	Sig.
OVERALL PERFORMANCE	Between Groups	4.058	1	4.058	5.622	.027
	Within Groups	15.159	21	.722		
	Total	19.217	22			
SALES GROWTH	Between Groups	6.642	1	6.642	5.248	.032
	Within Groups	26.576	21	1.266		
	Total	33.217	22			
RETURN ON TOTAL ASSETS	Between Groups	4.903	1	4.903	5.542	.028
	Within Groups	18.576	21	.885		
	Total	23.478	22			
RETURN ON TOTAL SALES	Between Groups	4.822	1	4.822	4.064	.047
	Within Groups	24.917	21	1.187		
	Total	29.739	22			

**Appendix 4.8**

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	OVERALL PERFORMANCE	4.058 <sup>a</sup>	1	4.058	5.622	.027
	SALES GROWTH	6.642 <sup>b</sup>	1	6.642	5.248	.032
	RETURN ON TOTAL ASSETS	4.903 <sup>c</sup>	1	4.903	5.542	.028
	RETURN ON TOTAL SALES	4.822 <sup>d</sup>	1	4.822	4.064	.047
Intercept	OVERALL PERFORMANCE	254.493	1	254.493	352.551	.000
	SALES GROWTH	302.294	1	302.294	238.871	.000
	RETURN ON TOTAL ASSETS	260.903	1	260.903	294.952	.000
	RETURN ON TOTAL SALES	274.562	1	274.562	231.403	.000
RANK	OVERALL PERFORMANCE	4.058	1	4.058	5.622	.027
	SALES GROWTH	6.642	1	6.642	5.248	.032
	RETURN ON TOTAL ASSETS	4.903	1	4.903	5.542	.028
	RETURN ON TOTAL SALES	4.822	1	4.822	4.064	.047
Error	OVERALL PERFORMANCE	15.159	21	.722		
	SALES GROWTH	26.576	21	1.266		
	RETURN ON TOTAL ASSETS	18.576	21	.885		
	RETURN ON TOTAL SALES	24.917	21	1.187		
Total	OVERALL PERFORMANCE	277.000	23			
	SALES GROWTH	340.000	23			
	RETURN ON TOTAL ASSETS	288.000	23			
	RETURN ON TOTAL SALES	308.000	23			
Corrected Total	OVERALL PERFORMANCE	19.217	22			
	SALES GROWTH	33.217	22			
	RETURN ON TOTAL ASSETS	23.478	22			
	RETURN ON TOTAL SALES	29.739	22			

a. R Squared = .241 (Adjusted R Squared = .204)

b. R Squared = .230 (Adjusted R Squared = .192)

c. R Squared = .239 (Adjusted R Squared = .201)

d. R Squared = .192 (Adjusted R Squared = .152)

Multivariate Tests<sup>b</sup>

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	.981	238.199 <sup>a</sup>	4.000	18.000	.000	.981
	Wilks' Lambda	.019	238.199 <sup>a</sup>	4.000	18.000	.000	.981
	Hotelling's Trace	52.933	238.199 <sup>a</sup>	4.000	18.000	.000	.981
	Roy's Largest Root	52.933	238.199 <sup>a</sup>	4.000	18.000	.000	.981
RANK	Pillai's Trace	.492	4.366 <sup>a</sup>	4.000	18.000	.012	.492
	Wilks' Lambda	.508	4.366 <sup>a</sup>	4.000	18.000	.012	.492
	Hotelling's Trace	.970	4.366 <sup>a</sup>	4.000	18.000	.012	.492
	Roy's Largest Root	.970	4.366 <sup>a</sup>	4.000	18.000	.012	.492

a. Exact statistic

b. Design: Intercept+RANK

# Correlations

		OVERALL PERFORMANCE	SALES GROWTH	RETURN ON TOTAL ASSETS	RETURN ON TOTAL SALES
OVERALL PERFORMANCE	Pearson Correlation	1.000	.476*	.413	.356
	Sig. (2-tailed)	.	.039	.058	.147
	N	34	34	34	34
SALES GROWTH	Pearson Correlation	.476*	1.000	.295	.281
	Sig. (2-tailed)	.039	.	.107	.125
	N	34	34	34	34
RETURN ON TOTAL ASSETS	Pearson Correlation	.413	.295	1.000	.891**
	Sig. (2-tailed)	.058	.107	.	.000
	N	34	34	34	34
RETURN ON TOTAL SALES	Pearson Correlation	.356	.281	.891**	1.000
	Sig. (2-tailed)	.147	.125	.000	.
	N	34	34	34	34

\*. Correlation is significant at the 0.05 level (2-tailed).

\*\*. Correlation is significant at the 0.01 level (2-tailed).

**Appendix 4.9**

Reliability

RELIABILITY ANALYSIS - SCALE (ALPHA)

1.	O2	OVERALL PERFORMANCE
2.	O3	SALES GROWTH
3.	O4	RETURN ON TOTAL ASSETS
4.	O5	RETURN ON TOTAL SALES

		Mean	Std Dev	Cases
1.	O2	3.6176	.6038	34.0
2.	O3	3.7353	.9632	34.0
3.	O4	3.5882	.8916	34.0
4.	O5	3.5882	.9250	34.0

Covariance Matrix				
	O2	O3	O4	O5
O2	.3645			
O3	.1988	.9278		
O4	.1711	.3119	.7950	
O5	.1408	.3119	.7344	.8556

Correlation Matrix				
	O2	O3	O4	O5
O2	1.0000			
O3	.3418	1.0000		
O4	.3179	.3632	1.0000	
O5	.2522	.3501	.8904	1.0000

RELIABILITY ANALYSIS - SCALE (ALPHA)

Statistics for Scale	Mean	Variance	Std Dev	N of Variables		
	14.5294	6.6809	2.5847	4		
Item Means	Mean	Minimum	Maximum	Range	Max/Min	Variance
	3.6324	3.5882	3.7353	.1471	1.0410	.0049
Item Variances	Mean	Minimum	Maximum	Range	Max/Min	Variance
	.7357	.3645	.9278	.5633	2.5452	.0642
Inter-item Covariances	Mean	Minimum	Maximum	Range	Max/Min	Variance
	.3115	.1408	.7344	.5936	5.2152	.0437
Inter-item Correlations	Mean	Minimum	Maximum	Range	Max/Min	Variance
	.4193	.2522	.8904	.6383	3.5314	.0498

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
O2	10.9118	5.2950	.3676	.1670	.6696
O3	10.7941	4.1078	.4214	.1947	.7442
O4	10.9412	3.4510	.7350	.8031	.5664
O5	10.9412	3.4510	.6909	.7954	.5927

Analysis of Variance					
Source of Variation	Sum of Sq.	DF	Mean Square	F	Prob.
Between People	55.1176	33	1.6702		
Within People	42.5000	102	.4167		
Between Measures	.5000	3	.1667	.3929	.7584
Residual	42.0000	99	.4242		
Total	97.6176	135	.7231		
Grand Mean	3.6324				

RELIABILITY ANALYSIS - SCALE (ALPHA)

Reliability Coefficients	4 items
Alpha = .7460	Standardized item alpha = .7428

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.614
Bartlett's Test of Sphericity	Approx. Chi-Square	58.667
	df	6
	Sig.	.000

Factor Analysis

Communalities

	Initial	Extraction
OVERALL PERFORMANCE	1.000	.747
SALES GROWTH	1.000	.611
RETURN ON TOTAL ASSETS	1.000	.938
RETURN ON TOTAL SALES	1.000	.946

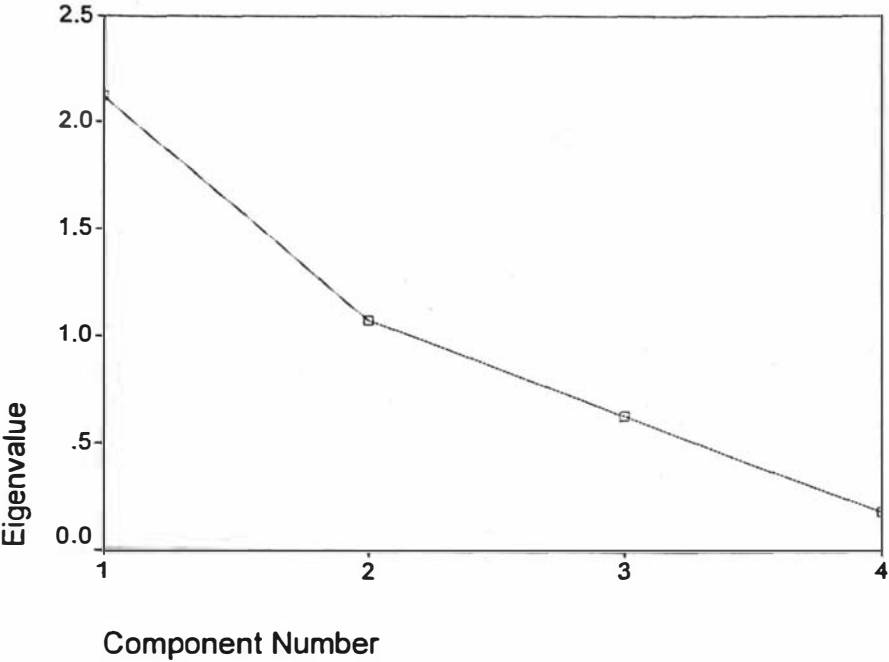
Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.316	57.908	57.908	2.316	57.908	57.908	1.883	47.073	47.073
2	1.057	23.142	81.050	1.057	23.142	81.050	1.359	33.977	81.050
3	.751	16.279	97.329						
4	.107	2.671	100.000						

Extraction Method: Principal Component Analysis.

Scree Plot



Component Matrix<sup>a</sup>

	Component	
	1	2
RETURN ON TOTAL ASSETS	.908	-.336
RETURN ON TOTAL SALES	.888	-.397
SALES GROWTH	.630	.462
OVERALL PERFORMANCE	.553	.664

Extraction Method: Principal Component Analysis.  
a. 2 components extracted.

Rotated Component Matrix<sup>a</sup>

	Component	
	1	2
RETURN ON TOTAL SALES	.959	.166
RETURN ON TOTAL ASSETS	.941	.228
OVERALL PERFORMANCE	8.797E-02	.860
SALES GROWTH	.265	.735

Extraction Method: Principal Component Analysis.  
Rotation Method: Varimax with Kaiser Normalization.  
a. Rotation converged in 3 iterations.

Component Transformation Matrix

Component	1	2
1	.830	.558
2	-.558	.830

Extraction Method: Principal Component Analysis.  
Rotation Method: Varimax with Kaiser Normalization.

Factor Analysis

Communalities

	Initial	Extraction
OVERALL PERFORMANCE	1.000	1.000
SALES GROWTH	1.000	1.000
RETURN ON TOTAL ASSETS	1.000	.946
RETURN ON TOTAL SALES	1.000	.948

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.316	57.908	57.908	2.316	57.908	57.908	1.868	46.708	46.708
2	1.057	23.142	81.050	1.057	23.142	81.050	1.014	25.352	72.060
3	.751	16.279	97.329	.751	16.279	97.329	1.011	25.269	97.329
4	.107	2.671	100.000						

Extraction Method: Principal Component Analysis.



Component Matrix<sup>a</sup>

	Component		
	1	2	3
RETURN ON TOTAL ASSETS	.908	-.336	8.700E-02
RETURN ON TOTAL SALES	.888	-.397	4.113E-02
SALES GROWTH	.630	.462	-.624
OVERALL PERFORMANCE	.553	.664	.502

Extraction Method: Principal Component Analysis.

a. 3 components extracted.

Rotated Component Matrix<sup>a</sup>

	Component		
	1	2	3
RETURN ON TOTAL SALES	.957	8.574E-02	.157
RETURN ON TOTAL ASSETS	.945	.164	.158
OVERALL PERFORMANCE	.145	.976	.159
SALES GROWTH	.193	.164	.967

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

Component Transformation Matrix

Component	1	2	3
1	.825	.375	.423
2	-.554	.686	.472
3	.114	.624	-.773

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Means

Report

RANK MOSTLY ON DECISION RESEARCH		Profitability Measure	Overall Effectiveness	Growth Measure
HIGH	Mean	.2509732	.1193423	.3929556
	N	12	12	12
	Std. Deviation	.6195706	.8374588	.9292652
MODERATE	Mean	-.1949358	8.028458E-02	-.2019191
	N	11	11	11
	Std. Deviation	.9856242	1.1360804	1.0259762
LOW	Mean	-7.8853191E-02	-.2104762	-.2267598
	N	11	11	11
	Std. Deviation	1.3349403	1.0793233	1.0053747
Total	Mean	-1.5612511E-16	-1.3877788E-17	-1.0408341E-17
	N	34	34	34
	Std. Deviation	1.0000000	1.0000000	1.0000000

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Profitability Measure	Between Groups	1.141	1	1.141	1.719	.020
	Within Groups	13.937	21	.664		
	Total	15.078	22			
Overall Effectiveness	Between Groups	.624	1	.624	.677	.042
	Within Groups	19.364	21	.922		
	Total	19.988	22			
Growth Measure	Between Groups	2.204	1	2.204	2.361	.039
	Within Groups	19.607	21	.934		
	Total	21.811	22			