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**THE INTERACTIVE SYSTEM IN THE ADOPTION
PROCESS OF NEW ZEALAND GROCERY RETAILING :
A STUDY OF THE ACCEPTANCE OF NEW
FOOD AND NON-FOOD ITEMS
BY MAJOR GROCERY RETAILERS**

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

for the degree

**of Doctor of Philosophy in Marketing
at Massey University**

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1996

ABSTRACT

It is evident from a review of the extant literature that retailer's evaluations and processes applied to the adoption of new products not only plays a vital role in determining the movement of product between supplier and end-users, but also has received very little attention. Low margin, high volume grocery products sold through supermarkets compete for limited shelf space. Very few studies have examined this area. Those that have are both dated and overseas in nature. No study examining the acceptance (or rejection) of grocery products by buyers and buying committee members in New Zealand was seen to exist.

Qualitative research with buyers and management laid the foundation for the study. Over four years of staged research activities virtually the same respondent base was drawn from a limited pool of buyers and committee members. The initial research grounded the study on New Zealand criteria, whilst subsequent stages aimed to reduce criteria to a salient list of attributes suitable for application in a full profile, conjoint analysis study. This final phase involved two new products, a food (Health Bar) and non-food (Laundry Detergent) item, each categorised as me-too products.

Both products featured as a separate conjoint study separated by a two month interval. Using a balanced block design, 3 versions from each of 3 sets of 18 full profiles (drawn from a pool of 27 profiles) were actioned. The balanced block design was commissioned due to management imposed time restrictions. Respondents were required to indicate on a 10-point scale, how likely they would be to accept the products described by the profiles. Data reduction techniques were used to determine a salient list of decision factors. In addition, the importance, centrality and interconnection of decision criteria were determined using a new, graphical measurement device, a decision tree.

A large mix of criteria exists amongst New Zealand grocery chain buyers and committee members. These, when grouped, extend beyond the simple confines of either product or supplier headings identified in the extant literature to include input from the sales representative (enthusiasm, knowledge, decision ability) and the buying organisation (policy and requirements). Importance of decision criteria, without the application of the notion of

centrality, is seen as an inflated artifact. Amongst the 7 salient attributes tested, Demand, Conditions and Supplier Information dominate considerations for both products, however, variations amongst organisations due to operating philosophies is likely to eventuate.

ACKNOWLEDGEMENTS

I 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. My Chief Supervisor, Professor Norman E Marr, for his support, guidance and encouragement on this thesis through its various research and writing stages, particularly during some personal ordeals. I am grateful for his example of research and publications, always striving for and encouraging a research culture. His personal ethos was paramount in establishing a publications stream from research undertaken for this thesis.
2. My wife Robyne and my son Paul for their unending support, reassurance and love. The quiet background of family was a haven and a well for solace during difficult times.
3. My mother and posthumously, my father, for their continuous positive support and instilling a spirit of continuance and a value for education.
4. My advisors at different stages, Professor Alan Williams and Dr Mary Earle, for providing guidance and alternate thought patterns.
5. My colleagues Ron Garland and Michael Fox for their untiring and willing contributions; Ron for his patience and readings, and Michael for his statistical support.
6. The Marketing Department at Massey University, in particular Professor Phil Gendall, for research funding and use of Department resources.
7. The Massey University Research Fund (MURF) for funding initial data-based literature reviews, and in particular Massey University for permitting part-time study by staff.
8. The Chief Executives and management of participating organisations for their trust in my research endeavours, and in particular the buyers and buying committee members. Without their time and willingness to participate, this thesis would not exist.

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CHAPTER ONE

INTRODUCTION

1.1 Introduction

Over the past 50 years New Zealand's grocery trade, in this instance comprising suppliers (manufacturers, importers and agents), wholesalers and retailers, has undergone a multitude of changes. Some of these changes are as much a response to environmental occurrences (some natural, others forced) as they are a direct result of the trade's active involvement in the process acting as a change agent in its own right, for example through mergers and acquisitions. There are elements of both reactive and proactive response much of which seems to be evolutionary in nature; as New Zealand society has evolved, so too has the grocery trade.

Population growth, urbanisation and increased mobility through the use of the automobile reflect one aspect of change in the environment. These events were in part matched by the development and growth of larger stores to the detriment of the small, proverbial "corner store", known today as the convenience store. As the 'new' styled grocery store grew in size, its nature and character shifted and the spectre of competition rose. The now familiar store descriptions of supermarket, superstore and hypermarket are the reflections of shrinkage and mergers that have occurred with time. Some of these have been internal to New Zealand, whilst others have descended from overseas. Today, three main operators (two of which are overseas owned) dominate and compete for the New Zealand retail grocery business. This is not to say or suggest that other components of the grocery trade have not been visited by mergers, shrinkage or rationalisations. Here too, the number of operators has not only decreased, but also has been, in some instances, coupled with retail operation growth. In addition, there is further competition in the trade generally with some retailers involving themselves with direct-from-supplier purchasing, as opposed to traditional dealings with wholesalers and agents.

Despite mergers, shrinkage and rationalisations, shelf space or shelf facings in the grocery trade generally has remained a scarce resource. Competition for this limited resource

intensified largely as a direct result of the proliferation of products that exploded upon the New Zealand market from the 1950s onwards. Coupled with this has been a growth in the amount of imported product, especially noticeable over the past ten years. In addition to this, the advent of retail chains developing their "own brands" and the introduction of generic brands has intensified the demand for shelf space.

Matching the demand for increased shelf space has been the growth in actual operating size of retail outlets. Today, larger stores range in size from 3,200 to 3,700 square metres of retail space with 20 or more checkout lanes. Still larger concerns (the hypermarkets) consist of 33,000 square metres and 60 plus checkout points. Most large, full service stores of today exhibit wide aisles, bright and colourful decor, intensified lighting (including neon lights), vast shelf facings, colourful packaging, expanded freezers and chiller areas, delicatessen and bake shop. Some of the larger stores, however, are dismal by contrast, reflecting a deliberate discount or warehouse-like appearance in a highly competitive and segmented marketplace. This type of operation features stacked, cut open cartons, limited range product lines and limited service to clientele. All of these elements contribute to the atmosphere of the supermarket of today. They are a dramatic contrast to the small, dimly lit "corner store" operations of years gone by.

With time has come a greater emphasis on other dimensions of merchandising. The emergence of the in-store deli, bakery and salad bar are notable, as is the increased attention given to signage, traffic flow, displays, demonstrations, visual packaging and point-of-sale material. All this has a bearing on attracting and keeping the shopper happy with the total atmosphere of the retail outlet, which is best described as projecting an image of freshness to the consumer at large.

Underlying all of this, however, in an era of cost consciousness has been the trade's increased emphasis on efficiency and productivity. To this end, the advent of the computer and other technology, namely scanning devices, has proved to be of immense importance. Major retail establishments make use of computer programmes to facilitate better shelf space allocations and product positioning. Currently New Zealand ranks about fifth in the world as to the number of scanning devices per head of population. But the developments of applicable

technology for both retail and wholesale merchants does not stand still and the developments that have occurred and those that are occurring further threaten the balance of power that exists in the marketplace. This power shift exacerbates the demand for shelf space. For the near future, the trade will be witnessing the advent of Electronic Data Interchange (EDI), electronic shelf tagging, talking scanners, FM systems of price verification, Direct Product Profitability (DPP), cart video promotions, own EFTPOS and credit cards.

In all of this people have to eat and people shop with their eyes and their feet. If a grocery retail outlet is not to their way of liking, does not carry the products they want in the size and variety they desire, then their shopping dollars will go to a competitor. The management of today's retail outlets must continually watch for improvements and developments that facilitate their operation. It may be that the future sees decisions being made at the "shop floor" in direct response to consumer demand and not the buyers or buying committees of head office operations.

In the past, suppliers have had considerable input into the evaluation and decision processes taken by retailers through the provision of information about products, their performance and likely demand. Ultimately, decisions involving product acceptance or rejection have had to be made largely by retailers themselves. This includes 'killing off' previously accepted products. Now, however, retailers have the wherewithal to more closely control their own operations, even to the point of dictating terms to would be suppliers.

It needs to be recognised that buying decisions take place within the greater context of a channel environment. Whilst channel management or even relationships is not at issue in this study such situations can condition trading activities. Within the overall setting, the retailer can be classified as a reseller (both a buyer and a seller), a unique entity in its own right, offering customers a range of products and services. Often this point is overlooked or diminished in the minds of some manufacturers or their representatives who need to sell products into this network. It is the buying activities and environment of grocery retailers that forms the nature of this study. Interest in this field is a direct result of discussions with wholesalers and retailers in the Pacific Northwest whilst on Sabbatical in 1989.

1.2 Grocery Retailing Today

It is against this grocery retail background that this study was undertaken. Here, due recognition has been given to change and its occurrence in New Zealand and overseas. Some overseas events have direct applicability in New Zealand. Whether change is home grown or adapted from overseas, decisions undertaken by management, buyers and buying committees in the operation of their retail establishments impact on the final acceptance or rejection of products stocked.

Grocery trade activity in New Zealand, particularly retail, is controlled by a small number of companies. This limited number represents a blend of overseas ownership, large multi-faceted operations, co-operative wholesalers and divisions between North and South Islands. As one example and during the course of this study, the Lion Nathan group, owners of Woolworths, Big Fresh and Price Cutter, divested themselves of their food retail interests to the large Australian food retailer, Franklins. This particular retailer is in turn controlled by Dairy Farm International (DFI), the retail arm of Hong Kong based Jardine Fleming. DFI has strong operations in Australia, Hong Kong, Taiwan, Thailand, Spain and the United Kingdom in the area of supermarkets and in Hong Kong with their 7-11 convenience stores.

Additional to Franklins involvement, Coles Myer, another experienced Australian retailer, has come and gone within New Zealand's grocery trade. Their involvement centred on Foodtown Supermarkets Limited. They too divested themselves of their grocery interests to another Australian group, Foodland Associates Ltd, who later acquired the Countdown chain and Rattays, both of South Island origin. These moves further highlight changes in New Zealand's food retailing. Recent dialogue within the industry suggests that change will be imposed once again, this time involving the Foodland group and Progressive Enterprises, former holders of Foodtown supermarkets.

The events being experienced in New Zealand are similar in nature to those that have occurring overseas. To this end, it has not been uncommon to witness mergers or acquisitions, a function of commercial aggressiveness for dominance or a means of securing market stance or position in a highly competitive environment. These positions are supported

by cost saving measures such as closing down old stores and in some cases opening larger outlets. Along with this cost saving strategy, there has been a growing concentration of power in fewer hands. That power is, and has been, more in the direction and favour of retailers than manufacturers and heralds with it new problems for manufacturers, especially with respect to product distribution. With retailers entering the market with their own house brands and a shrinkage in both outlets and owners, manufacturers or suppliers may be forced to seek new or different distribution methods. One option could be to open their own retail outlets, a factor that is occurring in the United States albeit in the non-food area. Similar activities have occurred in New Zealand through Fletcher's Placemakers retail outlets operating as distribution points for home handyman supplies.

Of course with size comes the imminent threat of government intervention, at least in some countries. Safeway, a large USA based grocery retail chain, was ordered to divest itself of a number of stores in Canada because it was getting too big and therefore was seen to be stifling competition. Such moves, economically based or not, facilitated the further establishment of voluntary chains like IGA (Independent Grocers Association). These wholesaler sponsored organisations together with retailer co-operatives both foster competition for large chain stores, at least by intent. Foodstuffs and to some extent the previous Countdown operations mirror this development. In New Zealand, the regional wholesaler operated outlets of Foodstuffs (e.g. New World, Write Price) control over 50% of the market.

Today's grocery shopper can choose among discount stores, full or partial service stores, gourmet outlets, convenience stores or ethnic shops. Some, but not all, of these are present in New Zealand. Of prime concern overseas recently has been the development of the hypermarket or the super-superstore. It is the newest competitor to the traditional supermarket both in terms of size and product assortment. Super-superstores cater not only for basic food items, but also for other routine purchases like personal-care products, low-priced housewares, stationery and sewing supplies, books and some household services like shoe repairs and dry cleaning. A North American super-superstore (about 33,000 square metres) is about three times the size of Henderson's Kmart/Foodtown complex. We see microcosms of this in New Zealand.

Part of what is seen overseas today in the way of scrambled merchandising (e.g. motor oils, fresh fruits and vegetables, garden plants, clothing) is also seen in New Zealand. The expansion of non-food items provides today's grocery retailer with added value, attraction and margins. It is in this area that further expansion is likely to be seen as retailers attempt to consolidate their place in the market.

In overseas markets the existence of convenience stores (e.g. Hong Kong 7-11s) providing very personal service and long hours of operation to suit patrons continues to flourish and in some instances expand under various forms of franchise agreements. This phenomenon occurs despite the longer opening hours of most larger chains. In many ways the resurgence of convenience stores and superettes is directly attributable to society's lifestyle; that is, two income households pursuing dual careers and not having the responsibility of raising children. In North America it is not uncommon to see major supermarket chains open until midnight and others "open all hours" in an attempt to capture the late shoppers and at the same time meet competition. The longer hours of operation noted here has happened in New Zealand in a modified form, yet it is possible that a revival of the corner store or superette in more populated areas could occur. The market in New Zealand is open to the development of the 7-11s concept perhaps through Dairy Farm International given the existence of appropriate legislation. This exists in part with all night, scrambled merchandise petrol stations, but its full impact is yet to be felt.

Regardless of what occurs in the market place, or how organisations attempt to establish their respective postures in a market, decisions about merchandise lines, product assortment, breadth and depth of product are taken either by a buyer or a buying committee. The people fulfilling these roles represent the interests of the organisations for whom they work, and both cast votes of approval or disapproval on product propositions presented to them by supplier representatives. What is the basis for their judgement? What attributes do they look for? How do they evaluate and decide amongst an array of propositions?

1.3 Product Acceptance or Rejection: A Brief Review

One of the most central aspects of product acceptance and rejection is that a purchase choice occurs. To this end, one is necessarily steered in the direction of decision making within an organisational context. Organisational buying literature would have us believe that there is first an assessment of the supplier followed by an assessment of the proposition, normally involving the product. This involves supplier or vendor selection criteria on the one hand, and on the other, product selection criteria. The opinion of the author is that product acceptance or rejection embodies both a simultaneous evaluation of the supplier, the product and the representative (presenter) either during or after a presentation of a total proposition by a prospective supplier. This evaluation or assessment is undertaken by a buyer, or subsequently, by the buyer and a committee. Further, since 'new' product decisions are being considered, the adoption process model suggests itself as a useful framework in which to handle discussions.

1.3.1 The Adoption Process

Acceptance or rejection of some product or idea is an outcome involving choice and, as the proposed study concerns the acceptance or rejection of new grocery products, one must necessarily discuss aspects of the adoption process, especially within the context of supply.

Assael (1987) recognised the expansion of adoption and diffusion theory to include its application to organisational buying activities. Whilst this may be the case, little research appears to have been conducted on the adoption process of firms and much of this occurred in the late 1960s to mid 1970s. Additionally, the research would appear to have viewed factors which influence the process such as sources of information, time of adoption and characteristics of early adopters.

However, of particular interest is one study by Ozanne and Churchill (1971) in which the conceptual framework of diffusion was used to explore the adoption process "through which individual adopters pass from awareness to full acceptance of the new product." (p.322) A five staged process model was used which "helped to indicate relationships among the

variables.." (p.322) and in particular, aided the identification of the group as the adopting unit. The end result of such a model is either acceptance or rejection of the innovation (product or idea). This was represented in the study as acceptance and continued use, acceptance and discontinuance later and continuous rejection. Noteworthy in their study was the finding that particular influences shaped the final decision. Here, such factors as quick delivery, cost/benefit comparisons, special product attributes, personal selling and past experience emerged. These elements strongly parallel supplier and product evaluative criteria and offer a small and token credit to personal input. Few researchers have ventured to include various aspects of the sales person's input as a contributing element to an adoption decision. This aspect is elaborated in more detail within this study. However, suffice to say at this point that it is proposed that the presenter features as a third element in adoption considerations.

1.3.2 Supplier Selection Criteria

It is recognised that the buying process is one that requires management (Carter 1987, Farmer 1985, Brown and Purwar 1980) and with little doubt, it could be argued to be a cornerstone of buyer-seller relationships involving exchange (Segal 1989). Whilst purchasing involves many interrelated activities both within the process and the organisation, one dimension of this totality has as its focus the selection and evaluation of suppliers. Given this importance, there is a need on the part of buyers to establish and execute evaluative or selection criteria.

It has long been recognised by many researchers that the evaluative criteria used in a purchasing process generally varies depending on the nature of the product, the situation and the setting; that is, manufacturer or reseller (Shipley 1985, Sheth 1973, Wind, Green and Robinson 1968). In fact, the importance attached to criteria does seem to vary between an industrial and reseller application. An industrial buyer may place greater emphasis on service backup, whilst a reseller sees more importance in delivery. Moreover, the nature and number of criteria used in a purchase situation varies considerably between the industrial and reseller applications.

It should be noted that the dominant base for examining selection criteria rests with industrial

market applications (Shipley 1989, Lehmann and O'Shaughnessy 1982, Cravens and Hoffman 1977, Cunningham and White 1973, Wind 1966). By comparison, very few studies have examined the issue of selection criteria within a reseller market (Wagner, Ettenson and Parrish 1989, Shipley 1985, Hirschman 1981, Brown and Purwar 1980). This is by no means a reflection of lesser importance, but one where industrial purchasing literature has originated and also the relative size of the reseller market by comparison.

1.3.3 Product Selection Criteria

Unlike supplier selection criteria, the literature on product acceptance criteria and their application is sparse. Rao and McLaughlin (1989) highlight this by noting the absence of new research concerning new product selection for more than a decade.

Two tracks of reference appear evident; one reflects factors that influence product acceptance, whilst the other explores modelling the decision process to add new products. The latter appears to dominate the literature and reflects a variety of mathematical applications of varying degrees of sophistication. Regardless of the approach, product selection criteria have been employed to a varying extent.

Perhaps because of the inability of some mathematical procedures to effectively handle a large number of criteria (Doyle and Weinberg 1973), most approaches examining product selection have limited the number of specific criteria. Researchers like Grashof (1970), Doyle and Weinberg (1973) and Nilsson (1977) were content to measure a smaller number of criteria (six to eight). The issue at hand appears not to be a recognition of the number of pertinent criteria (for there are studies with larger numbers), but the particular approach adopted by the researchers. Grashof (1970) utilised a simulation experiment, whilst Doyle and Weinberg (1973) made use of multiple regression analysis. The literature reviewed to date does not reveal the utilisation of conjoint analysis involving product selection criteria for retail grocery items. However, it appears that it has been the researcher's own determination that has dictated what has been and what has not been included in their respective product evaluation lists. There appears to be no consensus as to the actual number of criteria to include in studies involving choice, though this is likely to depend on the procedure used. However,

there is some 'agreement' about which criteria may be more important or meaningful. Some of the more obvious inclusions are:

- profit potential;
- advertising and promotion support;
- sales potential;
- newness of product;
- reputation;
- reliable delivery;
- price; and,
- existing assortment.

Notwithstanding this, it is recognised that there is inter-relatedness between criteria (Rao and McLaughlin 1989, McGoldrick and Douglas 1985, Heeler, Kearny and Mehaffey 1973). However, a number of researchers (McGoldrick and Douglas 1985, Doyle and Weinberg 1973, Hileman and Rosenstein 1961) recognise the disruptive influence to common lists of criteria by noting that the nature of the product, the importance some evaluators place on some criteria over others or the very nature of the deciding organisation and its policy can dictate the presence or absence of particular criteria in decisions concerning either acceptance or rejection of a product offer.

1.4 The Study and Its Process

Whilst supply can be an area of contention, the actual selection process and eventual decisions about new products that are taken are more paramount in importance and concern. Reasons for this are not solely tied to any retail change phenomenon for this has been with the grocery trade for years. Rather, it has to do with maximising the likelihood of achieving a profitable position through utilising limited shelf space and maintaining a watchful eye on product movement. Thus, decision activities taken by a firm to either accept or reject new products seem anchored to these points; that is, space and profits.

Decision activities dealing with new products quite easily are seen to replicate a staged adoption process. In order to establish not only a stable and meaningful framework for studying new product acceptance in a retail setting, but also to retain a common perspective throughout the research, a staged and extended adoption process model has been developed

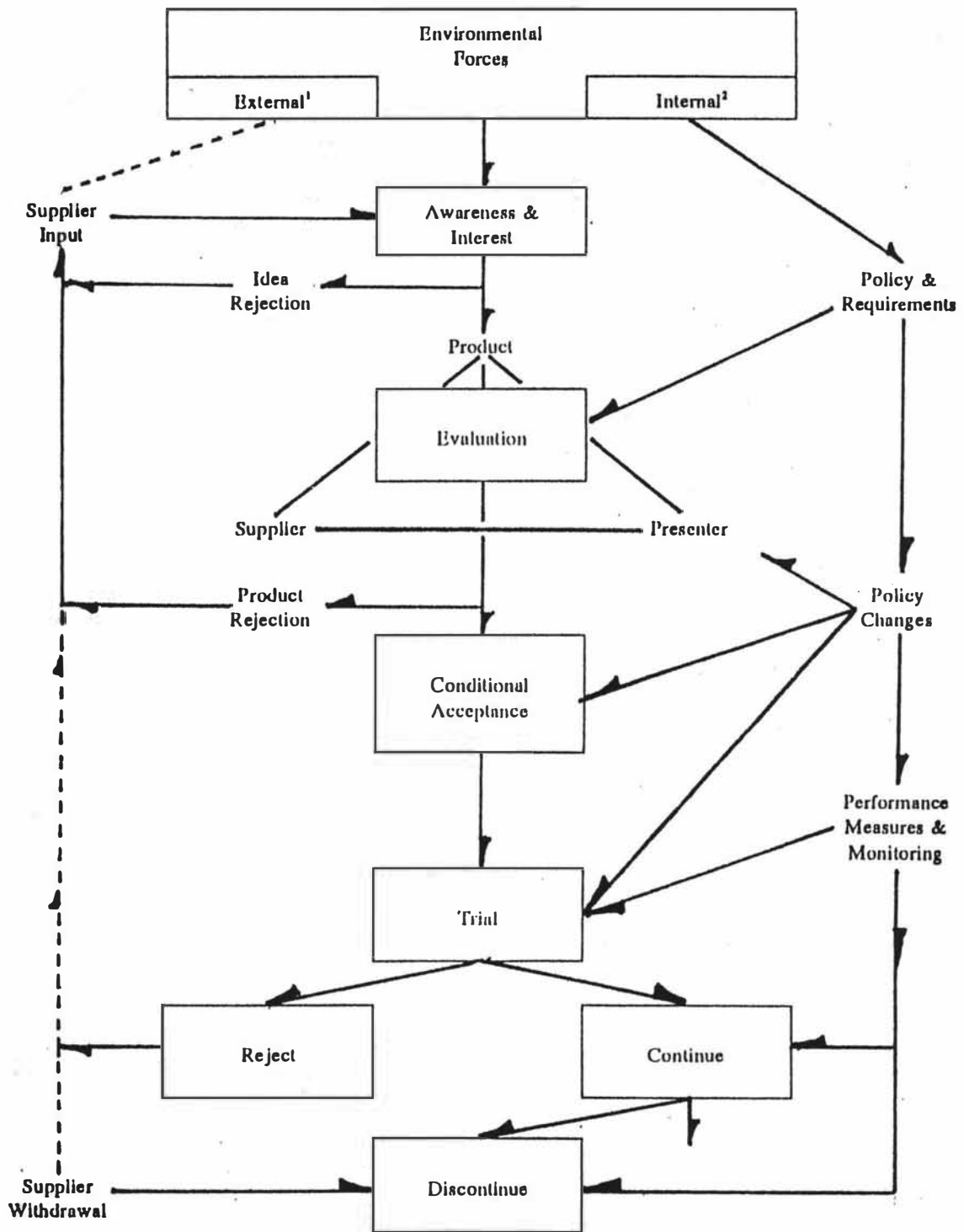
and utilised. This is shown as Figure 1.1.

The focus of the research and hence the extended model is not the awareness or interest stages (initial and traditional adoption stages), or the time horizon across stages. Rather the concern is about evaluations and outcomes. To this end, there is a need to determine what particular factors or events govern the movement of new grocery products from suppliers to grocery retailers' shelves. Pursuing this question, however, requires a well defined study topic. This study provides that definition by examining one food and one non-food grocery category item for private labelled national brands of local or imported origin that are dry packed or canned. Further, it focuses on the assessments and evaluations that buyers and buying committees make of these defined products categories. Discussion of the proposed model and its constituent elements is provided in Chapter Five.

Whilst detail on methodology is highlighted in Chapter Seven, Figure 1.2 provides an overview of the staged nature of the study. In examining Figure 1.2 (the PhD Study Process), it should be noted that there are four (4) central aspects upon which the study builds and explores. These include:

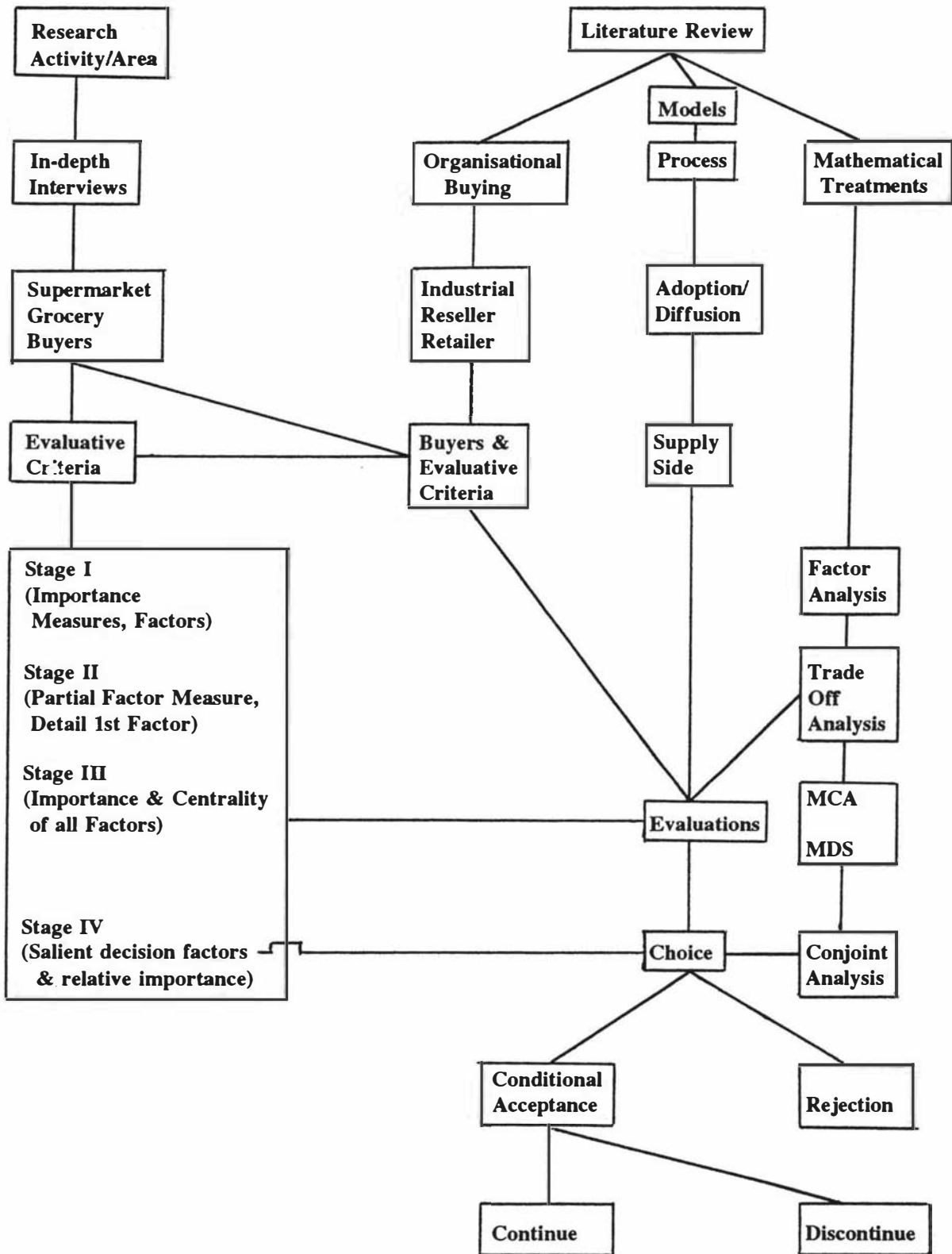
- supermarket retail grocery buyers and their evaluative criteria;
- the multifaceted nature of evaluations;
- decisions are of paramount concern; and.
- choice ultimately involves initial acceptance or rejection.

Figure 1.1 Modified and Extended Adoption Process Model



1. External forces include, for example, retail environment, government regulations, legislation, consumer demand, economic climate, competition, technology.
2. Internal forces include, for example, corporate ownership, attitude to risk and willingness to accept, buying structure, presence of buying committee and numbers, regard for consumer, buyer ages, experience, position in company, time as a buyer, time with company.

Figure 1.2 Ph D Study Process



1.5 Research Objectives

The overall intent of the study was the examination of new product acceptance from an 'internal' perspective only; that is, the processes and evaluations that are undertaken within a firm by a specific person or designated group of people, the buying or ranging committee.

Fundamental to the overall progress of this study was the determination of those forces, conditions and situations within the firm that govern the initial acceptance or rejection of new private labelled national brands (dry packed or canned) of food and grocery non-food product category propositions. The term 'new' as used here addresses 'copy cat' or 'me too' products which make use of small product changes such as packaging, size of packaging or product line variants. 'New' is not used here in connection with 'never before seen' or 'pioneer' products. This latter group is positioned at one end of the new product continuum. Initial search of extant literature suggested that the vast majority of new products seen and decided on are positioned at the 'me too' end of the spectrum.

Specific objectives were:

1. to ascertain how the term "new" product is defined amongst supermarket grocery buyers and gain some indication of the number of "new" products with which buyers are confronted;
2. to identify the nature and make-up of buyers and buying committees and to ascertain the role and influence these people and store management have in decision processes involving new products;
3. to determine the role and influence played by company policy and requirements in the process of new product acceptance or rejection;
4. to identify and measure important criteria associated with the evaluation trilogy (product-supplier-presenter) and to assess the interrelationships amongst criteria; and,
5. to determine and measure the importance and centrality of salient decision factors, their interrelationships and their relative importance in determining likely initial acceptance or rejection of new products.

1.6 Research Propositions

Paralleling the research objectives are a number of research propositions (P). For convenience, the propositions for assessment in this research are identified as P1, P2 and so forth and are set out below. The first proposition, evaluative criteria groupings, assumed prominence across most research stages.

- P1 that criteria of influence in new product adoption decisions can be grouped to form a trilogy involving elements of the supplier, the product and the presenter;
- P2 the importance noted for initial criteria will vary amongst respondents' companies and individual respondents;
- P3 the order of decision factors determined through principal component analysis will not be replicated by respondent assessment of importance;
- P4 measures of importance and centrality of decision criteria will vary;
- P5 the notion of centrality will diminish as importance diminishes;
- P6 the overall rank positions of decision factors determined by conjoint analysis will parallel those obtained by centrality methods; and,
- P7 the rank positions of decision factors derived from utility measures for a food and non-food item will vary.

In order to place the various objectives and propositions in perspective with the study's process and draw parallels between these and the various research activities, Table 1.1 portrays connections.

Table 1.1 Staged Research Activities, Objectives and Propositions

Stage	Research Activity	Objectives	Propositions
I	In-depth interviews & initial criteria importance	1 to 4	P1, P2
II	Partial factor measure & 1st factor detail	4,5	P3
III	Full factor importance, centrality & interconnections	3,5	P1, P3 - P5
IV	Measuring salient decision factors & relative importance	5	P1, P6, P7

1.7 Thesis Structure

The thesis comprises three sections. Section I is devoted to Background, Literature Review and Methodology, whilst Section II is concerned with Results and Discussions and Section III contains Ancillary Attachments.

With an Introduction to the study topic just outlined, Chapters Two through Four and Six is devoted to Literature Reviews. Chapter Two presents a brief history of New Zealand's retail grocery trade (and related channel intermediaries). This is followed by an exploration of Organisational Buying Behaviour in Chapter Three. Chapter Four presents Diffusion of Innovations and Adoption and specific aspects of the study's domain; that is, acceptance and rejection, and evaluative criteria. Chapter Five presents a brief discussion of a Modified Adoption Process model utilised as a background concept for the main study itself. Data Reduction and Utility Measures form Chapter Six. This chapter provides a discussion of the various mathematical techniques used during the course of the study (e.g., principal components, multidimensional scaling, conjoint analysis). Chapter Seven completes Section I and attends explicitly to Methodology, stating what was done and how, together with likely limitations.

Section II of the thesis is defined by Chapters Eight to Twelve. Chapters Eight to Eleven

specifically addresses the results and discussion of each stage of field research undertaken over a four (4) year period. Chapter Eight is exploratory in nature and identifies the Retail Grocers' Environment including the naming of a range of decision factors. Chapter Nine examines a partial set of decision factors and looks in detail at the first decision factor. In Chapter Ten, the full set of decision factors is examined from the point of view of importance and centrality with the express aim of establishing a sub-set of salient decision factors. These sub-elements are examined in Chapter Eleven through the application of a full profile conjoint analysis study involving a food and non-food product. Section II is completed by Chapter Twelve and contains conclusions of the study's process and the research. It also identifies further areas of research.

Section III addresses Ancillary Attachments and thus contains References, Additional Bibliography and Appendices.

CHAPTER TWO

LITERATURE REVIEW: THE FOOD AND GROCERY TRADE

2.1 Introduction

In its broadest application, the food and grocery trade in New Zealand, like other developed countries, covers all entities involved in moving products from manufacturer to retailer; that is, in the direction of the consumer. Note that 'end' or 'final' user, as in consumer, is not used since it is only to the point of sale in the chain of activities (distribution) that this research is concerned. This 'chain of activity' in the literature has been referred to as distribution, distributive trades, or channels of distribution. As such, a number of elements operating within this broad context could be explored. However, only the retailer or final reseller of food and grocery products forms the focus of the research. Despite this tight focus, it is worth noting that enterprises such as manufacturers, agents, wholesalers and retailers are involved in a complex arrangement of relationships and exchanges. However, it is the retailer that is the ultimate interface that provides the interconnection between manufacturer and consumer (Levy and Weitz 1992).

The place of this being brought together, the market, has been with us for centuries. Wherever people have congregated in various societies, merchants and traders have evolved. To this extent then, history plays an important part in the development of the exchange process generally, and with New Zealand retailing specifically.

Thus, this chapter traces some of the history and complexity of New Zealand's retail development, including 'core' ownership (where identifiable) over the past few decades to present day. The prime focus remains with the food and grocery retail sector (chains and co-operatives), though at times it is necessary to include some aspects of the wholesale trade given that the line of demarcation between the two is sometimes blurred. For example, some retail grocery business enterprises operate both wholesale and retail concerns in the distribution system.

For the purposes of reporting in this area, three (3) broad divisions are used; pre-1953,

1953 - 1983, and post-1983. Whilst these divisions may appear arbitrary, they are seen to mark definitive change points. For example, the pre-1953 era is largely historical, representing not only New Zealand's economic development from its origins in 1840, but also a settling in period after WW II and the Korean War. The second era noted (1953 - 1983) whilst spanning thirty (30) years notes continual change, not the least of which began in 1953 with the first ever Census of Distribution undertaken by the Department of Statistics. The referenced time period also marks added Government involvement through regulation and imposed controls and much of grocery retail development. Finally, post-1983 equates quite strongly with the considerable liberalisation and freeing up of economic forces initially under a Labour Government, in what came to be known as 'Rogernomics'. Despite a change in Government, a freer market economy has continued, and together these forces have resulted in a changed retail sector. Thus, each of these periods is seen as poignant in its own right, ultimately conveying an overall organisational climate.

2.2 Pre-1953

Whilst a wealth of information exists in the archives of individual grocery retailers and their older personnel, access to this information is limited on two accounts: one, such information is sensitive and jealously guarded within a highly competitive market; and, two, such information is not central to the aims and objectives of this thesis. In view of these conditions, one is heavily reliant on the written words of others, and here there is a dearth of information. As pointed out by Ayto and Bollard (1987) in their exploratory study NZ Distributive Trades, services and distribution studies seemed to be an exclusion area. They found only six studies (out of 179) concerning the distributive trades. The distributive trades, as used by these authors, referred to both wholesaling and retailing, further highlighting the likely scarcity of published information on early New Zealand retailing.

Emphasising the scarcity of published work in the trade generally and retailing specifically are the opening comments by W D Rose, then Director, NZ Institute of Economic Research who, whilst recognising the importance of retailing in society, goes on to say,

"Miss Christie's study is offered as the first major published study of the economics of New Zealand retailing." (Christie 1973, p.iii)

With the preceding in mind, and for ease of reporting a historical perspective, the material which follows is sub-divided into pre-1920 and post-1920.

2.2.1 Pre-1920

Prior to 1920, very little in the way of major retail grocery trade development has been recorded nor had it assumed a great deal of prominence. A grocery trade existed and functioned, largely under the auspices of individual entrepreneurs and shopkeepers, and certainly not in the organised form as it is known today. What organisation did exist was largely in the form of a few 'merchant wholesalers', barons in their own right in a developing country.

However, from early inception as a country in 1840 until 1920, much of the progress and development that occurred in New Zealand could be classed as 'infrastructure establishment'; that is, port development, communications, railways, gas works, hydro-electric power and refrigeration. All such development received attention at different points in time on a regional basis as the country evolved towards maturation and beyond colony status. These developments could be regarded as substantial necessities for extended commercial advancement, much of which started to unfold after 1920 as did increases in urban populations.

The pre-occupation with development is further signified by an apparent lack or minimum level of controls imposed by Government regulation of operating environments. For example, in these early years only two Acts relevant to the distributive trades seem to have appeared and both in 1908; that is, Mercantile Law and Sale of Goods.

2.2.2 Post-1920

One of the earliest recorded grocery trading establishments after 1920, and seemingly largest, were Self-Help stores in 1922, founded on the Wellington Co-operative Society (Poole 1969). Self-Help stores eventually operated throughout the country in competition to other independent grocers and early groups handling food. For example, United Buyers Ltd

operated under the name of Triangle Stores in Wellington from 1929. In the early twenties, Foodstuffs (Auckland) started trading, though as a formal company it was not established until 1925 through the then Auckland Master Grocers' Combined Buying Association (Barker 1972). The name alone sounds 'co-operative' in nature, yet this move marks the formal origins of retailer-owned co-operatives (as opposed to company-owned stores as in chains) in grocery trading. It should be noted that co-operatives as such were not a new phenomenon in New Zealand, first evidence of retail co-operatives arising in 1889 (Poole 1969).

After the Auckland unveiling of Foodstuffs, which operated under the banner name of Four Square, a 1932 Wellington meeting resulted in the formation of a national body, Dominion Wholesalers Ltd. whose purpose, according to Barker (1972), was to,

".. coordinate the groups, comprising Foodstuffs Ltd., Auckland, United Buyers Ltd., Wellington, and Amalgamated Buyers, Christchurch. Both the latter companies later adopted the Foodstuffs name." (p.148)

It is obvious from this, that established co-operatives or loosely knit groups existed in the retail trade in practically all main centres (in some cases earlier than 1922) and that grocery markets were served not only on a regional basis, but also by a strong breed of merchant wholesalers. Some evidence for this exists given that other groups developed, notably Grocers United Stores in Christchurch and Wellington Federated Buyers in Wellington (Barker 1972). However, the depression years, Government controls, the Second World War and erratic food supply slowed progress and perhaps saw the demise of some companies at the expense of securing others. Notable here is the ebbing of merchant wholesaler influence and the seeding of retail grocery competition.

Following the Second World War, a number of changes took place, not the least of which was the opening in 1948 of the first truly self service store by the Four Square Group (part of Foodstuffs Ltd., Auckland). Also in 1948, another Foodstuffs member was added, notably Foodstuffs (Otago/Southland) of Dunedin. By 1951, the self service concept, together with a growing selection of stock and better presentation of same, had spread throughout the country. It was a time of increases and further development as noted by an increase in the number of motor vehicles, attention to roads and the opening of an Inter Island Rail link in

1951 (Davis 1972).

In the post-1920 time frame further regulations effecting the distributive trades were commissioned. Notable amongst these were the Weights & Measures Act (1925), Industrial Efficiency Act (1936), the Control of Prices Act (1947) and Economic Stabilisation (1948). Additional control was imposed in 1938 with the introduction of import licensing and exchange controls brought about by a balance of payments crisis (Ayto and Bollard 1987).

2.3 1953 to 1983

This period in the food trade is full of development and change not only in terms of industry structure through mergers and acquisitions, but also importantly through the method of delivery to the consumer. Previously, the smallish store with long counter and grocer was the main mode of exchange between retailer and customer. In the United States, this method began to be replaced as early as 1933 by Albertson's Super Markets Inc. The supermarket was born! It was the dawning of a new innovation which took twenty five (25) years to successfully surface in New Zealand. The Four Square Group in Auckland opened its first successful supermarket in 1958. In the same year the first Foodtown supermarket in Auckland was opened. Commentary suggests that earlier attempts at developing supermarkets had failed and that the trade as a whole did not take the early ventures seriously. It was also suggested that the slow pace with which the supermarket did evolve was in part due to the attention being given to the further development and spread of self-service (Picot 1972). However, it also could be argued that New Zealand's recovery from the war years and her subsequent economic development was too slow to facilitate the freeing up of scarce capital that could be devoted to building new and larger stores. For the time being then, 'good enough would have to do', though the concept and reality of supermarkets was alive and developing in New Zealand.

2.3.1 Census of Distribution

Prior to the opening of the new delivery system, the then Department of Statistics in 1953 commenced collecting census data on the distributive trades (retail, wholesale and services)

in five (5) yearly cycles. Although there are recognised shortcomings with such information (e.g. questionable form, categories or descriptions used, changes in format and questions between periods, etc.), it nevertheless provides an overview of change and development in the retail sector where none existed before. In its own right, it provides a historical and near 'factual' context for the period of time in question.

Over the period of time that the Census data has been gathered, a number of observations can be made about the vehicle used to assemble the data, namely, the questionnaire. One observation is that the term self-service, which was progressively introduced from 1948 and spread rapidly until 1951, first appeared in the 1958 Census of Distribution figures. It was last used in 1967. However, time lags aside, Eden (1972) notes that by 1968, "one out of every two grocery stores employed self-service methods." (p.139)

Another term used in Census collection between 1953 and 1967 was 'multiple', described as a store of 4 or more units and operated under common ownership. For the period in question, the reporting of multiples grew in percentage terms from 9% of retail outlets to 13%. Accompanying this growth, the grouping attracted an increasing share of retail turnover.

Yet another description of importance was the retail categorisation of 'Food & Drink', used extensively between 1953 and 1972. It is within this general group of retailers that grocers, together with fruiterers, butchers and hotels were categorised. This general category as a percent of all retail shops decreased 5 percentage points between 1953 and 1972 despite an actual 41% growth in number of outlets. In other words, growth in retail outlets other than 'food & drink' during this period increased at a far greater rate.

In the 1972 Census, the Food & Drink category was sub-divided further as 'packaged' and 'consumed', the latter reflecting hotels, fish and chip shops, and restaurants. The former held butchers, grocers, fruiterers and accounted for 70% of 'Food & Drink' establishments. Half of these were classified as 'grocers & dairies'. Also undertaken for the first time, with no specific repetition, was the inclusion of shopping malls. Here, 45 malls were indicated as containing 762 retail stores. The first shopping malls (either neighbourhood or community) appeared on the New Zealand scene in 1963.

Another lagged anomaly appeared in the 1977/78 Census. Here, major changes were witnessed: supermarkets were mentioned and counted for the first time; and, classifications by type of customer were included using a revised New Zealand Standard Industry Classification (NZSIC) schedule. Previously, business identification was self-defined. However, the interest here is that supermarkets as an entity first appeared in the environment in 1958 and developed relatively quickly from that time onwards.

In view of the changes rendered on the collection instrument since its inception, very few meaningful comparisons across the years can be drawn. However, of note is the changed base of ownership in retail stores generally, and grocer and supermarket numbers specifically.

2.3.2 Retail Store Ownership: 1953 - 1972

The Department of Statistics used three (3) ownership groupings: individual, private company and public company. As seen in Table 2.1, one of the most dramatic developments to occur was the drastic reduction in the number of 'individually owned' establishments. At the time of the first Census (1953), 51% of all retail units were individually owned and accounted for about 23% of all sales. By 1972, however, the level of ownership was halved, standing at 23%, whilst sales drooped drastically to 6%. By contrast, 'private company' ownership moved from 31% in 1953 (where they accounted for 51% of sales) to 55% in 1972 (and 61% of sales). 'Public registered companies' who accounted for 3% of stores and 15% of sales in 1953 moved ahead to 6% of stores and 23% of sales by 1972. This bears witness to the virtual 'role reversal' and change in fortunes within retail activity generally.

Table 2.1 Retail Ownership Comparisons, 1953 - 1972

Ownership	% Retail Stores		% Sales	
	1953	1972	1953	1972
Individual	51	23	23	6
Private Company	31	55	51	61
Public Company	3	6	15	23

Source: Census of Distribution, 1953 - 1972, Department of Statistics, Wellington

As surmised by Table 2.1, an immense amount of company as opposed to individual activity emerged in the retail environment during the 1950s and into the 1970s, a phenomenon that has continued given the shrinkage and concentration of present-day ownership.

2.3.3 Grocers, Dairies and Supermarkets: 1977 - 1982

Due to the non-compatibility of data collection methods, only 1977 and 1982 Census periods are compared and these make use of the NZSIC system. Previous years allowed respondents to 'self-classify' themselves and thus are really not comparable. As an observation of earlier submissions, however, grocers tended to increase in number from 1953 through to 1972. Dairies (a New Zealand equivalent to a 'corner store') on the other hand increased in number until the mid 1960s, but decreased thereafter. In all of this, however, the term 'grocer' according to Christie (1973) is heterogeneous as a store type and, "comprises a conglomerate of small corner stores as well as large self-service supermarkets." (p.44)

For ease of comparison, 'grocers and dairies' have been combined for the periods under examination as shown in Table 2.2.

Table 2.2 Number of Grocers, Dairies and Supermarkets, 1977 - 1982

Store Type	1977	1982
Grocers & Dairies	4024	3818
Supermarkets	327	344

Whilst not directly comparable, the loss of numbers noted for 'grocers and dairies' in Table 2.2 goes part way to amplifying the demise of the individual owner, as against the growth in private and registered companies. In the early 1980s, individual efforts in grocery retailing were losing further ground to large companies, a feature that has continued into the 1990s.

2.3.4 Competition

Whilst it has been noted that competitive information is difficult to obtain, it does exist in sanitised form within Annual Reports, Company Information Releases and early editions of Grocer's Review. These have formed the basis of what follows.

By the early 1980s, L D Nathan with its Woolworths stores emerged as New Zealand's largest retailer generally and supermarket chain specifically as far as number of outlets is concerned. This was achieved by its takeover of McKenzie interests in 1979 and Bond & Bond in 1973 both of whom had retail and wholesale grocery interests. After the merger with the latter, Associated Wholesalers Limited (AWL) was a wholly owned wholesale grocery subsidiary of L D Nathan, a factor that further enlarged its supply activity in the market generally.

L D Nathan competed strongly and nationally with the regional combinations of Foodstuffs (Auckland, Wellington and several South Island representatives), who it is estimated had between 30% and 40% of New Zealand's grocery business during the mid 1970s. These organisations, already well established as grocery wholesalers with extensive retail connections through a co-operative network, further enhanced their own position through the absorption of the Self-Help chain of mini markets during the mid to late 1970s. Takeovers,

acquisitions and mergers are not, as some might believe, the sole domain of the 1980s and 1990s. As stated in 1975 by R N Clarkson, Chairman of Directors, Foodstuffs (NZ) Limited,

"Over recent years many changes have come about in the field of grocery distribution. Amalgamations and take-overs have been common until today it is in the hands of a rather restricted number of distributors, both wholesale and retail." (Foodstuffs (Auckland) Ltd, Annual Report, p.9)

Foodtown, from its inception in 1958 and its merger with the Picot family interests of Progressive Enterprises in 1961, continued to establish its base in Auckland city and the region generally. By 1981 Foodtown opened its first store outside of the region in Hamilton with plans to expand further throughout populated areas in the North Island.

The Auckland area during the 1970s and early 1980s intensified as a base of grocery trade competition with the founding of 3 Guys discount supermarkets in 1973. This business enterprise competed strongly and successfully with both Foodtown and Foodstuffs in the Auckland region until its takeover by Progressive Enterprises in the early 1980s.

Whilst the vast bulk of retail activity took place in the North Island during the 1970s and early 1980s, the South Island was not without certain elements of change. In 1981, the market received a new competitor in the form of Countdown Supermarkets, which continued to grow during the 1980s.

2.3.5 Regulation

Regulation, it seems, has been part of the New Zealand's distributive environment for years. As indicated by Ayto and Bollard (1987),

"Regulation has figured prominently in New Zealand. Successive governments have seen it as their task to address many economic problems directly through a series of regulatory actions." (p.65)

Although the origins of these government actions commenced in a pre-1953 time frame, their existence carried forward into the post war years and beyond. In fact, the stage was set for successive government 'intervention' from the 1950s onwards.

Between 1953 and 1983, countless number of price controls and other general regulatory elements were imposed upon the distributive trades. Examples of these include the Trade Practices Act (1958), Price Justification Scheme (1971), Local Government Act (1974), The Commerce Act (1975), Price Surveillance Regulations (1979), the Food Act (1981) and Economic Stabilisation Regulations (1983). These and other acts and regulations imposed controls on the operating environment of the grocery retail trade in both general and specific contexts.

2.4 Post-1983

Retailing cannot divorce itself from politics and political processes, whether these are Government centred or individual enterprise initiated. Whilst this statement may seem trite, it is intended to reflect the vulnerability of a State's system to political activity, especially in the marketplace, and business dealings generally. An eternal triangle of Government, Business and Society exists and changes with time.

In October 1984, a new look Labour Government was elected and took control of a flagging economy. When elected no New Zealand citizen (businesses included) really had an inkling about what was in store for them in the new Government's comprehensive packages of economic reform, later known as 'Rogernomics'. It is fitting that the last stage in examining New Zealand's food and grocery trade should commence with the 'dragons of change'. It issued forth an era that witnessed the death of many of New Zealand's sacred 'cows'!

The economic reform packages of the Labour Government took several forms and unfolded over a number of years. One of the highlights and centre points of this Government was its concept of user-pays amongst a growing base of restructuring and re-organisation both within Government circles and private enterprise. In October 1986, the much talked about and little debated concept of Goods & Service Tax (GST) was introduced. Initially struck at 10% (and later raised to 12.5% in 1989), GST was applied to every known transaction. Within the retail grocery trade, it resulted as a tax on the total grocery bill. The nett effect of GST according to some industry spokespeople was a slight reduction in spending, many people having spent up before GST introduction.

Within the supermarket industry generally, advances in efficiency were being made. In 1985 and onwards, sophisticated scanning devices at front end check-out positions were being introduced on a regular basis. Such electronic systems put first hand product traffic information in the hands of buying organisations generally, and buyers particularly. It facilitated the sales analysis of any product by a number of indicators (e.g., product line, category, store, season). The power syndrome in buyer activity had swung to favour the buying organisation, thus presenting a different complexion to supplier - retailer relationships.

Accompanying the restructuring that was occurring in New Zealand during the mid 1980s and onwards was a generally depressed economy, worsened by a market crash in 1987. Increasing unemployment, static population growth and a decline in personal disposable income all lent themselves to a slowed pace in spending thus effecting food and grocery retailing activity. This was further compromised by the Government's welfare benefit cuts in 1991. However, against this background, competition in the retail grocery trade continued and indeed intensified.

2.4.1 Grocers, Dairies and Supermarkets: 1987 - 1992

The continuing slump in Grocers and Dairies noted during the 1970s continued into the 1980s and beyond. This was largely at the expense of the increase in supermarket outlets, though this body as a group witnessed some rationalisations; that is, older, smaller and inefficient outlets were closed though some survived by further refurbishment. To some extent this is reflected by the 'supermarket' figures shown in Table 2.3. Notwithstanding this observation, the number of Grocers and Dairies in 1992 decreased by 46% over their level of 20 years ago.

Table 2.3 Number of Grocers, Dairies and Supermarkets, 1984 - 1993

Store Type	1987	1992
Grocers & Dairies	2820	2683
Supermarkets	392	387

2.4.2 Competition

Rationalisations account for the decline in supermarket numbers noted in Table 2.3, yet construction of supermarkets continued for most chains during this period. Tight economic conditions of the time led to expansion of the discount end of the supermarket spectrum, reflecting a 'value for money' orientation. Consolidation of market position appears to have been an operating motive. Here, Foodtown and 3 Guys moved further afield from Auckland, whilst a South Island rival in the form of Countdown increased its holdings of North Island outlets.

The economic events of the late 1980s and early 1990s that effected competition centred around supermarket ownership through takeovers and acquisitions. Just mentioning a buyout had the result of inflating a company's share price (Baird 1986). However, the interest in the supermarket businesses had a number of attractions, not the least of which was property. Baird (1986) suggests that whilst prime property was needed by retailers for growth and development, its accumulation was attractive. He noted that Progressive Enterprises recorded about \$44.3 million under Land & Improvements in their 1986 annual report.

The 1987 - 1992 period witnessed considerable 'trade' in New Zealand supermarket interests. In 1988 the large Australian retail group Coles Myer bought into Progressive Enterprises, operators of Foodtown and 3 Guys. This was followed in 1990 by L D Nathan selling its grocery interests (Woolworths, Big Fresh and Price Chopper) to Dairy Farm International. In 1992, Foodland Associates Limited (FAL), another Australian concern, bought Magnum Corporation's wholesale and retail grocery interests (Countdown, J Rattray, G U S). The nature of New Zealand's grocery market is both food and property development.

2.4.3 Regulation

In the post-1983 period, regulations as such have taken a less crucial role largely because of the restructuring which occurred within the economy. Progressively since 1987, import licensing has been removed which has led to a strengthening of business activity and competitive stances. To some extent, the takeovers and acquisitions during the years in

question could be seen as ensuring a smooth flow of cross-border grocery product transactions and exchanges. However, despite the presence of CER, a greater flow of product exchange between New Zealand and Australia is limited given the slow progress on agreeing to a Joint Food Standards Code. In addition, the issue of takeovers and acquisitions has seen the Commerce Commission maintaining a watchful eye on the 'balance' of competition in the marketplace. As further consideration, the role played by the Resource Management Act (1991) and Planning Tribunals in various parts of the country imply regulatory control on future retail grocer developments.

2.4.4 Grocers, Dairies and Supermarkets: 1993 - Present

In 1993, Coles Myer sold down its share in Progressive Enterprises, which were later taken up by FAL (FAL-Progressive merger), making this group the second largest grocery concern in New Zealand after Foodstuffs. With this manoeuvre, and despite operating different 'store brands', the focus of control in New Zealand's grocery business rests now with three corporate chains: Foodstuffs, Progressive Enterprises and Dairy Farm International. Each of these entities has within its collection of store brands those that are designated as full service and those that could be regarded as semi-discounter or discounter in nature (e.g., Pak 'N Save, Countdown/3 GUYS, Franklins at Big Fresh). These operations have contributed to the 'push' on retail prices and facilitated the level of competitive activity in the marketplace. With this respective development at the discount-end of the market, it is also believed that the existing and remaining route trade (i.e., corner stores and dairies) use these discount stores as their respective 'cash and carry' outlets. At the other end of the spectrum, Foodtown launched its '2001' supermarket concept in Auckland complete with cafe and banking facilities, and an emphasis on fresh foods. Supermarkets change as management and people see them.

2.5 Summary

Studies of New Zealand's distributive trades generally and retail specifically are far and few between. Published studies in these areas likely number in the low double digits, though there is one suggestion that it is even lower. The reason for this could be as much about

research interest as it could be about retailer cooperation. Given the extreme competitive activity amongst grocery retailers particularly, any lack of cooperation (in the past at least) perhaps reflects a lack of trust or credibility that 'owners' bestowed on researchers.

Grocery retailing has existed for several decades in New Zealand. In earlier times, it was undertaken by a series of independent shopkeepers, supplied by a network of wholesaler operations scattered throughout the country. However, grocery retailing as we know it today emerged from the late 1950s largely as a result of structural and economic changes occurring at the time. Part of the change also could encompass a drive for efficiencies. However, retail grocer growth has had its costs for individuals (the demise of the corner shop) and corporate bodies (amalgamations and takeovers).

The pace of change in the grocer retail sector has slowed. It has been accompanied by a reduction in the number of competitors and an intensification in the level of overall competition. However, the change of recent times is more controlled, albeit as a direct result of Commerce Commission or Resource Management Act interventions. Imbedded in this change, however, are the strategic initiatives of the three remaining supermarket groups each striving for its own identified level of efficiency.

CHAPTER THREE

LITERATURE REVIEW: ORGANISATIONAL BUYER BEHAVIOUR

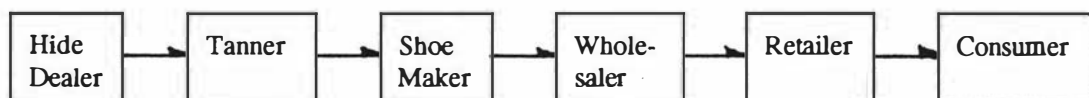
3.1 Introduction

Buying or purchasing activities as undertaken by any organisation generally represents the pivotal point or interface between exchange parties. These activities are the meeting place of competing viewpoints and offers, and the nexus of organisational life and continuance. Without buying (though the prospect of bartering or other forms of exchange are present), organisations would cease to exist and function. Thus, the importance and understanding of organisational buying activities cannot be emphasised too much. As stated by William Marx, AT&T Executive Vice President (Telephone Products):

"Purchasing is by far the largest single function at AT&T. Nothing we do is more important." (Tully 1995, p.51)

In a global sense, the term 'organisational buying' applies to all manner of organisations that buy goods (and services) for their own industrial purposes; that is, as input into other goods, or use in the production of those goods or services. In short, organisational buying (or industrial buying as it is sometimes known), does not reflect the final consumer, rather it represents all intermediate stages through which goods pass in the chain of distribution. Figure 3.1 portrays a possible, though abridged, transaction chain for leather shoes (adapted from Kotler et al, 1988, p.160).

Figure 3.1 Transaction Chain for Shoes



In Figure 3.1, all of the stages up to the point where trade activities engage the final consumer have their own buying activities. This is the domain of business markets which are seen as separate and distinct from consumer markets even though some overlap between the two exists. Gross et al (1993) defined the situation as:

"A business market is an individual or an organisation that sells goods and services to other business people, businesses, institutions, or organisations. The business marketer may also be called a business-to-business marketer or seller." (p.6)

For the purposes of this chapter, organisational buying takes place in the business market chain and is divided between industrial markets on one hand, and reseller markets on the other. However, the latter market for specific reasons of focus is refined in order to examine retail markets generally and grocery retailing specifically. This fine tuned focus is necessary in order to accommodate supermarket retail grocery buying. Central, at this level, is the role played by the buyer, his or her evaluative process and the emergence of evaluative criteria used to assess products, suppliers and sales representatives. The emphasis over the next few sections concentrates on the nature of industrial and reseller markets, buyer processes and activities and the evaluative process. Within the area of buyer processes and activities, an overview of models of organisational buying, buying classification schemes and buying activities are examined. In the area of the evaluative process, the process itself and criteria used as a basis of evaluating products, suppliers and sales representatives are examined.

3.2 Nature of Industrial and Reseller Markets

3.2.1 Industrial Market

The term 'organisational' or 'industrial' buying is often used to describe the same activity. Moreover, Gross, et al (1993) show equivalence amongst a number of other terms associated with these two broad activities several of which include business buyer, industrial or organisational buyer, purchasing agent, purchaser and customer amongst others. Whilst several terms can be used to infer the same endeavour, the purchase activity itself applies to all manner of organisations that buy goods (and services) in order to produce other goods and services. In relation to business markets, Morris (1988) indicates,

"the focus is on a flow of goods and services which produce or become part of other goods and services, or which facilitate the operation of an enterprise .. (ultimately impacting) .. upon the performance of day-to-day business operations, and thus the viability of the enterprise." (p.5)

Thus, as a process, there exists an 'input-output-input' chain involving exchanges and

relationships. These relationships involve interdependent actions by companies trying to achieve their respective objectives through an interaction (Morris 1988).

With regard to the creation and movement of leather shoes through various levels and exemplified by Figure 3.1, a shoe maker (manufacturer), in addition to buying leather from a tanner, also buys a variety of other components needed to complete the making of shoes. Included would be specific types of heels, laces, threads, machinery, labour and energy (Kotler, et al, 1988). In essence then, many organisations and people enter the production system of the industrial or business market and become involved either directly or indirectly in buying activities. In short, any industrial enterprise is involved in multiple supply transactions in order to achieve their respective organisational objectives. As Morris (1988) suggests, industrial marketing is about creating value amongst customers using goods and services to meet company needs and objectives.

In the buyer behaviour literature generally, the existence and recognition of needs is seen to act as a catalyst in determining the start point for most decision processes, which subsequently and often involve multiple decisions. Gronhaug and Venkatesh (1991) suggest that needs and need recognition are in part the stimuli that elicit responses to evoked problems, or that which gets a buying process started. They tacitly acknowledge in their 'model of organisational buying needs' that evoked problems are subject to internal and external forces. An example of these might be searching for a supplier that gives better service delivery (external), or a desire to implement a new technology in a production system (internal). Both involve objectives and needs.

Although any organisation's buying activities can be seen to facilitate achieving organisation objectives, it is perhaps the clear and definitive creation or addition of value to component elements making up a finished product within the 'input-output-input' chain that lends itself to identifying a major difference between 'hard core' industrial buying on one hand and reseller buying activities on the other. The former essentially is the 'doer', whilst the latter is the 'temporary recipient'. The 'doer' is more likely to impose external need recognition on resellers in the form of "here is our new product", as opposed to resellers as 'temporary recipients' going out of their way to "look for new products".

3.2.2 Reseller Market

If one regards resellers collectively as 'temporary recipients' of products, then one also is likely to envisage resellers as being outside of, or removed from the product's actual production. This is not to suggest that resellers are not part of the production system, rather it is used here as a means of distinguish between the two. Several different terms apply to a variety of business enterprises. For example, agents, industrial distributors, wholesalers and retailers operate at or near the end of the supply chain as resellers. However, without being specific and naming all such entities, resellers (and retailers particularly) operate to facilitate the movement of goods towards end users. They are all part of a trade group, loosely described as intermediaries, that operate between manufacturers and end users, they include the final links in the chain.

The term 'reseller', however, requires clarification. In its generic form, the word defines for example both wholesalers and retailers in that both are temporary recipients of goods. To this end, both acquire goods (manufacturing output facilitating their operations) for resale to others. The differentiating point between the two lies not with the output that is acquired, rather it lies with a description of **others**. Simply stated, 'others' for wholesalers are generally a variety of retailers, whilst 'others' for retailers are shoppers, the final end user or retail store customer. It is this particular group, the retailer, to which further reference is made in the context of the term reseller.

Resellers (or retailers), as pointed out by Reeder, et al (1987),

"... like industrial firms, do not purchase goods for personal consumption, but do so to facilitate the operations of their businesses. That is, everything that is purchased is purchased to make a profit." (p.21)

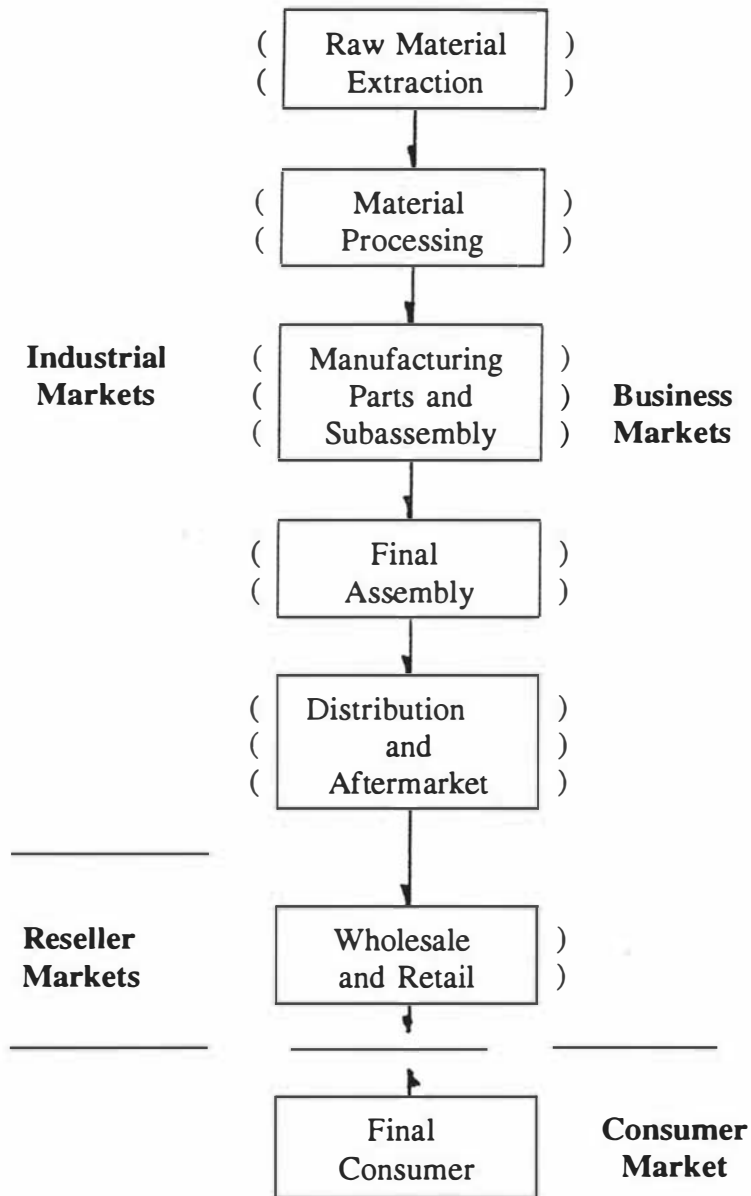
However, it is possible to imagine that some profit is indirect in nature as in the case of a service or resource purchase (e.g. electricity) used to assist the functioning or running of a shop. To some extent though this seems to be covered by the phrase, 'to facilitate the operations' in Reeder et al's quote.

The fact that commercial organisations operate a business unit in order to make a profit essentially minimises the usefulness of the above quote. More pertinent may be the fact that a retail market acquires goods for resale or renting at a profit (Kotler et al, 1988), though no mention of an end user exists. However, the emphasis lies in resellers 'acquire goods'. Nonetheless, in the context of the discussion, it needs to be added that in many cases **resellers usually** and retailers particularly acquire end-user **finished** goods. It is noted here that some resellers also acquire components for inclusion in other processes. However, the acquisition of end-user finished goods separates industrial and retailer markets, and infers taking title (ownership) of the goods as well as gaining assortment of product for on-selling. For example, clothing retailers obtain a range of shirts, suits, ties, socks and so forth from more than one supplier. Similarly, a grocery retailer on a larger scale acquires a large assortment of finished, consumable goods from a wide array of suppliers.

When one considers the nature of the two types of markets (industrial and reseller/retailer), subtle differences exist. These differences are seemingly functional and centre largely on an organisation's respective activities in the marketplace. Although Kotler (1991) sees resellers providing time, place and possession utility, it could be argued that his use of the word 'reseller' is too broad and thus deficient to be of suitable use.

To assist the delineation between industrial markets per se and reseller markets, Figure 3.2 offers a pictorial interpretation of what Morris (1988) refers to as the 'production chain' (p.11). The figure extends on the Morris 'model' by adding the 'Final Consumer'. Morris's notion of a production chain is itself an adaption of earlier work by Hass (1982) and Ames et al (1984). It is identified in Figure 3.2 as 'The Business Market String'. As shown in Figure 3.2, business marketing is seen to encompass six (6) business entities and activities from 'Raw Material Extraction' up to and including the 'Wholesale and Retail' sector. All represent various domains of organisational buying. In terms of these 6 groups, the first 5 ('Raw Materials' to 'Distribution and Aftermarket') represent industrial markets, whilst the 6th group, 'Wholesale and Retail', is the sole representative of reseller markets. Within this last group, the retailer is the entity most likely to have direct contact with final consumers. It is really only at this fine tuned level (retailer) that research concern about buying activities begins.

Figure 3.2 The Business Market String



3.3 Industrial and Retail Buying Differences

It is evident from assorted research (Kline and Wagner, 1994; Wagner, Ettenson and Parish 1989; Hirschman 1981) that differences between industrial and retail buying activities are real, and that much of the difference cannot be accounted for by continual reference to organisational buying models which, at their best, are suggested to be inadequate in reflecting

decision making at a retail level. As pointed out by Kline and Wagner (1994), " .. the focus of such models is the behaviour of industrial, not retail buyers." (p.76) Such assertions, and indeed the input from retail texts (e.g., Mason et al 1993; Davidson et al 1988), suggests that there is enough difference between the two general industry groupings to warrant elaboration.

3.3.1 Industrial Buying

One striking feature of industrial markets is the generic notion that raw material, unfinished or semi-finished products are bought, that these in their own right constitute large quantities, that they involve large dollar values and that they are purchased for inventory and scheduled usage. More often than not, products (or materials) bought are more technical in nature and usually carry with them strict stipulations in terms of their physical dimensions and the jobs for which they are intended.

It is often the case, in view of the product, that technical support (a service element) is also bought or provided with products and that a longer buying process evolves (especially for new products). In addition, the products or materials purchased affect the operations of the company making the purchase. As a bottom line, the purchasing company sometimes has the option of making or leasing the product in question as opposed to buying it.

Possibly due to the nature of the markets with which organisational buying interfaces (e.g., government, institutional, commercial), the very nature of any transaction or relationship is different. Government and institutional markets demand relative transparency in their respective dealings due to the public nature of such organisations. As a consequence, various bidding programmes or schemes are entered into by commercial enterprises whose 'real' customers are other organisations.

As a final collection of observations, differences between industrial and retail buyers can be seen in the areas of packaging, markets and decision processes. In the industrial sphere, packaging will more likely reflect protection for a product. The market will involve a smaller audience (i.e., fewer customers), and reflect a decision process that is likely to have been longer and had more people involved in various buying tasks and decisions. The length of

the decision process and the varying level of involvement by others, characterised in the literature as a decision making unit (DMU), is suggestive of diverse influence on buying decisions which can be both lateral and horizontal in organisation make up (Gross et al 1993, Bingham and Raffield 1990; Morris 1988; Reeder, et al 1987; Hutt 1979).

Business marketing (and thus industrial buying) as pointed out by Gross et al (1993) is different and deserves special attention. Whilst Gross et al were drawing comparisons between business and consumer markets, the comparisons nonetheless are seen to parallel those differences that exist between business and retail markets. Whilst the differences may be one of degree, Gross et al note that other aspects are unique.

3.3.2 Retail Buying

Reeder et al (1987) would have one believe that from a marketing perspective, retailers are considered as an element of the marketing mix (place or distribution) and thus similar to industrial buyers. Whilst retailers may be regarded as occupying a 'place', they certainly also are perceived as being different. Moreover, in a brief introduction, Swindley (1992 b) positions retail buying on an equal footing with the success factors of retailing; that is, location, location and location. He indicates that retail buying, ".. occupies a central role in a retail company, providing the essential link between the supplier and 'goods inward' function, and the customer and 'goods outward'." (p.533)

Retail purchase activities, whilst often centralised, result in defined markets for many chain operations, and thus involve buying finished products for resale to the consumer market. This in its own right may constitute dealing with an assorted range of suppliers, as well as buying for a diverse market. Whilst many retail products may be packaged initially for bulk protection (known as 'outers' by the trade), the packaging, in addition to being informative, must be attractive, appealing and, in many instances, functional to the end-user. Chang and Sternquist (1994) see retail buying as obtaining merchandise for profitable resale to consumers. This view supports Heinritz et al (1991) who suggested that reseller buyers play a dual role as both buyer and seller.

Due to the proximity of retail establishments to the end-user market, the importance of customer demand may well assume increased status and impact more heavily on retailer buying decisions than otherwise might be the case with industrial activities. This assumed heightened importance given to demand could be accompanied by an increased sensitivity amongst retailers to price. Whilst price alone takes on greater relevance in combination with quality and delivery (Shiple 1985), it may be less important than potential mark up (Heinritz et al 1991). These elements force the issue of concern about demand. This sensitivity, however, is likely to be product specific and needs to be tempered by consideration for other financial aspects involved with any retail transaction. This aside, the relevance of customer demand as seen by Chang and Sternquist (1994) further reflects its importance when one considers that "retail buyers, in contrast to industrial buyers, frequently rely on past observations of consumers' shopping patterns" (p.64), an ultimate indication of demand.

It has been recognised for some time that retail buying activities can reflect one of two buying situations; that is, individual or group decision making. Hutt (1979) has pointed out that a majority of supermarket retailers use a buying committee for decisions involving product selection and deletion. Obviously, the involvement of multiple participants (Hutt suggested 4 to 6 people) reveals organisation preference not only for its existence, but also for the numbers involved. At the retail level, the buying committee mirrors the DMU concept shown in the industrial sector. However, individual decisions also exist at this level and thus are perhaps more likely to reflect consumer decision making. Here, Kline and Wagner (1994) believe that examining consumer models on decision making, especially from an information perspective, might be more useful, yielding a better identification of information sources affecting retail buying decisions.

As a final note concerning differences between the two markets, retail activity, especially that involving grocery items, can hardly be regarded as dealing with technical products requiring similar support. Technical complexities in producing food items do exist, but there is little, if any, need for exacting specifications such as seen in the industrial market, since the products in question are consumed essentially to sustain life. However, this statement does not detract from or preclude the need and legal requirement to identify (and display) the content of food items, a feature absent from many sectors of the industrial market.

3.4 Models of Organisational Buying Behaviour

Hillier (1975) highlighted that "as industrial marketing has evolved ... various models of organisational behaviour have been proposed ... these are but the first stages in the development of a comprehensive theory of industrial buyer behaviour." (p.99) However, prior to this point in time (and indeed even today), industrial buying theory, expressed in the form of models, continues to evolve thus adding further information to an already comprehensive literature base. Whilst comprehensive may be one expression, Dnes' and Dnes' (1983) were of the opinion that the study area of industrial buying behaviour had developed unevenly, whilst McQuiston (1989) felt that the research in the area was fragmented and difficult to operationalise. The basis for these opinions seems to rest on the fact that a variety of seemingly unconnected models have been developed over time, ones which, according to Ward and Webster (1991), reflect the interests of the researchers involved. Thus, as an 'historical' expression, the extant literature is replete with an assortment of models which fluctuate in perspectives, orientations and outlooks. A chronological ordering of pertinent literature reflecting some models is contained in Appendix A. Given the depth and diverse nature of the subject area, this section is arbitrarily divided between 'early era' and 'current age' models.

3.4.1 Early Era Models

Business buying decisions have been observed, described, theorised and modeled in a number of different ways. Early efforts of discussing various aspects of organisational buying behaviour (OBB), for example, buying motivations, negotiations, selling, would appear to have been largely descriptive in nature, mainly a likely reflection of the then relative newness of the field of study. Pioneering writings by Copeland (1924), Dunkin (1940) and Cyert, Simon and Trow (1956) are perhaps noteworthy in this respect. The seminal work of Cyert and March (1963) with their conceptualisation of a 'behavioural theory of the firm' marked a shift in thinking. This paved the way for the development of a series of decision process models, most prevalent and seemingly characteristic of much of OBB, together with what is referenced as 'comprehensive' models (Ward and Webster 1991; Krapfel 1982). In this regard, the mid 1960s through to the 1970s witnessed the development of models that

specified and described a range of variables and later their respective associations and connections. In this context, the contributions of Webster (1965), Robinson, Faris and Wind (1967), Webster and Wind (1972), Sheth (1973) and Hillier (1975) are classics in terms of their outlooks and approaches. Indeed, the models themselves of this era, their concepts and variables are often referred to in one manner or another in several industrial marketing or business marketing texts today (e.g., Gross et al 1993; Hutt and Speh 1992; Bingham and Raffield 1990; Morris 1988), a testimonial to their respective utilities and abilities to define the scope of OBB. In addition, the legacy of this early era lies in its richness of conceptual material and its description of complex business decisions. The material, together with a considerable array of academic research, has yielded, amongst other things, a recognition of buying stages or a decision making process (DMP), the conception of 'buyclasses' and the 'buygrid'. The buying centre or the decision making unit (DMU) and the roles played by those involved in buying decisions, the differential effects of internal and external environments has likewise been identified. In addition, group processes and individual characteristics, conflict and its resolution and the likely impact of information sources on buying decisions are other topic areas defined. The interaction or blending of this array of information certainly points to the likely complexity and multifaceted nature of OBB.

There is a plethora of models associated with this era, many of which are conceptual in nature and thus untestable. Eveland and Rogers (1979) suggest a cautionary stance about models in this era urging researchers not to lose sight of what models are intended to be. They are, as they submit, abstractions of reality served in symbolic form. Whilst many models are capable of classifying relationships and thus provide knowledge about problems, they are nevertheless conceptions representing varying levels of usefulness, though at the same time offering a basis for exploration.

Despite this protestation, the untestable nature of these early models has been identified as a weakness which, for many, is seen as limiting their usefulness. For example, Webster (1984) notes that the Webster and Wind (1972) model does not deal with the specific influence of key variables at all well. Morris (1988) adds further to limitations by indicating that it is difficult to devise a model that gives recognition to all organisations and buying situations, that there is little guidance about interactions and that variable linkages are uni-

directional. Further, Bingham and Raffield (1990) suggest that many early models of buyer behaviour are incapable not only of depicting buying situations, but also of being quantified. However, they also believe that the early models are insightful about buyer behaviour and offer a basis for evaluation by marketers.

3.4.2 Current Age Models

In the general framework of modelling OBB, descriptive processes and comprehensive model development gave way to 'hypotheses for further exploration' involving buyer-seller dyads, exchange transactions and relationships. This phase, labelled by Ward and Webster (1991) as 'Interaction and Relationship Models', tends to overlap with the tail end of the early era in that on a time line, the late 1970s and onwards represents its domain. Their label tends also to act as a grouping variable in that several interaction and relationship approaches are identified by the authors. For example, dyads, transactions, buyer-seller relationships, negotiations, exchanges and adoption/diffusion modelling represent the subject areas covered and the current age in thinking. Representative of works in this regard are those offered by such authors as Dwyer, Shur and Oh (1987), Berkowitz (1986), Hakansson (1982), Krapfel (1982, 1985), Bagozzi (1978) and Barclay (1972).

In terms of the current age of thinking, it is engaging to note from some of the literature accumulated by Ward and Webster (1991) that dyadic relationships were initially discussed in the early 1960s (e.g., Evans 1963) and later picked up by Wilson (1977) and Bonoma, Bagozzi and Zaltman (1978). In one context this could represent a categorical statement of the strength of thinking and writing occurring during the early era (1960s - 1970s) and discussed above, yet in another context, the absence of exchange and relationship writings and pursuits until recent times is condemning and stifling. The absence or limitation of dyadic relationship writings is hinted at by Barclay (1972) as being due to different perspectives operating in North American as opposed to European schools of thought. That philosophical differences could act to curtail earlier recognition and development of dyadic relationships is a further indictment on scholarly pursuit. This aside, Webster (1984) acknowledges the individual nature of organisational buying behaviour, despite the setting. Further, he attests to the central role of individuals in defining and taking action on problems.

It is the examination of buying from a 'dyadic' view and the issue of relationships that stem from this and interorganisational contacts that should define the parameters of studying OBB, a view not without support in the literature (Anderson and Chambers 1985, Johnston 1981, Bonoma, Bagozzi and Zaltman 1978). Interactions and relationships of buyers and sellers is one key to understanding business-to-business marketing (Barclay 1972).

In examining models of organisational buying behaviour, it is useful to maintain a broad and dispassionate overview, thus reducing the likely side-effects of getting caught up in the differences offered by divergent philosophical viewpoints. Models range from the general and descriptive, which provide understanding in many areas (Bunn, 1994), to the specifics of the environment, conditions, activities, interactions and relationships within and between organisations. The variety of models available portray a conceptual richness for the study of OBB, yet by the same token they highlight its complexities and limitations. However, Ward and Webster (1991) note that there is no coherent OBB framework which could nurture theory and research, rather there is an extensive perspective on the subject matter.

One of the main limitations of OBB study rests with any apparent application of OBB models to areas outside of and removed from industrial markets; that is, to reseller markets generally and retailing specifically. Swindley (1992 a), for example, advances the point for retail purchasing theory, one that could accommodate product class and retailer types. In more general terms, Kotler (1991) sees reseller buying decisions of new products as roughly the same as that for the industrial buyer, this supports Ettenson and Wagner (1986) who also saw parallels. However, much of this commentary may well reflect the scant attention in the literature that is devoted to retail buying (Mazursky and Hirschman 1987; McGoldrick and Douglas 1983). Although this has occurred for a number of reasons, mainly methodological, it remains that an extensive retail buying theory structure is lacking. In many respects the parallels that exist between retail buying and industrial buying rests within the description of merchandise buying decision processes. These apparently, are seen and best described as being in steps or stages similar to early OBB efforts. For example, Lewison and De Lozier (1986) list 6 steps in the merchandise buying process; that is, identifying, surveying, contacting, evaluating, negotiating with and buying from sources of supply. However, it remains as a condemnation that "the meagre research in this area has been marked by

conceptual problems, stemming from the dependence on industrial buying models." (Kline and Wagner 1994, p.75) This tends to support an earlier contention by Rao and McLaughlin (1989) that there was limited knowledge available that pointed to how channel intermediaries made decisions concerning the acceptance or rejection of new products.

3.4.3 Modelling Retail Decisions

Notwithstanding the foregoing, the general area of modelling decisions is not without attempts at focusing on modelling retail decisions, some involving products. The end result, however, is a diverse collection of mathematical and/or process models of various decisions. Massy and Savvas (1964) depicted a flow model when discussing different approaches to modelling, Grashof (1970) utilised a simulation experiment in his early model, whilst Berens (1971-1972) developed a decision matrix approach. Heeler et al (1973) and Doyle and Weinberg (1973) utilised regression procedures to assess product acceptance, whilst McGoldrick and Douglas (1983) developed a decision process model of a choice situation. More recently, McLaughlin and Rao (1991) completed a comprehensive assessment of decision criteria and portrayed a decision process model.

Whilst models can be classified in several ways (e.g., probabilistic, normative, theoretical, verbally, symbolically), as a final observation, it remains that a conceptual void about retail buying exists relative to OBB. In fact, Ettenson and Wagner (1986) note the scarcity of empirical retail buying studies. Adding to this, Wagner et al (1989) note that if OBB models such as Sheth's (1973) framework are to be used in retail studies, then modifications in their structure are required so as to secure the duality of retailer activity; that is, buying and selling.

3.5 Buying Classification Schemes

It would be realistic to assume that decision activities undertaken by buyers, buying committees or DMUs are framed by the buying situation(s) faced by the people found in these respective positions. Without a doubt situations impose conditions upon decision activities. In the general area of OBB, though more specifically industrial buying, classification schemes have existed for a considerable length of time. For example, Robinson and Faris (1967)

classified goods as capital, parts and materials and maintenance, repairs and operating supplies. Hakansson and Wootz (1976) classified uncertainty situations (i.e., need, market and transaction). The purpose of raising the classification issue here is to highlight a divergence of opinion on the one hand, and the likely implications of the machinations of such schemes on decision activities on the other hand.

Various authors have developed their respective views of classifying the purchase of goods. Lehman and O'Shaughnessey (1974) developed a scheme based around a variety of 'problems' with which a buyer might have to contend; namely, routine, procedural, performance and political. Moriarty and Galper (1978) extended on the buyclass framework by adding product categories and developed specific buying situations involving raw materials, component parts, commercial equipment and supply items. Hutt and Speh (1992) classify goods in business markets in an elaborate 3-tiered scheme involving entering goods, foundations goods and facilitating goods. The point to make here is that regardless of the industrial orientation of these (and other) schemes, the nature of the buying situation will dictate and/or impact on decision activities. For example, the decisions (and vicariously the associated criteria) involving goods entering some production system would differ considerably from those purchased as facilitating items (e.g., supplies and services). Similarly, the purchase of a new items carries with it a considerable amount of uncertainty or risk which can impact on decision activities in terms of involvement, time and information requirements.

Regardless, such classification schemes have accompanied the development of organisational buying models and mainly serve as a means of explaining the differences and variability in organisational buying conditions and patterns. A major implication of these schemes is the likely influence they impart on a buyer's decision process and the likely importance attached to decision criteria.

One of the more noteworthy classification schemes is that proffered by Robinson et al (1967). Their scheme is built around the distinction drawn between straight rebuys, modified rebuys and new tasks. This scheme, often referred to as a model (Ward and Webster 1991; Anderson et al 1987) was fashioned around 3 unique variables; that is, the newness of the problem, the

amount and type of information required and new alternatives given consideration. Robinson et al (1967) at the time expressed the belief that there was insufficient depth with existing schemes to adequately explore or explain buyer behaviour, especially in terms of encompassing product and situation differences. The newness of the problem and information requirements both reflected the number and types of participants involved in a decision.

Whilst buying classification schemes may set the tenor of the purchase process and impact on the buying decision and criteria, there is scant evidence in the extant literature to suggest equivalence for reseller or retailer purchase activities; that is, the preponderance of material is heavily weighted towards industrial markets as opposed to reseller market applications. This is not to suggest that retail markets do not have classification schemes, rather that their existence and use is specific to retail activity. For example, Mazursky and Hirschman (1987) report on the structural factor of department stores into hard and soft product lines adding that, "buyers of soft lines are likely to be cognisant of the social risk in product choice ..(while) .. hard goods are typically evaluated more on their technical performance." (p.48) However, such classifications hardly match the coverage offered by the buyclass framework.

Nilsson and Host (1987), in their study of choice criteria used by resellers, placed emphasis on the difference between new and old product purchase decision noting their impact on information sources and decision outcomes. These authors note that understanding criteria influence is accumulated by taking account of multiple situational factors that may influence any specific decision. McGoldrick (1989) highlights 5 types of retail decisions in addition to also emphasising new versus old decisions.

Kotler (1991) also identifies three types of buying situations: new-item, best-vendor and better-terms. Kotler describes the new-item situation for a retailer as being different to an industrial buyer's new-task purchase. Whilst the industrial buyer may have to buy a needed item (due to market position), Kotler assumes a retailer can choose between offers, applying a yes-no ballot based on likely product profitability.

The relative absence of classification schemes similar to those found in industrial market sectors may well reflect researcher interests or opinions. For example, at the supermarket

level, Doyle and Weinberg (1973) simply envisaged retailers making consumer-like decisions about which products to stock; that is, decisions of a routine, low involvement, repetitive nature. From another perspective, Mazursky and Hirschman 1987 suggest that the absence of schemes may be due to the scant attention devoted to retail buyer behaviour. Equally, the lack of presence of schemes may reflect their limited generalisability to the structural levels that operate within the retail sector; that is, the variety of store types and differential margins associated with a wide variety of products carried. As a final consideration, it may well be a matter of numbers; that is, the excessive array of products carried and presented for decisions may outweigh the usefulness of developing a retail classification scheme of any substance.

3.6 Retail Buyer Processes and Activities

The overall intent of this section is to briefly track what buyers do in that their respective processes and activities go beyond the strategic and central domain of buying. Leed and German (1979) intimate variability in processes and activities by stressing the importance to buyers and their company's merchandising programme of having the right product in the right amount at the right price at the right time. Further, and in contrast to industrial buying where DMUs are the norm with several people doing various tasks, Hardwick (1987) pointed out that the choice of a particular buying structure could impact on a company's relationship with its suppliers. However, this view tends to deny the existence of different purchasing structures and ultimately their respective impact. Kline and Wagner (1994) indicate that it is the individual who is the decision-making unit in retail buying activities. Thus, exploring and understanding what buyers do within given structures seems crucial to the overall assessment of retail functioning.

Gronhaug and Venkatesh (1991) suggest that rules and procedures are assumed to be possessed by organisations in order to deal with the variety of tasks which they encounter. This expression is seemingly an echo of that established by Nilsson (1977) who indicated that companies actually have developed practices (rules, routines, standards) for handling purchasing activities. Such undertakings include a number of operations which surround the successful conduct and conclusion of a buying operation. However, it cannot be presumed

that the activities, and the manner in which they are undertaken, are the same for all. Swindley (1992 a) distinguished some differences between grocery and apparel buying entities stemming primarily from their respective buying operations structure. Hardwick (1987) identified that the establishment of a particular buying structure (e.g., committee versus individual) could impact on the relationship that evolves between buyers and suppliers. Hence, a discussion of buying activities has implications not only in terms of product categories, but also in respect of relationships.

Over time and with general business development, buying activities have become increasingly sophisticated and complex. This seems particularly true over the past few years with the introduction and use of various technologies (e.g., bar code scanning, electronic data interchange). Sealey (1994) found that retailers well versed in the use of technology had an established advantage over manufacturers relative to those retailers who were not knowledgeable. Earlier Swindley (1992 b) intimated that buyers have been thrust into powerful positions through the availability of instant information. At a touch of a finger, buyers are able to determine what is or is not selling, where and in what amounts. However, Swindley also recognises that although the availability of such information has changed the balance of power in supplier-retailer relationships, buying itself has remained a specialised function linking suppliers and customers.

As a specialised function, retail buyers make a variety of decisions. In terms of 'new' products, Leed and German (1979) identified three classifications; that is, line extensions, new but duplicate products and entirely new products. Kotler (1991), in a more general vein, has buyers making decisions about product assortments, suppliers, price and terms of trade. On the other hand, Swindley (1992 a) is more specific indicating that buyers, in addition to sourcing merchandise, have selection, monitoring and appraisal concerns in 3 main areas; namely, products, suppliers, and markets generally. A fourth area, replenishment buying, is also indicated by Swindley (1992 a). This is inferred to take little in the way of total time. In addition, there is a suggestion that buyer activities also concern new product acquisitions and deletions of older lines. In contrast, Heinritz et al (1991), although discussing industrial buying, view typical activities as including processing basic information, research, procurement, materials management and miscellaneous undertakings. Nonetheless, the general

tenor of these 'industrial' activities seem applicable to a retail setting. As such, however, a retail buyer seems to be responsible for much more than buying in its own right and goes well beyond what buying is often perceived as being. For example, McGoldrick (1989) in discussing demands on buyers suggests that they integrate large amounts of information in order to assess suppliers' terms, whilst at the same time managing communications and negotiations. This is in contrast to Gronhaug and Venkatesh (1991) who indicate that buying is merely an exchange outcome. However, in discussing actual demands on buyers, McLaughlin and Rao (1991) take a different view suggesting that buyers spend a small proportion of their time devoted to new product presentations. Much more time is spent analysing new product propositions from a perspective of likely impact on product categories and their potential contribution to sales and profits.

One use of the words 'process and activities' could imply the roles buyers play. Whilst the concept is not new, its application here signifies the likely importance that could be attached to decision criteria and choice situations. Hutt (1979) alludes to this in his discussion of the retail buying committee and suggests that new product propositions need to be able to satisfy separate and potentially conflicting criteria of all people involved in the decision. The roles one could play in a buying situation then seemingly feature as a 'situational variable' that determine outcomes as outlined by Nilsson and Host (1987).

In the buying literature generally, Webster and Wind (1972) were amongst the first to classify the roles played by DMU members as initiators, gatekeepers, influencers, buyers, deciders and users. Hirschman and Stampfl (1980) offer a further view on roles of retailing particularly in respect of diffusion processes. Here, they suggest that four roles are evident; that is, change agent, gatekeeper, opinion leader and innovator. They go on to indicate, for example in terms of organisations operating as opinion leaders for consumers, that companies establish evaluative criteria and influence tastes. Rao and McLaughlin (1989) in talking about the pressures on buyers refer to them as "gatekeepers to the supermarket shelves." (p.80)

Whilst roles played may well have a contributing effect on decision activity, McGoldrick (1989) sums opinion well in discussing new and re-evaluating any existing product assortment. He intimates a triangular relationship between product, market and supplier

considerations apparent in various decisions and which can compound a decision process. Obviously these elements feature in any evaluation process.

3.7 Evaluative Process

As evidenced by some early models of organisational buying (e.g., Webster 1965; Robinson, Faris and Wind 1967; Howard and Sheth 1969), the 'classical' approach to studying buying has been largely through the portrayal of a number of decision stages. These stages or steps characteristically involve problem or need recognition, information search, alternative evaluation, choice and post-choice, though there is no universal agreement as to their actual number or their naming. Notwithstanding this, McGoldrick (1989) is noted as favouring a greater understanding of the decision process. However, broad or ill-defined a decision process may be, in the context of studying the acceptance or rejection of new products, little else assumes a more central role in overall consideration than the evaluation stage. Whilst evaluations and sub-decisions can occur at various stages or points in time, ultimately an evaluation signifies an accept or reject decision. A justification for this view rests with Mowen and Gaeth (1992) who indicate that, "understanding the evaluation stage is crucial ..", and that importantly, ".. the judgements that take place during the evaluation stage form the foundation for choice." (p.177) This supports McGoldrick (1989) who recognises the core strength of evaluative aspects as being central to final decisions.

However, in Mowen and Gaeth's (1992) examination of the area of evaluation, little evidence in the marketing literature concerning aspects that influence evaluation was found. In fact, as pointed out by McLaughlin and Rao (1991) in terms of the retail market specifically, "buyer decision processes, however, remain a relatively unstudied area." (p.33) One brief indication of evaluation of information was presented by Nilsson (1977) who indicated that evaluations are based on heuristics, though this involves a blend of experience and judgement. Underlying this idea, Nilsson points out, is the limitation of the human brain. In consequence, grouping or composite variables are utilised as shortcuts.

It is established that evaluations take place and, in the context of retail activities, these are largely undertaken by individual buyers with category responsibilities, or alternatively as a

group phenomena in the case of a buying or ranging committee. Whilst the difference in structure may contribute to a disparate outcome through the use and emphasis on various criteria, judgements nevertheless occur. These can eventuate during a presentation (Borden 1968), or following the presentation of information to the buyer concerned and accompany the acquisition of additional information from other sources. As depicted by McLaughlin and Rao (1991) evaluation is multi-faceted in that it involves elements of the product, the individual buyer and the buyer's organisation.

McLaughlin and Rao's (1991) portrayal is useful in that it points to product matters and acknowledges the existence of 'individual characteristics of the buyer'. However, relative to a buyer's processes and activities, the statement would be enhanced if it included specific reference to 'supplier characteristics' on one hand, and recognition of 'salesperson input' on the other. The latter aspect seemingly has a place given the personal nature of many new product presentations and the current emphasis on exchange relationships or dyads in the OBB literature. Leuthesser (1991), in viewing buyer-seller relationships, provides some support for this, noting that a seller's performance is influenced by the interactions between the two. The interaction was given the label of 'boundary behaviour'.

As can be seen by the foregoing, the intent has not been to delve deeply into the subject area of evaluation, rather it was intended to briefly outline the importance and placement of evaluation in the overall acceptance or rejection of products by retail buyers. A substantial body of literature already exists in the general subject area of evaluation and related fields (e.g., Bettman 1979, Tversky and Kahneman 1974, 1981; Chakravarti et al 1981; Cox and Summers 1987; Hogarth 1987). No attempt has been made to replicate these various avenues of interest. However, it is recognised that evaluations are not without problems in terms of decision heuristics and biases; that is, representativeness, availability, anchoring and adjustment, and that such aspects are operating as part of buyers' deliberations.

3.7.1 Evaluative Criteria

A thorough search of the extant literature has indicated that no known research or publications concerning new product acceptance and rejection by New Zealand grocery retailers exists.

As far as it is known, this also applies to Australia. As a consequence, there is a heavy reliance on literature emanating from the United States and the European community, including of the United Kingdom. At the outset, however, it is important to point out that some researchers have experienced problems concerning evaluative criteria research. McGoldrick (1989) is specific in this regard and indicates that buyers themselves may have difficulty or reluctance in discussing all the intricacies of their decisions. This condition, in part, also may account for McLaughlin and Roa's (1991) condemnation that little or no new research has been undertaken on new products selection activities for more than a decade. Also, there are inherent methodological difficulties in the area of buying organisation research in terms of identifying buying participants, accessing them and securing their willing cooperation (Ward and Webster 1991). In fact, the authors point to the intimidating situation which can compound problems when trying to manage research involving multiples; that is, respondents, organisations and repetitive timings.

Notwithstanding these difficulties, product acceptance or rejection embodies an evaluation of the supplier and the product, and no doubt as previously proposed, also embodies an assessment of the supplier's sales representative, the presenter. Consideration of these aspects occurs simultaneously during and after presentation of some total proposition by a representative to a retail grocery buyer. Extant literature reflecting the so called staged nature of organisational buying might have us believe that there first would be an assessment of the supplier followed by an assessment of the proposition, normally involving the product. The literature reviewed does tend to hold these two activities as separate undertakings and to this end the literature is seen as supplier or vendor selection criteria on the one hand, and on the other, product selection criteria. Arbuthnot (1990), for example, viewed evaluative criteria distinctly on a supplier and product basis. Consequently, this section provides an overview of the literature on supplier selection criteria followed by a similar review of product attributes and retailer conditions involved in acceptance and rejection of products. A third sub-section, albeit brief, concerned with the sales representative is also included.

Supplier Selection Criteria

With little doubt, the buying process (also referred to as the purchases process) for any organisation, features as a central aspect of major importance (Farmer 1985; Narasimhan 1983; Monczka et al 1981). In fact, as suggested this buying process is a cornerstone of buyer-seller relationships involving exchange and one that requires management (Segal 1989; Carter 1986; Farmer 1985; Brown and Purwar 1980). Whilst purchasing involves many interrelated activities both within the process and to the organisation, one dimension of this totality has as its focus the selection and evaluation of suppliers. Given this importance, there is a need on the part of buyers to establish and execute an evaluative process involving specific selection criteria. However, it is an oddity that on one hand supplier selection is seen as frequent and important to retail operations (Berens (1971-1972)), yet on the other, supplier selection research in the retail sector is scarce (Wagner et al (1989)

It has long been recognised by many researchers that evaluative criteria used in a purchasing process generally will vary depending on the nature of the product, the situation and the setting; that is, manufacturer or reseller (Shipley 1985; Sheth 1973; Wind, Green and Robinson 1968). In fact, the importance attached to criteria does seem to vary between an industrial and reseller application. For example, whilst an industrial buyer may place particular emphasis on a supplier's reputation and service abilities, a reseller's emphasis could be towards likely consumer demand, product availability and delivery. Notwithstanding this, the literature does point to at least two central and common criteria; that is, price and quality (Segal 1989; Shipley 1985). However, Heinritz et al (1991) point out that in retailing it is potential mark up that is more important than price. Further, in a recent study by Wilson (1994), a shift away from price as an attribute in supplier selection is noted as being superseded by an emphasis on quality and service.

Wagner et al (1989) report that Hirschman (1981) compared department and chain store vendor selection criteria. Overall, reputation, brand name and price featured, whilst differences were recorded between the two retail store types. Beyond the two central items mentioned by Heinritz et al (1991), the nature of the criteria used and the extent of the number of criteria used in a purchase situation varies considerably between the industrial and

reseller applications. This latter aspect could well be a reflection of the researcher's approach and methodology as much as it could be the situation being researched. Consider for example that Kiser, Rao and Rao (1975) utilised sixty-one criteria grouped into six categories (e.g., convenience, economic-financial, calibre-capability, image-dependability, intercorporate relations, service), whilst Narasimhan (1985) used four grouping criteria (e.g., pricing structure, delivery, quality, service) the last three of which had a variety of second level elements. In addition to the foregoing, it should be noted that the dominant base for examining selection criteria rests with industrial market applications (Shipley 1985; Lehmann and O'Shaughnessy 1982; Cravens and Hoffman 1977; Cunningham and White 1973; Wind 1966). By comparison, very few studies have examined the issue of selection criteria within a reseller market (Wagner, Ettenson and Parrish 1989; Shipley 1985; Hirschman 1981; Brown and Purwar 1980). This is by no means a reflection of lesser importance, but one where industrial purchasing literature has come from and the relative difficulty of researching the reseller market generally and retailers specifically. This aside, Wagner et al (1989) indicate that vendor selection is an important decision and that their evaluation and selection is a central aspect of the retail buying process, though some criteria may be unique to retail activities.

Product Selection Criteria

Unlike supplier selection criteria, the literature on product selection criteria and their application seems sparse. This is highlighted by the fact that over the past decade there has been a handful of articles in refereed publications. However, as an observation, the literature appears to have taken two tracks; one reflecting factors that influence product acceptance, whilst the other explores the modelling of the decision process to add new products. The latter appears to dominate the literature examined and reflects a variety of mathematical applications of varying degrees of sophistication. Regardless of the approach, product selection criteria have been employed to a varying extent. In fact, despite a patchy history, researchers have recently begun to examine merchandise selection (Wagner et al 1989).

Perhaps because of the inability of some mathematical procedures to effectively handle a large number of criteria (Doyle and Weinberg 1973), most approaches examining product selection

have limited the number of specific criteria, and in some instances have collapsed these to a smaller number of dimensions. However, as evidenced here this is not always the case. For example, some researchers, Grashof (1970), Doyle and Weinberg (1973) and Nilsson (1977), were content to measure a smaller number of criteria (six, eight and eight respectively), whilst Montgomery (1975) assessed eighteen items. By contrast, McGoldrick and Douglas (1983) attempted to measure the importance of nineteen variables in a retailer's stocking decision. Similarly, Rao and Mclaughlin (1989) measured twelve variables but these were framed within four broad categories enveloping financial, competition, marketing strategy and other matters.

The issue at hand appears to be a blend of recognising a discrete number of salient criteria in combination with a particular research approach adopted by the researchers in question. For example, Grashof (1970) utilised a simulation experiment, Doyle and Weinberg (1973) made use of multiple regression analysis and Montgomery (1975) utilised multiple discriminant analysis. However, in each case it has been the researcher's own determination that has dictated what has been and what has not been included in their respective product evaluation lists.

Whilst there is a clear recognition that one cannot include all possible criteria (or sub-variations), there appears to be little consensus as to the actual number of criteria to include, a further expression of the diversity of markets or products being examined. However, there is some "agreement" about which criteria may be more important or meaningful. For example, some obvious inclusions include profit potential, advertising and promotion support, sales potential, newness of product, reputation, reliable delivery, price and existing assortment. Nilsson and Host (1987) in their comprehensive review noted the **mention** (a count) of 389 criteria divided across 28 specific items. They grouped the variety of criteria into 10 categories, identified as profitability and sales, economic conditions, assortment considerations, consumer evaluation, supplier marketing, supplier characteristics, competitive considerations, distributive factors, tactical considerations and salesman presentation. In all, concerns about criteria in the categories of profitability, economic conditions, consumer evaluation, supplier marketing and characteristics accounted for 84% of their count. These findings compared favourably to an earlier study by Nilsson in 1980.

More recently, McLaughlin and Rao (1991), through factor analysis, determined 12 attributes that could be used in a conjoint analysis study to describe a new product. The twelve items included profit margin, prior experience with the vendor, uniqueness (product and package), price, product status, competing firms carry the item, competing brands and vendor support in TV advertising, coupons, market research presentation and P.O.P. materials and additional introductory funding.

In addition to the agreed importance of some criteria amongst researchers, some recognise the inter-relatedness between criteria (Rao and McLaughlin 1989; McGoldrick 1989; McGoldrick and Douglas 1985; Heeler et al 1973). Undoubtedly, this implies a likely trade-off between criteria in the face of market realities when assessing a proposition. For example, sales potential in a product category may be strong, yet profit potential small due to the initial buy-in price.

The issue of number of criteria, the important ones and their interrelatedness is further complicated when one involves an aspect of difference; that is, difference between products, evaluators and organisations. A number of researchers (McGoldrick and Douglas 1985; Doyle and Weinberg 1973; Hileman and Rosenstein 1961) have recognised the disruptive influence to common lists of criteria by noting that the nature of the product, the importance some evaluators place on some criteria over others or the very nature of the deciding organisation and its policy can dictate the presence or absence of particular criteria in decisions concerning either acceptance or rejection of a product offer. As hinted previously, the importance of criteria to buyers acting autonomously can differ in comparison with buyers operating within a 'committee decides' environment. However, a clear indication and description of selection criteria is essential in terms of evaluating new products (Hutt 1979).

Sales Representative

The buying and selling process, whether industrial or retail, is best seen as a juxtaposition; that is, the same event is seen or analysed from different perspectives, or as some might say, it's the different sides of the same coin (Webster 1984). Whilst the buyer may be regarded as the 'gatekeeper' for the buying organisation (one of several possible roles), the salesperson

likewise can play a series of roles (most likely the conveyor of information) in representing the selling organisation. The literature covers this 'meeting ground' in a number of different ways or perspectives. Most notable of these is the literature on dyads and buyer-seller interactions.

Another perspective taken in the literature views 'boundary roles'; that is, the roles performed as an interface between organisations (Webster 1984). The intention here is not to pursue the area of the 2-person dyad, rather it is to recognise its existence and its likely influence in shaping decision outcomes given the social roles that both parties can and do play in an exchange environment. The purpose here is to draw attention to the fact that these social roles act as conditioning forces which operate on ones opinions, attitudes, beliefs, values, or goals, thus shaping a person's perceptions (Webster 1984).

If dyads and interactions are so important as a unit for analysis (and this appears to be the case), and salespeople the conveyors of information, then there is little evidence available to suggest that the sales representative has been given due recognition as an evaluative base for decision outcomes. However, this is not to say that the salesperson has been entirely disregarded. Different streams of literature have examined the subject area. Notable in this regard is the vast literature on negotiations and game theory. The importance of salespeople as a source of information and script theory analysis are other areas that have involved the sales representative. However, few researchers have explicitly included in their studies items or criteria that reflect the input of the salesperson. Arora (1975) viewed salesperson input by means of planning and preparation (along with other criteria), whilst Kiser et al (1975) included 'knowledgeable salesmen' as an item within their Calibre-Capacity Attributes. McGoldrick and Douglas (1985) noted that 'competence of sales personnel' was ranked 6th in importance amongst multiples and 11th by cash and carry samples. Nilsson and Host's (1987) study particularly indicated that the salesman's presentation as a category of criteria only accounted for 2% of the total count of criteria.

Whilst explicit recognition of salesperson input may be sparse, implicitly it may be recognised in other forms such as before sales service, prior experience with vendor, or reputation of selling company. Banville and Dornoff (1973) in discussing source selection cite Klass

(1961) who included 'salesmen' amongst items of importance as contributing to product images. Another view is offered by Hill and Hillier (1977) who noted in discussing aspects of perception that a salesmen's overall demeanour influences product perceptions. Webster (1984) sees reputation equating with source credibility, and in reporting on Levitt (1965), noted that a poor sale presentation affected trustworthiness. Webster also noted that the quality of a presentation affects a favourable first hearing and that, a presentation facilitates interaction between the buyer and sales representative.

As a concluding comment, the importance of a sales representative cannot be underscored. Although the function and purpose of people filling these positions has been recognised, little evidence exists as to their explicit acknowledgement as an important source of influence.

3.8 Summary

All organisations involve themselves in buying in order to produce goods, or to resell finished goods through to the final consumer. In its entirety, the process is conceptualised as an 'input-output-input' chain involving organisations and people at different strata pursuing a multitude of objectives in a mutually interdependent fashion. The basic buying processes of these entities are similar, though obviously motivations vary with the vagaries of the markets served. Depending on an organisation's placement in the business chain, varying sensitivities to technical matters, time and forces of demand emerge and impact on buying practices.

The more industrial a company, the more constant and predictable the effect of these matters, hence the more predictable buying behaviour becomes. These circumstances facilitate general model development which, with time, has moved from general and descriptive to specific and prescriptive. A wide variety of models reflecting diverse perspectives exist under the 'umbrella' of organisational buying behaviour. The same three elements noted above and the predictability of behaviour also have provided the basis for buying classification schemes. However, as one moves toward a final end-user (retail), predictability of buying diminishes, sensitivities to the three issues change and a fragmentation of organisation form occurs. This may well account for the inability of researchers to devise not only a suitable model that recognises retail buying in its own right, but also buying classification schemes that suit this

environment. The variety and range of product dealt with at this end of the total market limits the application of existing schemes.

Buyers in retail establishments enact a variety of roles which impact on what they do in encountering divergent environments. Their activities and general functioning as buyers choosing product assortments or deciding upon a supplier are in sharp contrast to monitoring the performance of products previously accepted, or researching prospective suppliers and product sources. Ultimately, however, retail buyers are discerning 'gatekeepers' acting either autonomously or through a buying committee, though obviously fulfilling several roles simultaneously.

Buying is central to organisation continuance and much is known about this. However, little is known about the actual evaluative process that buyers undertake, though it too is critical to enhancing an overall understanding of buyers and the judgements they make. Little is specifically known about the retail decision process either through lack of interest by researchers, or alternatively cooperation from senior management and potential respondents.

However, a considerable body of knowledge exists concerning the variety of criteria used by buyers. Conveniently these are partitioned to reflect a basis for assessing suppliers and products. Despite the advance of 'models' to the finite level of dyads and interaction processes, there is limited evidence of the development and application of criteria reflecting the input and likely important contribution of the supplier's sales representative to decision outcomes. With the exception of including this latter point, Webster (1984) is close to 'getting it right' when he states that,

"the outcomes of the buying process are seen as determined by the actors, structure, technology, and goals and tasks of the buying organisation, processing information obtained from the environment about buying alternatives (products and vendors)." (p.62)

CHAPTER FOUR

LITERATURE REVIEW: DIFFUSION OF INNOVATION AND ADOPTION

4.1 Introduction

In the context of examining the acceptance and rejection of new products by supermarket retail grocery buyers, search was undertaken for a suitable framework to act as a basis for exploring retailer decision activities. A close examination of the 'buy-class' framework was undertaken and despite the existence of a 'new task' condition, this framework was deemed inappropriate for retailer application. Other such schemes were examined in less detail but they too were discarded. The main reason for not using such buying classification schemes was largely due to their heavy industrial market bias. Likewise, the application of existing industrial buyer behaviour models, even as frameworks, appeared too restrictive and presented severe limitations.

Thus, it seemed a logical step to make a connection between potentially new, supermarket retail products being accepted or rejected and the process and deliberation rendered on these products by buyers and/or committee members through an adoption process framework. The process is viewed as an 'adoption' exercise in that 'new' products or product line extensions are being considered, potentially for continued stocking at warehouse and store levels. Additionally, given the general absence of a retail buying model (cf. industrial buying models), a natural progression was to assimilate an adoption process framework not only for explanatory purposes, but also for exploring conceptual issues and some specifics about evaluative actions. Further, the lengthy history and literature of this multi-disciplinary subject area offers this basic framework as one which is relatively well known and easily understood as a conceptual device.

Although the adoption framework acts as a 'backdrop' only, the Chapter's contents reflect a brief history of the subject area of diffusion and adoption, followed by an examination and discussion of the concept of new products, the nature of innovations, and innovation characteristics. Discussion reflects the importance attached to evaluative practices pertaining to retail activity, recognising the central role that innovations, evaluations and adoption

practices play in the successful transition of products from initiator to end-user. Various aspects of the adoption process are discussed together with changes to adoption schemes, including assorted perspectives or points of view. Its application to supermarket retailing activities is discussed. In doing so, the subsequent setting for the ensuing research is established.

4.2 A Brief History of Diffusion of Innovations and Adoption

4.2.1 Background

Prior to discussing various aspects of both diffusion and adoption, it is useful to first provide a demarkation between the two concepts, thus placing later discussion in a more beneficial position. The term diffusion broadly represents a communication process whereby some idea (known as an innovation), "is communicated through certain channels over time among the members of a social system." (Rogers 1983, p.5) In all, four elements of diffusion as it is known today are identified; that is, the idea (innovation), the communication channel(s), time, and the social system. These have remained relatively unchanged from earlier efforts by Rogers.

In the context of diffusions, an innovation is any idea or object that is perceived as being new by individuals or groups (Frambach 1993; Rogers 1983). Thus perception of 'newness' and its likely impact on behaviour, determines the level or degree of response by individuals or groups. The communication channel in many instances is used to replicate the movement of information between parties involved. Whilst this can be seen in the form of various media, it also often reflects human interactions. Time is involved and it is featured as facilitating or restricting the spread of an innovation. Diffusion through some social system is usually not immediate especially given varying perceptions of those involved. Knowledge of some innovation and its subsequent assessment takes time to come to fruition. The social system is the final constituent part. This usually is held to represent the interaction of people sharing something in common over time (Gatignon and Robertson 1991) This, as the authors indicate, can be local farmers in a community, or participants in a particular industry.

Whilst the above briefly simplifies what in essence is an aggregation of the transition of innovations, it defines a 'macro' perspective of the subject area. By contrast, adoption of innovations offers a 'micro' viewpoint. As a term, adoption can be viewed somewhat differently. Rogers (1976) viewed it as entailing a purchase, whilst Mittelstaedt et al (1976) saw the purchase of an adoption process as a definitive categorisation of an 'adopter'; that is, one who has purchased. Spence (1994) saw it as a mental process involving an outcome of personal decision making.

However, at the 'micro' or individual level of assessment, more particular attention is devoted to the specific detail of the actual innovation; that is, its process, nature and characteristics, as well as the make up of those involved. As much of the detail of these aspects form subsequent sections, discussion is left until later. Suffice to say at this point, however, adoption of innovations is normally what individuals or entities do. Diffusion is the tracking of what has been done.

4.2.2 Diffusion of Innovation History

As pointed out by Lancaster and Taylor (1986), the literature on the diffusion of innovations is large, having been developed for close to eighty years and aided by contributions from a wide assortment of academic disciplines. Such disciplines as anthropology, sociology, rural sociology, education, medical sociology, geography and marketing are amongst those nominated by these authors to have contributed to the development of knowledge on diffusion and adoption.

Earlier, Rogers (1983) included the industrial sector as offering contributions to the subject area. Notwithstanding this, Lancaster and Taylor (1986) note that, "these areas approach innovation diffusion in different ways depending on the nature of the innovatory idea or object under examination, and the particular aspect of its diffusion which is of interest." (p.13) This sentiment was likewise indicated some 10 years earlier by Rogers (1976) who went further by indicating that there was little in the way of interchange between the different schools of diffusion research.

It is acknowledged, given the time line for the general subject area and its multi-disciplinary nature, that a fertile information base has resulted. Such a base bears witness to a variety of contributions, spanning such topics as information flows, opinion leadership and the role of personal influence, diffusion curves, adopter categories, adoption stages, diffusion models, and the rate of diffusion to name a few. In fact, many of these 'topic areas' have grown to be disciplines in their own right, or emanate from such disciplines. For example, distinct, yet related, pockets of information rest in such areas as diffusion modelling, the examination of innovativeness or communications research. The multi-faceted nature of the subject matter is quietly recognised by Rogers (1976) as "an invisible college (composed of researchers on a common topic who are linked by communication ties)." (p.291)

Whilst each of the research traditions or study areas named above has taken its own particular perspective on the subject area, only a few of these areas are discussed here, highlighting by and large the central theme or contribution made. Early research activity in both anthropology and sociology is credited with being the origin of diffusion research (Lancaster and Taylor 1986; Rogers 1983, 1976; Rogers and Shoemaker 1971). Notable in this regard was the work of the sociologist Gabriel Tarde (1903), the pioneer of the S-shaped diffusion curve, and the anthropologic discipline's belief that societies change as a result of introducing (or adopting) the practices from other societies.

Rural sociology possibly has been the greatest contributor to our understanding and appreciation of diffusion of innovations, so much so that many of the practices and research processes followed have been borrowed by others contributing to the field. Particular reference is made of the seminal work of Ryan and Gross (1943) who examined the diffusion of hybrid seed corn amongst Iowa farmers. They identified four stages of adoption (Lancaster and Taylor 1986), highlighted the pattern of a 'bell-shaped' curve and noted varying levels of influence offered by salespersons and neighbours at different stages.

Reporting on the work of Carter and Williams (1959), Rogers (1983) notes that the industrial contribution (comprising work from economic historians, industrial economists and industrial engineers) aided further understanding of innovativeness. Such factors as a favourable attitude, cosmopolitanism, information sources and lack of resistance were favourable for

diffusion. Similarly Rogers (1983) notes that diffusion studies in the education area contributed an understanding about time lags, the impact of costs (wealthier schools could afford to be more innovative) and a reinforcement of S-shaped diffusion curves.

Lastly in this brief historical overview of diffusion is the study area of marketing. The application of diffusion research in this area commenced from the early 1960s onwards (Rogers 1976; Rogers and Shoemaker 1971). Initially at least the work undertaken borrowed heavily on diffusion theory to assist an overall understanding of new product success, or alternatively, why so many new products failed. However, much of the research focused on the consumer largely from the product manufacturer's or retailer's position (Rogers 1976). This bias aside, it is important to note that diffusion research emanating from this quarter was, in many instances, capable of controlling dependent and independent variables. Classic in this regard was Arndt's (1967) experiment which was established to measure the importance of personal influence and the rate of adoption. Involved was the use of a new food product, communications and price coupons (Rogers 1976).

Whilst the foregoing has treated some of the more noteworthy aspects from the separate study areas, it should not be assumed that isolated traditions exist. On the contrary, over the past few decades academic barriers have been reduced; that is, the findings in one discipline are being used by others (Lancaster and Taylor 1986). The acceptance, use and sharing of research information by various academic concerns and centred on a single phenomenon such as diffusion is indeed a sign of maturity.

4.3 The Nature of Innovations and New Products

Previously innovations were indicated as being ideas and objects seen by individuals or groups as being new. However, Gatignon and Robertson (1991) point out the long standing difficulty many have had in operationalising such descriptions since the term 'new' depends entirely on personal perception; that is, if something is seen as 'new', then it is seen as an innovation. Preceding this by two decades, Robertson (1971) argued that an innovation's effect on behaviour ought to be the basis of determining whether or not some idea or product was in fact an innovation. Robertson developed an innovation continuum typology based

around consumption behaviour. It ranged from one end of the spectrum as a 'continuous' innovation (little or no required change in behaviour or consumption), through to 'dynamically continuous' innovations (some change in behaviour or consumption required), ending at the other end of the spectrum as 'discontinuous' innovations (major changes in behaviour and new consumption patterns). There is an argument available which suggests that if behaviour changes (and with it consumption patterns), then it is equally likely that attitudes and beliefs have likewise changed (Craig-Lees, Joy and Browne 1995; Mowen 1990). Such an argument is contingent upon there being a positive connection between attitudes and behaviour, a contentious issue and one which is beyond the scope of this subject and dissertation. It has been mentioned in passing purely as a further reminder of the likely impact on behaviour rendered by innovations generally.

Others (Gatignon and Robertson 1989; Rogers 1983; Calantone and Cooper 1981) have also pursued the subject area of innovations. However, each has largely inspected the topic from an impact or change perspective. These efforts and the early efforts of Robertson (1971) are very distinct though somewhat parallel to the far earlier efforts of Brozen (1951). This contributor examined new products mainly from an economic perspective, assessing the likely impact of change brought on by his 3 Is: invention, innovation and imitation. Whilst innovation was viewed by Brozen as a change in production methods, it has with time seen various 'translations' imposed upon it. To the purist, an innovation is likely to be described narrowly such as Bucklin and Sengupta's (1993) notion of a new product being radical or discontinuous only. To the not so pure, an innovation will likely reflect the attributes of degrees of change in behaviour or consumption, and thus also reflect perceptions of newness.

Stepping back from both a pure, quasi-scientific definition of newness (e.g., new-never-before-seen) and the somewhat 'softer' appeal offered by Robertson's (1971) typology, a further perspective on 'new' is offered. New, as applied and used to describe products entering the retail and supermarket industry, offers yet another viewpoint entirely. However, here too the term 'new' exhibits both similarities and differences to that already discussed. McLaughlin and Rao (1991) saw new products as those requiring more shelf space, whilst Girlich (1990) used the term uniqueness to describe various aspects of new products (e.g., innovations, line extensions, me-too products), and Gorman (1990) saw new products from

manufacturers as encompassing new flavours, colours and varieties, though he excluded new sizes, packaging or general improvements. Earlier Kaiser (1986) believed that there were very few new products, thinking in a contrary manner to Gorman, that most new products were merely variants to existing products, a stance supporting the earlier work of Borden (1968). Borden would include in this array duplicate products; that is, new product releases to compete against existing brands. An early description of new products by Borden (1968) reflects the fact that supermarkets viewed 'new' simply as not currently stocked, an expression not too dissimilar to that offered more than 20 years later by McLaughlin and Rao (1991).

Rangan et al (1992) report on a Booz Allen and Hamilton (1982) study which categorised new products into 6 groups, reflecting a variety of dimensions. The Booz Allen and Hamilton study detailed new products as, "new to the world (10%), new product lines (20%), additions to existing product lines (26%), revisions to existing products (26%), repositioning (7%) and cost reduction (11%)." (p.69) The application of the term 'new' for products at a practical, ground level has a multitude of meanings few of which, it seems, would be in agreement. However, the Booz Allen and Hamilton report does provide a useful depiction and quantification of different types of new products which, on close examination, tend to cluster around the continuous innovation-end of the new product continuum. Perhaps as the Bible suggests, 'there is no new thing under the sun.' (Ecclesiastes 1:9)

Interest in new products seemingly stems from three related sources. Firstly, products released to the trade have met with high failure rates either from initial rejection by the trade, or later soon after launch (Girlich 1990; Calantone and Copper 1981; Yorke 1981; Copper 1979; Montgomery 1975; Doyle and Weinberg 1973; Peters and Venkatsean 1973; Borden 1968). Estimates of new product failure vary. For example, Borden (1968) after one year noted that only 22% of products considered by committee were accepted. By contrast, Doyle and Weinberg (1973) noted a 78% rejection rate on new products submitted for consideration by one supermarket, whilst Montgomery (1975) indicated a failure rate as high as 85% for packaged goods.

The second related source of interest in new products is linked to management and ultimately

costs; that is, dollars, time and space (Girlich 1990). However, it needs to be noted that there is a profusion of 'new' products (variously defined) released to the trade annually (McLaughlin and Rao 1991; Girlich 1990; McGoldrick 1989; Rao and McLaughlin 1989). Given the high failure rates of these products, some of management's expressed concern is: how can we do it better? In short, what needs to be done to launch new products successfully (More 1986; Cooper 1983; Rogers 1976)? A considerable body of literature from a management outlook exists. However, whilst a management perspective is important, the literature will not be pursued here since it does not fall within the focus of the research. Suffice to say that such dimensions as newness or uniqueness of the product, issues of complexity, relative price, market need and competition feature as considerations (Cooper 1979). As an observation, such items could usefully be transposed to reflect decision criteria or attributes, though seen in a slightly different way.

The third and final point to cover in relation to interest in new products is linked directly to management issues generally and business specifically. This concern reflects a strategic market stance in that new product activity (and success) is seen by many to be critical, vital or essential to a business's viability, maintenance or prosperity (Burns 1992; Rangan et al 1992; More 1986; Peters and Venkatsean 1973). Whilst these issues may underlie business motivations for 'survival', a minimal number of studies involving organisations adoption decision concerning innovations (new products) compared with consumer studies exist (Jones and Ritz 1991; More 1986; Yorke 1981).

4.4 Characteristics of Innovations

Characteristics of innovations, also known as 'aspects' or 'attributes', have been a long recognised area of concern in the study of innovation diffusion. The reason for this is related to the fact that a number of characteristics have been found to directly impact on the rate at which some innovations are adopted, and hence, diffused in a social system. However, it is not so much the characteristics themselves that are important, rather it is a potential adopter's perception of an innovation's characteristics that is at issue (Lancaster and Taylor 1986). Such perceptions, as subjective as they might be, dictate an 'actual' rate at which some innovation is adopted and diffused.

Rogers (1962) introduced five adoption characteristics, noted by Lancaster and Taylor (1986) as 'comprehensive and mutually exclusive'. The five characteristics are listed in Table 4.1 and each is accompanied by a brief explanation.

Table 4.1 Key Innovation Characteristics

Characteristic	Explanation
Relative Advantage	Superior to, or better than that currently used
Compatibility	Degree of consistency with values and needs
Trialability (Divisibility)	Ability to use before buying
Observability (Communicability)	Ease of, or ability to observe positive effects
Complexity	Ease of understanding and using

The five items noted in Table 4.1 tend to be regarded by some researchers as being the most important attributes capable of effecting an adoption activity (Venkatraman 1991). By contrast, Assael (1992), also noting the five elements, argues that relative advantage and compatibility are the two most important characteristics of this grouping, though no support for taking this position is offered. The point to make here, however, is that over time many of the noted characteristics have been tested, along with others, to assess their respective and relative influence on adoption decisions. These five items, more so than others, it is believed have yielded the most consistent results in terms of either a positive (facilitate adoption) or negative (retard adoption) influence. Gatignon and Robertson (1991) note that research has at least approved Rogers' five dimensions.

In examining characteristics, it needs to be added that a considerable array of characteristics have been assessed (or suggested) as impacting on the diffusion of innovations. Whilst most of the suggested alterations or additions have emanated from the consumer market, some have entered consideration from the business arena. With this in mind, Lancaster and Taylor (1986) have suggested that innovation attributes are assessed differently by sensory and cognitive adopters. For example, sensory adopters are thought to place greater emphasis on innovation newness and relative advantage. Gatignon and Robertson (1989) note matters

external to an innovation's attributes, notably supplier marketing programmes and inducements, as aiding diffusion. McLaughlin and Rao (1991), examining matters from a business perspective, have noted differential advantage, needs and preferences, strong launch, technical and marketing synergy, attractive market and management commitment and support as necessary ingredients. However, they also note that such lists tend not to be action oriented, have a strategic focus and do not examine the operational aspects of an innovation's introductory process. Spence (1994) suggests that seven basic elements need to be examined. These include, at a minimum, costs (in terms of both dollars and opportunity), group decisions, complexity, utility, visibility, trial and compatibility.

Economic aspects and risk also feature. Brandner and Kears (1964), amongst other matters, tried to link an innovation's congruence with previously evaluated practices and suggested that adoption would be faster where there was economic importance attached to the decision. Early work by Fliegel and Kivlin (1966) examined reward and riskiness, together with occupational interest. The character of the group as an influencing feature was noted by both Martilla (1971) and Ozanne and Churchill (1971), whilst Zaltman and Lin (1971) listed such dimensions as social costs, return on investment, pervasiveness and radicalness amongst others. Peters and Venkatsean (1973) intimated that industrial buyers are likely to respond to the same attributes as consumers, noting however, that personal, environmental and company attributes have a role to play in influencing adoption. Perceived risk as an attribute was linked to adoption activities by Ostlund (1974). It would appear that these issues have not been of much concern since the 1970s.

As a final observation, the assembly of research on innovation characteristics is quite vast, reflecting a multi-dimensional array of items and a broad platform of interest. Over time, characteristics such as felt need, marketing efforts, feasibility, type of group, and perceived risk have been added to Rogers' five basic elements. However, as a criticism of much of the research to date, many of the additions seem limiting in that most emanate from a consumer research focus. Furthermore, in assembling lists of innovation characteristics with this 'consumer' focus, there is little, if any, indication that these characteristics parallel an equally extensive list of evaluative criteria. For example, what evaluative criteria combine to yield 'relative advantage' or 'compatibility'? Is the concept of 'observability' applicable in a

business environment? There is a wide range of questions that need to be addressed in drawing parallels between evaluative criteria and innovation characteristics on the one hand, and the application of these between business and consumer markets on the other hand. Such an investigation is outside the scope of this research and would be best left as a dedicated and singular piece of future research.

4.5 Adoption Schemes and Alternative Perspectives

A basic adoption process is characterised as an 'hierarchy of affects' model, emanating as it has from communications studies (Gatignon and Robertson 1991; Ward and Webster 1991). Earlier work by Gatignon and Robertson (1985) note that such hierarchies pose as a learning orientation and that their usefulness depends on the level of cognitive activity engendered by the adoption process itself. Schemes of this nature have traditionally portrayed a staged display, often without feedback loops. Such a scheme is shown as Figure 4.1.

Figure 4.1 Basic Staged Adoption Scheme

Awareness - Interest - Evaluation - Trial - Adoption

Rogers (1962) is largely responsible for the pervasiveness of this basic, staged model, though Campbell (1966) credits its origin to the earlier work of Beal and Bohlen (1957). In terms of adoption stages, a general belief is that over time a person or group passes through successive stages. Progression is largely dependent on the information available and its processing (Frambach 1993). However, Burns (1992) suggests that some researchers and practitioners do not accept that an adoption process exists.

Given the lengthy history of adoption research and its multi-disciplinary nature, it is useful to exhibit some alternative schemes. This is accommodated by examining a small collection of adoption process schemes. A time-based 'snapshot' of basic development and variation is shown in Table 4.2.

Table 4.2 Changed Perspectives on Adoption Process Models

Ryan & Gross (1943)	Rogers (1962)	Rogers (1983)	Spence (1994)
Awareness	Awareness	Knowledge	Aware
Conviction	Interest	Persuasion	Interest
Acceptance	Evaluation	Decision	Investigation
Complete Adoption	Trial	Implementation	Action
	Adoption	Confirmation	

Table 4.2 in presenting a very small portion of available adoption process heuristics, offers a visual variety of opinion about the staged nature of the adoption process. Although not evident by the contributors noted in Table 4.2, some change in thinking has eventuated, if not by labels alone. Awareness of an innovation (or new product), even if labelled 'Knowledge - Persuasion', is still seen as a paramount start position. Campbell (1966) echoes early sentiments in making the well known point that evaluation and adoption can not occur without awareness, though evaluation and trial need not precede it.

One of the more striking and refreshing 'changes' in the above collection is that offered by Spence (1994). Although his heuristic seems limiting, it should be noted that 'awareness' is preceded by one of two conditions; that is, 'felt needs' or 'chance', and that 'action' is followed by either 'need reduction' or 'dissonance'. Both of these outcomes are linked to a second order of 'felt needs', thus completing a feed-back loop. Further, Spence's model usefully portrays evaluation as occurring throughout the adoption process and the various adoption stages are paralleled by a time-based communications structure. Hence, a continuous form of evaluation is suggested, a feature which re-enforces an absorption of communications throughout an adoption process.

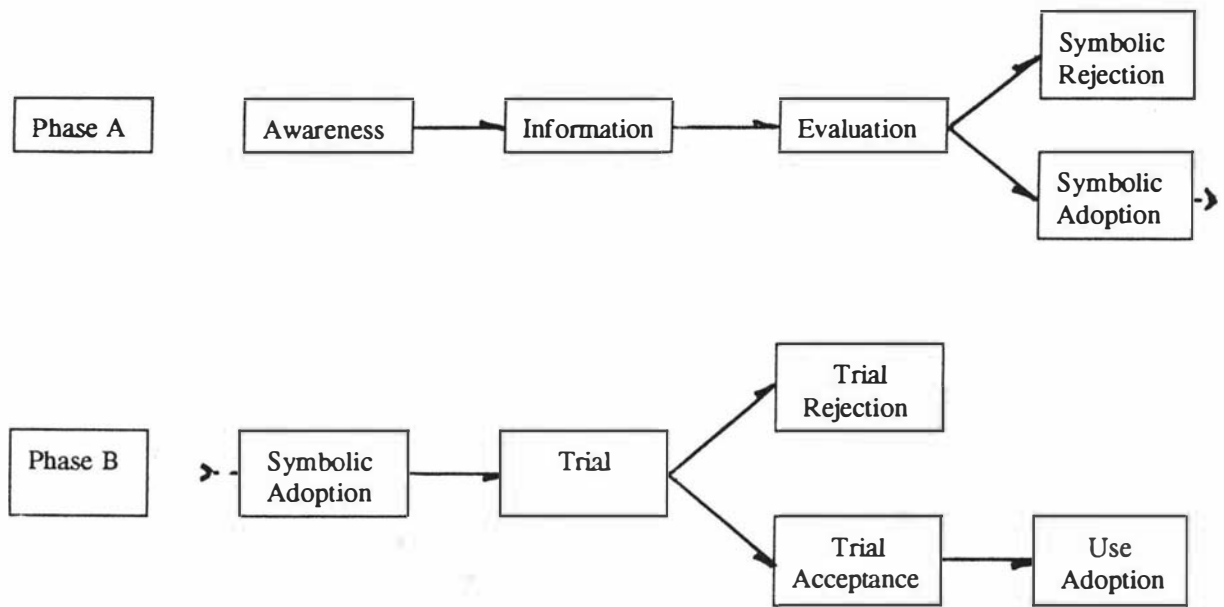
Spence claims his basic model has remained unchanged since the 1970s, a time period dominated by writers such as Rogers and Robertson. This aside, Spence makes the point that whilst many different adoption process models may be produced, awareness and adoption will

always be respective start and finish points. Further, he emphasises that all such models are merely variations of the basic five stage model illustrated, for example, by Rogers' (1962) model noted in Table 4.2.

Another area concerning the adoption process is the alternative perspective offered by the concept of **symbolic adoption**, seemingly a powerful idea. Burns (1993, 1992) made use of this early adoption framework in order to pursue changes in the need for sensation and uniqueness as one progressed through a 'symbolic adoption' process. Whilst the need for sensation and uniqueness is not of issue, the notion of symbolic adoption is. The term 'symbolic adoption' is not new, though few have used it to expressly augment the basic five stage adoption process model. In addition to Burns, those that have used or extended on the notion specifically include Mittelstaedt et al (1976), Hermann et al (1972), and Klonglan and Coward (1970). Klonglan and Coward note other writers such as Rogers (1968), Bohlen (1968, 1964) and Beal et al (1966) to have at least cited the concept or similarly hinted at it.

Of those mentioned, Klonglan and Coward (1970) are perhaps the most central to argue for an augmented adoption model, since their seminal work explicitly brought together the thinking of others. Regardless of the material or non-material aspects of innovations, Klonglan and Coward proposed that product adoption (an outcome following evaluation) had two components; that is, symbolic adoption (idea acceptance) and use adoption. The utility of their model was emphasised as explaining time lags, differential effects of variables at particular points in an adoption process and the impact of two types of rejection (symbolic and trial). Klonglan and Coward's (1970) two phase adoption process model is re-produced as Figure 4.2

Figure 4.2 Klonglan and Coward's (1970) Two-Phase Adoption Model



It is noted that Klonglan and Coward made use of 'information' as a second stage in their staged adoption process. It is felt that this could just as easily be defined as 'interest'. By contrast, Burns (1993) utilises 'interest' as a second stage in his replication, yet substitutes 'consideration' for 'evaluation'. Notwithstanding these minor alterations, the augmented model stands as a useful indicator of an alternative perspective.

Mittelstaedt et al (1976) argued that the Klonglan and Coward model did not adequately account for those who might use information drawn from a trial activity as an input to their respective evaluations and subsequent decision. There was also an express concern for those who might not be aware of some innovation. Hence, using the Hermann et al (1972) model, Mittelstaedt et al placed symbolic adoption and symbolic rejection after a 'pre-evaluation' stage (noted as attitude formation by Hermann et al). Following symbolic adoption was 'trial' with three possible outcomes: rejection, acceptance, or indecision. Thus, using Mittelstaedt's approach, it is only from trial acceptance that use adoption could result.

Thus, it is evident from that which has been covered above that there is more to an adoption

process model than a simplified five stage process. Whilst five stages may well be acceptable as a generic description of stages for adoption, the labels accompanying such a schematic are likely to vary according to the perspective of respective researchers. Whilst not specifically noted, the notion of symbolic adoption and symbolic rejection as an interceding phenomenon assumes special interest given the likelihood that it is possible in a retail setting to occur as a pre-evaluative incident. From a buyer's perspective, there may well be some stage during initial transactions where symbolically a product and its accompanying offer is either symbolically accepted or rejected as a pre-evaluative action.

4.6 New Product Adoption and the Retail Market

It is noted and generally accepted that retailers are bombarded by a vast array of new product propositions from suppliers or their agents. In the grocery trade for example, Doyle and Weinberg (1973) indicated that between 50 and 100 items per week may be offered to retail grocery buyers; Kaiser (1986) noted a 21% increase in the average number of items carried by supermarkets in Sweden in 1986 over 1971; and, McLaughlin and Rao (1991), citing Gorman (1990), note a 66% increase in the number of new products introduced between 1984 and 1989. The magnitude of a new product assault may well vary depending on the nature or segment of the market being served, suggesting that the intensity and frequency of subsequent decisions involving either acceptance or rejection of new product offers could be substantial and ultimately vary by retail sector. Kline and Wagner (1994) note that some retail buyers who once bought four lines per year may now be buying as frequently as every six weeks.

It remains, however, that an incessant strain on retail buyers and the facilities that they are charged to 'protect' is under constant pressure (Rao and McLaughlin 1989; Montgomery 1975). Recently, in the retail grocery trade in the United States for example, it was estimated that up to 12,000 products per year have been submitted for consideration (McLaughlin and Rao 1991). Whilst not definitive, and based on 'aged' information, anywhere from 22% (Doyle and Weinberg, 1973) and 38% (Nilsson and Host, 1987) of new product presentation are accepted for initial display on supermarket shelves. It has long been recognised that obtaining distribution is one of the key success factors for consumer products (Montgomery

1975). It is also recognised that shelf-space is a scarce resource (Kaiser 1986; Montgomery 1975; Heeler 1973), adding emphasis to Rao and McLaughlin's (1989) notion that retailers (and buyers specifically) are gatekeepers to shelves.

However, it is equally recognised that scant attention has been paid to organisational adoption activities by researchers. As noted by Gatignon and Robertson (1989), "the marketing literature on adoption at the level of the firm is rather sparse ... and much of it is oriented toward product/innovation characteristics associated with successful or unsuccessful market entry." (p.35) This supports similar sentiments offered by Yorke (1981) and Mahajan and Muller (1979) who pointed out that very little had been done to include channel member purchasing activities or consider the effect of distribution in diffusion models. Jones and Ritz (1991) report that a study undertaken by Jones and Mason (1990) revealed that no retailer adoption data was found after a year long search.

The dearth of information then on retailer adoption practices may well be a result of researcher concentration on consumer markets. Robertson and Gatignon (1986) are specific in suggesting that there is a limited number of research projects concerned with the adoption activities of organisations. By contrast, Frambach (1993) imply that innovations in the business market are often viewed in terms of production inputs, machines, processes and techniques adopted for use by companies.

Yet it remains fact that retail organisations are in a central and important position (Hirschman and Stampfl 1980), play multiple roles and obviously are an integral part of the entire adoption process (Brown et al 1976). Indeed, this integral part has been recognised by many researchers and is featured as 'supply-side' factors or considerations. Frambach (1991) not only notes the relevance of this phenomenon in explaining the adoption process, but also finds that it has received little attention. Jones and Ritz (1991) in viewing distribution, see two adoption processes occurring at once; one involving the retailer, the other concerned with the consumer. They note that purchase by a consumer cannot effectively occur without its availability in retail concerns. Earlier, Gatignon and Robertson (1989) drew attention to factors which help explain adoption. Noteworthy of these are supply-side issues and information process features. Finally, Frambach (1993) notes that, "the adoption process of

a decision making unit and the way it is influenced lie at the heart of the diffusion paradigm." (p.23) This heart is seen to reflect that which transpires between a supplier and a retailer, two entities which exhibit strong similarity to Fliegel and Kivlin's (1966) interpretation of diffusion as involving an advocate and acceptor of change.

The dissertation research at hand concerns the acceptance and rejection of new products by supermarket retail grocery buyers. Its heart involves supply-side diffusion of which adoption is a part. The application of an adoption process framework to facilitate understanding the retailer's role in the diffusion of new products is seen as an apt application of the concept.

4.7 Summary

Much of the research concerning organisations reflects an industrial bias thus limiting the useful extension of some worthwhile concepts to the retail trade. Notable in this regard is the buy-class framework and a host of industrial buying models. In the absence of a retail buying model and given that retailers are making accept and reject decisions on new products, the application of a basic adoption process framework is a natural extension, used as it is to assist explanation of these decisions. Little has been done by researchers in this regard, thus the adoption framework is seen to partially contribute to understanding and help fill a highlighted void. In terms of retail buying concerning new products, the situation is seen as fulfilling the four elements of diffusion; that is, idea, communication, time and a social system.

Diffusion and adoption research is multidisciplinary in nature though obviously having a strong social science origin. This vastness in contribution possibilities provides a fertile information base. It further suggests and supports a flexible application to a wide range of topic areas, including retail adoption of new products.

The use of the term 'new' when applied to products is problematic in that it presents definitional and placement problems. In one context its meaning is explained as a position on a continuum somewhere between 'brand new, never-before-seen' and 'me-too, imitation'. The situation, the perceiver and the product all contribute to placing a new product on this

continuum. In another context, a further continuum is offered; placement on this device is determined by the amount of change in behaviour a new product might create. Continuous, dynamically continuous and discontinuous innovations are the gradations from least to most change respectively. In a practical sense; that is, at the retail level, 'new' likewise has multiple definitions. However, interest from the manufacturing sector reflects self-interest; that is, how to release products better given that they can be regarded as essential to business life.

Five basic characteristics are central to innovations; namely, relative advantage, compatibility, trialability, observability and complexity. These attributes, and several others added over time, are noted as facilitating or retarding the rate at which an adoption process eventuates. However, these items have been derived largely from an intense manufacturer - consumer focus, and little in the way of application to business transactions. There is no indication of any similarity with parallel lists of evaluative criteria generally, an area it is suggested, may be pursued as future research.

A five-stage process most suitably describes, and is generally accepted as, representing an adoption process. Several variations of this process have occurred though it remains that the process itself begins with 'awareness' and ends with 'adoption'. Of particular importance as an alternative perspective is the concept and placement of symbolic adoption. Whilst existing research places the concept after 'evaluation', there is considerable scope for contemplating its placement as a pre-evaluative condition. As a reflection, it might usefully be thought that 'evaluation' is not static or occupying one place or stage. Rather, evaluation is a phenomenon that transcends an entire adoption process.

Channel members, particularly retailers, play a vital part in the success or failure of new market entrants, supplied as they are by manufacturer concerns. Without retailers, adoption of new products would be difficult to eventuate. However, there is a dearth of information about retailer adoption practices. These practices lie at that heart of the diffusion process.

CHAPTER FIVE

MODIFIED ADOPTION PROCESS MODEL

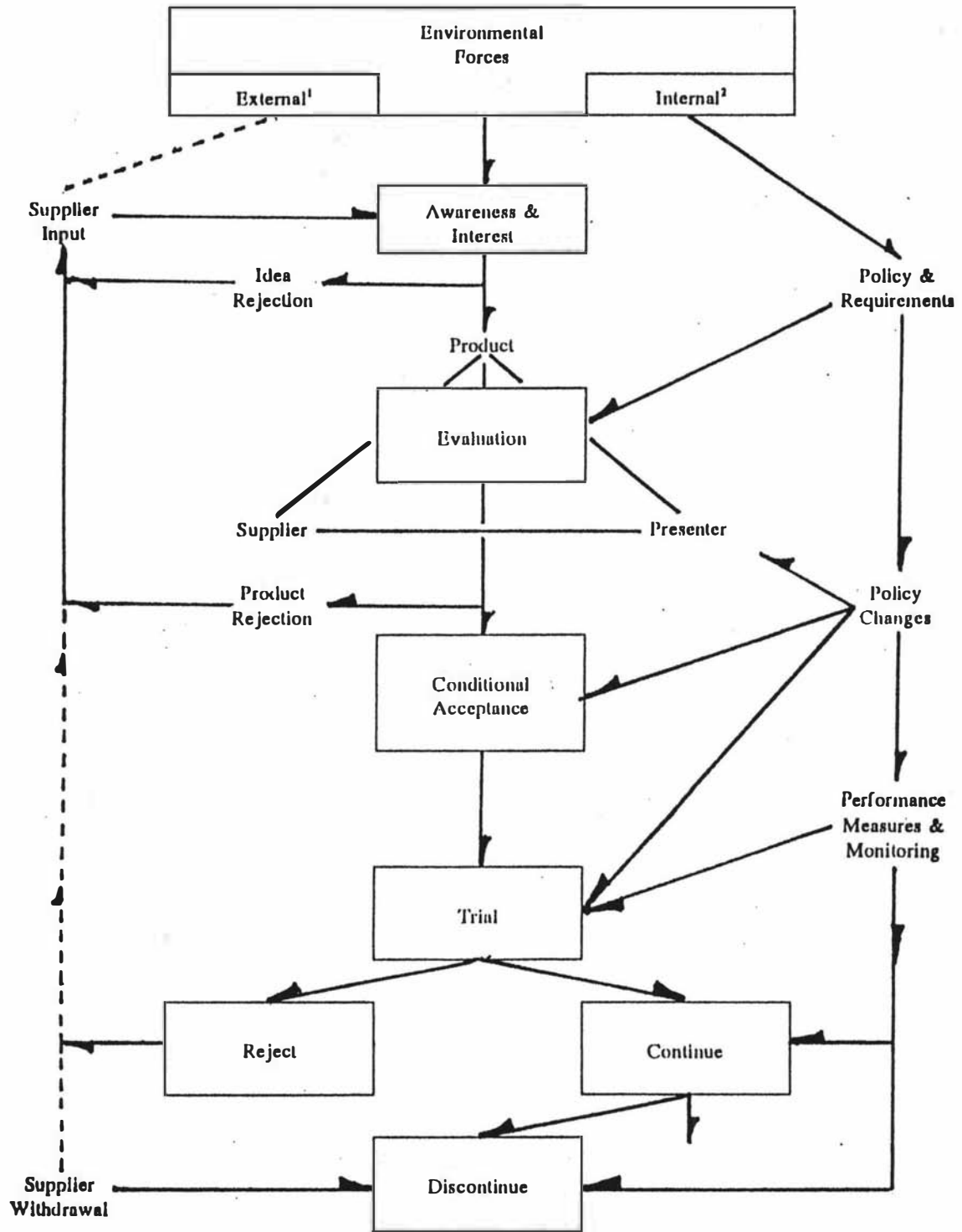
5.1 Introduction

Chapter One introduced the subject matter and study area of research. Figure 1.1 displayed a modified and extended adoption process model and it was indicated that the model would be discussed more fully. Having just outlined various aspects about the adoption process, it is important to clarify and discuss in more detail not only the underlying premise of the modified process model previously introduced, but also and perhaps more importantly to explain the model's constituent parts. This elaboration is necessary to fine tune the focus of the research; namely, the evaluation of new products by buyers and others involved in decisions to accept or reject new grocery products. The process model is shown as Figure 5.1.

The literature concerning the application of an adoption process model to reseller and retailer markets is at best scant. Where such models have been applied, they are limited to industrial markets, though here too there is a dearth of extant literature. Adoption process models generally speaking are often depicted as a series of stages occurring over time. These stages notionally are identified as awareness, interest, evaluation, trial and culminate in either acceptance or rejection. At each of the various stages events can impinge on the system sometimes resulting in an idea or product being rejected (even without trial). These stages in modified form are shown in Figure 5.1. Typically all of this represents a basic 'Input-Output' cognitive process model. Indeed, it could be argued that each step or stage represents a successive series of inputs and outputs. This notion aside, the intent of this chapter is not to debate the pros and cons of such models, rather it is to explore the use of such a model as a managed explanatory framework for the study.

To facilitate Chapter discussion, the modified adoption process model is seen to be composed of four (4) main parts: Environments, Offer, Process and Outcomes. These are shown in relational form as Figure 5.2. The four (4) parts contain the various elements of the larger model displayed as Figure 5.1 and form the basis of structure for this Chapter.

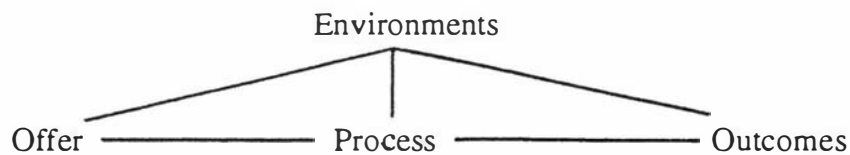
Figure 5.1 Modified and Extended Adoption Process Model



1. External forces include, for example, retail environment, government regulations, legislation, consumer demand, economic climate, competition, technology.

2. Internal forces include, for example, corporate ownership, attitude to risk and willingness to accept, buying structure, presence of buying committee and numbers, regard for consumer, buyer ages, experience, position in company, time as a buyer, time with company.

Figure 5.2 Constituent Parts of the Adoption Process Model



5.2 Environments

In the context of its usage here, 'Environments' refers to the environmental forces which operate on a company. These are shown in Figure 5.1 as the internal and external environments; that is, forces over which a company either has or does not have control. Each is seen to have both a micro and macro composition. For example, in an internal context, micro aspects may include a buyers age, experience, or length of time with a company, while in a macro sense such forces as corporate ownership, corporate buying structure or regards for customers are items in focus. By contrast some macro elements operating externally to a company could include the retail environment, government regulations or economic climate. External micro forces are seen to include competition and technology.

Such is the operating environment of retailers generally and supermarkets specifically. The various elements which represent both internal and external forces essentially are regarded as "inputs". An assessment or analysis of these by a company operating in the system creates an "output" germane to that company and referenced in Figure 5.1 as 'policy and requirements'. Such policy, not of itself static, acts as an input to both The Process and to Outcomes, the latter via any policy changes that may occur from time to time. These changes also affect or impact on The Process.

In an operational context then, 'policy and requirements' actioned by buyers and buying committee members are pivotal, acting as an input to The Process. These may dictate the form and nature of The Process. If one could imagine a pyramidal structure of 4-points, then one of the nodes is representative of buyers imposing their company's policy and requirements on The Process. Taken further, the buyer armed with their company's policy act as screening mechanisms to inputs from suppliers; that is, the supplier's Offer.

5.3 The Offer

In the overall context of the constituent model (Figure 5.2), The Offer effectively represents supplier input. At a macro level, this input in reality is part of the retailer's environment. However, the input at a micro level takes the form of information about the product, the market in which it will be exposed and the supplier's willingness and ability to support the proposed new market entrant. In the larger adoption process model, Awareness and Interest are encompassed. Thus inputs in the form of a product, cursory knowledge of the same and what a supplier intends to do is initially assessed by a buyer. If the interest generated is sufficient and The Offer meets a company's 'policy and requirements', then the supplier's offer passes forward and interacts with The Process. If the interest generated is minimal and company policy and requirements are deemed not to be met, then the supplier's offer is rejected. This rejection, however, is not terminal in that appropriate modification to the initial input at a later point in time could increase the interest level sufficient enough to have the re-submission interact with The Process.

In terms of the larger process model, awareness and interest have been combined for focus and convenience. For the purpose of the research, the main focus was on the staged element 'Evaluation', not what preceded this activity. This is not to suggest that these earlier stages are not important in the entire process of acceptance, merely that they were not the primary focus of the study. Thus, it was convenient to link awareness and interest. However, it is recognised that the term 'interest' has imbedded in it an evaluative dimension. Thus, a 'pre-evaluative' phase occurs initiated by a buyer who has as his/her standards (amongst others matters), the company's policy and requirements. The outcome of this pre-evaluative activity is noted as 'idea rejection', or alternatively the idea/product ultimately achieves a full interaction with The Process and the buyer's evaluation which is more formal and detailed in its orientation. This latter activity may or may not involve others, notably a buying or ranging committee.

5.4 The Process

As it may be discerned, the evaluation stage of the adoption process model (labelled in Figure 5.1 as Evaluations and The Process in Figure 5.2) is seen as central or, as previously indicated, pivotal to the flow of goods into the retail sector. Operationally, this central position absorbs and processes the inputs of Environments and The Offer. What is more, the buyer is actively involved representing not only the interests of his/her company, but also his/her own.

Previously noted (Chapter Four) is the issue and importance that evaluative criteria have in a buyer's deliberations. Extant literature suggests that these criteria broadly fit one of two main categories; those associated with a product, or those associated with a supplier. However, in Figure 5.1 a third grouping is suggested; that is, criteria associated with a presenter. Thus it is proposed here that a trilogy of elements are assessed by any buyer, hence the triangular shape and pluralistic label 'Evaluations' which needless to say are multifaceted.

The rationale for including a specific third evaluative element rests on the reality of product presentations and assessment in retail activities. Such activities are not robotic, nor are they a rubber stamp affair undertaken over the telephone. People in face-to-face contact are involved in dyadic interactions and negotiations during The Process phase. Once a product proposition (The Offer) from a supplier passes the pre-evaluative stage (Interest), it is seen to be presented more formally by the supplier's representative (Presenter in Figure 5.1). Prior to any acceptance or rejection (an outcome of Evaluations) of any supplier's offer, negotiations form part of the evaluative activities and occur as part of The Process. As a bottom line, and negotiations aside, buyers evaluate products, suppliers and people.

5.5 Outcomes

Deliberations undertaken as part of The Process produce outcomes that have involved choice; that is, is the supplier's offer, all things considered and after due consideration, accepted or rejected? Once again the output of one sub-system forms the input to the next.

In Figure 5.1, the two outcomes of choice are labelled as 'conditional acceptance' or 'product rejection'. In the case of the latter, a supplier's offer may well have passed initial screening (pre-evaluation), however, under more detailed scrutiny be rejected for any of a number of reasons. For example, a supplier may not be willing to meet fully a company's demanding terms and conditions, a buying committee becomes involved, or the company already has a sufficient number of similar products or product lines. It may even be the case that the supplier and buyer clashed on personality terms! Rejection, however, is not final in that a subsequent re-presentation at a later date may meet with 'conditional acceptance'.

The second outcome aspect of The Process is 'conditional acceptance' which is intended to accommodate both 'yes and maybe' buyer's deliberations. It should be noted in Figure 5.1 that an 'unconditional acceptance' is not an alternative. Every acceptance by a supermarket retail grocery buyer is conditional; that is, acceptance and continuance is conditional upon any product performing at some designated satisfactory level during a trial period. This trial is seen as embracing 'performance measures & monitoring' in Figure 5.1. As a matter of course, performance measures and monitoring, to the extent that they are fully an internal phenomenon (e.g. sales figures), are seen as being subject to change relative to a company's policy. Thus policy changes operate as an influential input across the full spectrum; that is, The Offer, The Process and Outcomes. It could be the case that performance measures and monitoring differentiate between known and unknown companies' product offers. Such differentiation may perhaps be seen to be the difference between a two month or four month review cycle involving performance measures and monitoring.

The issue of performance measures and monitoring after 'conditional acceptance' represents a departure from the more conventional explanations of the adoption process. In the more conventional explanations, Trial normally follows Evaluation, but precedes either Acceptance or Rejection. Here, an accept or reject decision follows Evaluations, and Trial (performance measures and monitoring) of those items conditionally accepted leads to either Acceptance or Rejection.

Assuming a product meets with a successful trial, its 'life' on a supermarket shelf is generally assured as long as it continues to perform (e.g. meet profit and sales objectives, sells a

specific number of units per store). If a product fails to perform after acceptance, its 'life' is terminated; that is, it is discontinued by the supermarket. Discontinuance also may be accomplished voluntarily by suppliers, themselves noting that a product has not been performing, or by the supplier reducing or trimming his/her product lines. Such actions do not normally result in re-entry to the system at a later date.

5.6 Summary

The assessment of new products by supermarket retail grocery buyers (and committees where these exist) are seen to follow and best exhibit a depiction of an adoption process. Not unlike existing models of the adoption process, 'idea or product' rejection may occur prior to formal evaluation. However, rejection in itself does not prevent a re-introduction at another point in time, a feature which is distinct in the modified model. Although this is proposed as a new feature, for the purposes of the research, primary attention is directed to the formal evaluation stage of the adoption process (The Process shown in Figure 5.2). In particular, attention focuses on the likely trilogy of assessment by a buyer; that is, the product, supplier and presenter. All are seen to interact as part of an overall process that is subject to inputs and influence from internal and external sources and culminates in choice. Very little information in terms of evaluation assessment seems to exist or has been undertaken in adoption research. The outcome of the evaluative process is choice, which in this instance is either conditional acceptance or product rejection. This is yet another departure from a more 'traditional' view of the adoption process framework. Further, the 'pathway' to adoption and continuance (cf. product success) is a successful time-related progression through supermarket imposed performance measures and monitoring, a buyers' continual evaluative activity.

CHAPTER SIX

LITERATURE REVIEW: DATA REDUCTION AND UTILITY MEASURES

6.1 Introduction

Over the course of the staged research activity, the central focus of the study was directed towards developing and executing a research platform aimed at assessing the likely acceptance of suppliers' new product propositions by retail grocery buyers. The essential measurement device for assessing this activity was seen appropriately to be conjoint analysis. This research procedure has not been applied previously in this context despite its wide use to assess, for example, the suitability of alternative products, prices and services in both consumer and business markets. In fact, Cattin and Wittink (1982) and Wittink and Cattin (1989) document well over 1,000 studies that have used a conjoint analysis procedure to obtain meaningful research results.

According to the extant literature, the application of the conjoint analysis procedure to supermarket retail decisions involving new products has not been studied before. In addition, its application within the New Zealand supermarket grocery trade is likewise new. Given these circumstances and the fact that a 'short list' of salient decision attributes were necessary, a number of deliberate, methodological steps were taken. These steps ultimately involved the use of a range of mathematical procedures which would be capable of reducing any final data set to a manageable level. This chapter deals exclusively with the various mathematical procedures used during the course of the research activity, the net effect being a staged data reduction process aimed at gaining utility measures and assessing the relative importance of decision attributes.

The Chapter is descriptive in its orientation, thus little, if any, mathematical symbolism and models of a more technical nature are presented. Most of the analysis was conducted using several computer based data management programmes. The chapter is divided between two main sections. One section deals with data reduction techniques, whilst the other is confined to examining utility (conjoint) measures. Within the data reduction section, discussion begins with factor analysis (in particular principal components analysis), its general use as a

technique, key concepts and some of its limitations. As the course of the study progressed, it was necessary to examine data further from a number of perspectives simultaneously, hence multiple correspondence analysis (MCA) was likewise used. A brief examination of the subject matter in this area follows principal components analysis. In order to further reduce the decision factor data set, both multidimensional scaling (MDS) and cluster analysis were used in a final stage prior to the conjoint study. Overall, discussion of the topics in this 'reduction' section has been purposely limited to essentials given the peripheral role that each has played as analysis tools in the study.

In the second of the main sections, a number of elements about conjoint measurement are first discussed (general issues, utility model, reliability, attributes). Following this is a brief discussion of trade-off analysis, one of two techniques used to gather respondent evaluations. This technique was used to examine some of the top criteria that loaded heavily on the first principal analysis component. The technique also was used as a preliminary test of procedural acceptance (ranking data). A discussion of the second technique, full profile analysis, follows this treatment. In both instances, basic information is presented.

6.2 Data Reduction Techniques

A number of mathematical techniques are available to act as tools for researchers wishing to reduce their data sets to a more manageable collection of information. Choice of these techniques largely will reflect objectives being pursued and the outcomes or results one is trying to achieve. It is often the case that a requirement for data reduction occurs when one trades in multivariate data; that is, data which has three or more variables being considered at one time (Kinear and Taylor 1979). The pursuit then is reducing the original number of variables to a lesser number, entrusting in the process that similar or additional meaning is extracted or otherwise provided. Whilst a number of such techniques are available for use, four are viewed here in succession; that is, factor analysis, multiple correspondence analysis, multiple-dimensional scaling and cluster analysis. Haire et al (1992), Malhotra (1993), Arabie and Hubert (1994) and Hoffman et al (1994) either directly or indirectly relate the foregoing techniques as fulfilling data reduction tasks.

6.2.1 Factor Analysis

Factor analysis is an interdependent research tool; that is, no constituent variable in the data set predicts any other variable in the same set. As such, the research device has been used extensively for several decades across a wide variety of academic disciplines. In the marketing area, it has been applied to such research endeavour as segmentation, media usage, identification of brand attributes and price sensitivity (Malhotra 1993). Its use can be exploratory (i.e., looking for or identifying patterns in data, or data reduction), confirmatory (i.e., hypothesis testing), or developmental in that a 'scale' (factor scores) can be created for subsequent use (Ganesalingam 1993; Malhotra 1993; Haire et al 1992; Nie et al 1975). Whilst some debate as to its use as an exploratory or confirmatory tool exists (Haire et al 1992), its use in the current study is essentially exploratory in nature.

The basic premise of factor analysis and its sub-programme, principal components analysis, is perhaps best expressed as a data reduction tool. Nie et al (1975) specifically note that data reduction is the most outstanding feature of factor analysis, a sentiment echoed by others either implicitly or explicitly (Malhotra 1993; Haire et al 1992; Norusis 1985). The factoring procedure combines or reduces a larger number of variables into more meaningful (interpretive) and manageable numbers or set of factors. The aim is to achieve compression of input variables without a great deal of loss of information in terms of output; that is, the factor solutions (Haire et al 1992). The factors created in this process have been variously described as underlying indices, patterns, dimensions or components (Manly 1994; Malhotra 1993; Haire et al 1992; Nie et al 1975) that exist within a multivariate data set. The factor analytic process creates these 'new' variables that exhibit relationships and interrelationships between the initial variables and the respective compressed factors (Malhotra 1993; Norusis 1985; Nie et al 1975). Thus, factor analysis (or principal components analysis) reduces or compresses a larger number of variables into a smaller set of independent dimensions so as to facilitate understanding and produce a meaningful structure to a problem under investigation (Ganesalingam 1993).

The formation of new, compressed variables as allied linear constructs (factors or components) is based upon the mathematical interrelationships noted in the data (Haire et al

1992; Norusis 1985; Nie et al 1975). The representative outcome of these interrelationships is a correlation coefficient, a summary statistic, expressed in two ways. On one hand, the coefficient can be expressed in matrix form involving individual variables. On the other hand, Malhotra (1993) indicates that "each variable is expressed as a linear combination of underlying factors." (p.620) The by-product of this is the visible coefficients which are seen to 'load' on the various factors. In terms of factor loadings, Haire et al (1992) note that larger factor loadings represent higher levels of significance. For example, values greater than 0.30 are seen as significant, whilst those in excess of 0.50 are very significant. However, notwithstanding this, loadings remain as the correlation between the original variables and the factors to which they align. Rotation of the factor solution improves interpretation and can find new factors (Manly 1994; Haire et al 1992).

With respect to the mathematically derived factors, three aspects should be noted. Firstly, the factors, however many originate, are independent of each other and hence are seen as unrelated. This unrelatedness is referred to as being orthogonal. Secondly, according to Haire et al (1992), the first factor best summarises the linear relationships amongst the data, hence it may be assumed to be the most important factor, especially if the factor solution is unrotated. Thirdly, several points of view exist with respect to the number of factors that should be determined. Some argue that it is the researcher or analyst who should determine the number (Manly 1994). Others (Haire et al 1992), in a more conventional and scientific manner, suggest that the number of factors ought to be decided by eigenvalues or a scree test. An eigenvalue (also known as the latent root, or sum of squares) refers to the total variance explained by each factor (Malhotra 1993; Haire et al 1992) and, as already noted, suggests the relative importance of factors in the data set. Generally, any factor exceeding 1.0 (or unity) operates as the basis for determining the maximum number of factors. According to Haire et al (1992), eigenvalues are an acceptable device when variables in the data set number between 20 and 50. On the other hand, a scree test involves a graphical representation and examination of factor variance. The number of factors selected is taken as prior to the instance where the graph begins to flatten.

In addition to factor loadings and eigenvalues, three particular outputs generated by factor or component analysis are communalities, and two statistics, Bartlett's Sphericity and Kaiser-

Myer-Olin (K-M-O). Communality suggests the relationship that exists (measured as a variance) between each variable and all factors taken together. 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 factor solution.

Of the two statistics named, Bartlett's Sphericity tests whether the derived correlation matrix is an identity matrix; that is, all diagonals are 1.0 and all off-diagonals are 0 (Malhotra 1993; Norusis 1985). According to Malhotra (1993), larger values are more favourable to denying a null hypothesis. The K-M-O statistic, on the other hand, measures sample adequacy through a comparison of observed and partial correlation coefficients. Values can range between 1.0 and 0. Ideally, larger values of K-M-O are desired given the explanatory power of correlations between pairs of variables. Malhotra indicates that values above 0.5 indicate that factor analysis is an acceptable tool, whilst values below this question its use.

As a related matter, Haire et al (1992) suggests that factor analysis is preferable with larger samples; that is, 100 or larger. Use of factor analysis with smaller samples is not ruled out, rather it is indicated that caution should be used in interpreting results using such samples. Earlier, Kinear and Taylor (1979) noted that factor analysis, multiple dimensional scaling and cluster analysis are all techniques which can be used with small samples. Whilst caution is likely necessary with factor or principal components analysis under small sample circumstances, the technique as Malhotra (1993) directs, "is recommended when the primary concern is to determine the minimum number of factors that will account for maximum variance in the data for use in subsequent multivariate analysis." (p.625)

6.2.2 Multiple Correspondence Analysis (MCA)

Multiple correspondence analysis (MCA) is a multivariate descriptive tool initially designed to examine categorical row and column data simultaneously (Kaciak and Louviere 1990; Greenacre 1989; Hoffman and Franke 1986). Haire et al (1992) note that it is an interdependent technique that assists dimensional compression and that it is similar to multidimensional scaling (MDS) in its ability to provide a perceptual map. The 'map', a processed solution, provides what is referred to as 'low dimensional' space (Hoffman et al

1994; Malhotra 1993; Nishisato and Gaul 1988; Hoffman and Franke 1986). Low dimensional space is the result of data reduction or decomposition of multiple respondent and multiple variable interactions.

Imbedded in the output are a number of dimensions, each accounting for a declining proportion of variance, a feature not too dissimilar to variance representations noted for factors under principal components analysis. Indeed, as Haire et al (1992) identify, the MCA procedure develops eigenvalues for each dimension (similar to a factor) that indicates that dimension's contribution to variance explanation. Further, Malhotra (1993) notes the similarity of algorithms between principal components and correspondence analysis. However, Fox (1993) notes a difference between the two by intimating that no rotation of axes is needed for MCA since the original space produced achieves the largest amount of variance through the simultaneous maximisation of criteria.

MCA is known in the literature under several names. These include dual scaling, optimal scaling, homogeneity analysis, method of reciprocal averages, correspondence analysis and simultaneous linear regression (Nishisato and Gaul 1988; Hoffman and Franke 1986). Regardless of any title that is proffered, the essential aspect of the treatment is the discovery of structure and pattern in a data set, not otherwise visible or detected by alternative methods. Thus, its application is well regarded as an exploratory tool in nature (Malhotra 1993; Hoffman and Franke 1986).

The origins of MCA are credited to a Frenchman, Jean-Paul Benzecri in 1969 (Nishisato and Gaul 1988; Hoffman and Franke 1986). Thus, the technique of correspondence analysis or its derivatives is relatively young compared to many other mathematical tools. This feature may well account for the few marketing related papers noted by Nishisato and Gaul. Hoffman and Franke (1986) suggest that the uses to which MCA could be put are perhaps limited by one's own imagination. They cite development of market segments, product positioning, new product development and similarities and differences between brands as obvious areas for application. However, they also note that it has been used to select a brand name, evaluate competitive brands, investigate family purchasing roles and monitor the effects of advertising campaigns. More recently MCA has been used to investigate improvements

in means-end chains (Valette-Florence and Rapacchi 1991) and viewers response to programs (Hoffman and Batra 1991). It is also noted that Kaciak and Louviere (1990) used a combination of MCA and a discrete choice model to assist the determination of market segments. However, Fox (1993) suggests that there is increased use of MCA.

The wider array of usage (or potential use) seems to arise from the realisation that categorical data is not the sole and limiting form of data acceptance. Hoffman and Franke (1986) note specific conditions or needs. These are a large data matrix whose structure is not revealed by inspection; homogeneous variables where row and column distances can be calculated; and, an unknown or poorly understood matrix. However, Haire et al (1992) indicate that a rectangular data matrix without negative numbers is required, the numbers depicting categorical responses. Depending on the problem confronted, it is possible to utilise contingency tables, sorting data, multiple choice data, paired comparisons, rank order data and associative data (Fox 1993; Nishisato and Gaul 1989; Hoffman and Franke 1986).

In addition to these central requirements several limitations have been nominated. Notable of these is that MCA is descriptive and not intended to test hypotheses, that it is exploratory in nature and that there is an inability to determine an absolute number of dimensions. It is further suggested that solutions are susceptible to outliers and missing items and attributes, in addition to being prone to high levels of subjective interpretation. Despite these limitations, Green et al (1988) had earlier noted that correspondence analysis was viewed positively in its ability as a reduction technique to provide 'maps' and spatial representations.

6.2.3 Multidimensional Scaling (MDS)

Similar to Correspondence Analysis or MCA, multidimensional scaling (MDS) is likewise young. It has been at the disposal of a variety of researchers for the best part of three decades. Wilkinson (1989) briefly describes MDS as a powerful data reduction vehicle usefully applied to matrix or rectangular data where the aim is to examine similarity or dissimilarity amongst the contained observations. Taken further, MDS is a robust aid to distinguishing important underlying dimensions in such data sets given that these measurements are the result of some evaluation process (Haire et al 1992). The dimensions

uncovered are the result of applying computer-based spatial models and numerical techniques (Desarbo and Manrai 1992) in order to create a structured 'map' (also known as a perceptual map or perceptual mapping) that shows geometric relationships amongst various elements of a data set (Manly 1994; Malhotra 1993; Haire et al 1992; Malhotra 1987).

MDS is concerned about representation (Hodgkinson et al 1991; Coxon 1982); that is, the visual illustration of several variables or criteria as single points in some defined multidimensional space. These points, as Haire et al (1992) suggest, are the result of objective and subjective (perceived) respondent evaluations which are combined in a mathematical process to yield correlation coefficients. These correlations exhibit either similar or dissimilar Euclidean distances between each other, thus defining their relative relationship to each other. Given enough data points, preliminary groupings of respondents' points are assembled relative to the dimensions identified. The spaced data points are essentially representations of respondent perceptions or judgements (Haire et al 1992; Hodgkinson et al 1991; Haire et al 1978). Haire et al (1992, 1978) make some assumptions about respondent perceptions, noting that judgement is unlikely to be stable over time, that perception varies across attributes and that respondents are likely to place different levels of importance on attributes. In short, evaluation will never be the same for all. Whether these forces act as a weakness or limitation of the MDS procedure is not made clear. It is, however, cast as a challenge. Seen in question form, how robust and capable is the MDS process in handling respondent perceptions?

Part of the answer to this question can be seen in the popularity of MDS and the support given it by a vast array of researchers from various disciplines (Malhotra et al 1988; MacKay and Zinnes 1986). In effect, if the technique were not robust and capable, why would it be put to such wide use? In terms of applications, MDS is seen as investigative and comparative (Haire et al 1992), capable of handling a variety of data though requiring 8 items as a minimum (Malhotra 1993). The latter author notes that more items (stimuli) better define the dimensional space. Specifically, MDS has been widely used and is seen as a versatile technique. For example, use has included the development and positioning of products, assessing market structure and product or outlet images, defining market segments, assessing advertising effectiveness and assisting in channel decisions (Malhotra 1993; Desarbo and

Manrai 1992). These uses are seen as being additional to its basic use as a data reduction technique. Coxon (1982) suggests that when it is used in this manner, it acts like any other descriptive statistic trying to show similarity. In such circumstances, "we use our intuitions and knowledge about our three-dimensional world to grasp information about the data we analyse." (p.4)

The overriding objective of MDS is to provide the best fit amongst input data in as few dimensions as possible (Malhotra 1993). A researcher may be able to accomplish this by selecting amongst a wide array of MDS programs that have been developed over time. Such programs, for example KYST, MDSCAL, PREFMAP, INDSCAL or ALSCAL, are common. It is important to recognise, however, that these programs and others like them are all capable of providing optimal solutions (Haire et al, 1992), though equally it is generally noted that they each operate slightly different algorithms, or use a different analysis in their respective processes (Manly 1994; Mackay and Zinnes 1986).

In terms of the various MDS models, the more popular ones have been 'spatial distance' models (Desarbo and Manrai 1992). Regardless of the model, and hence its in-built method, distance measures, regressions, goodness-of-fit and stress measures are achieved (Manly 1994). These elements of output are essential for any spatial solution. However, on a technical level, various authors have drawn attention to issues concerning compositional and decompositional models (Haire et al 1992), metric and non-metric models and probabilistic and deterministic models (Mackay and Zinnes 1986). These ultimately impinge on any model's capabilities and imply limitations. For example, MacKay and Zinnes note that deterministic models (no error value included) cannot be used to test hypotheses, account for variations in judgements, or provide insight about variations in item and distance perceptions. Technical issues aside, MDS can be used on its own as an exploratory or investigative device. It also can be used in combination with other measures such as cluster analysis (see Green et al 1988), thus magnifying its capability of providing an insightful look into the structure of a data set and suggesting possible patterns.

In addition to the spatial map(s) produced by whatever computer program or model used, two particular outputs are important to note: dimensions and their numbers; and, measures of

goodness (or badness)-of-fit. Dimensions, like factors in principal components analysis, are derived in that a number of criteria or variables position themselves in close proximity or distance to suggest or assist the description of a dimension. Wilkinson (1989) points out that whilst MDS is a relative to principal components, it differs in that MDS does not require a linear relationship to exist. Further, a fit between a data set and an MDS model can occur with a lesser number of dimensions.

Whilst MDS programs are incapable of naming dimensions, it is generally recognised that an MDS solution is sensitive to changes in items (Malhotra 1987). This might suggest that as the number of variables increase or decrease, the number of resultant dimensions likewise change. Malhotra et al (1988) in a study testing the robustness of MDS configurations found that data deletion has a detrimental effect on configuration retrieval and that 'number of items' used produced significant effects. They suggested that more items has the effect of increasing the burden on respondents' judgements. They also found support for the use of imagery in facilitating judgement tasks. They note the earlier efforts of Pipkin (1982), Ernest (1980) and Kieras (1978), all of whom suggest the usefulness of imagery to enhance similarity judgements.

As with most statistical measures, the creation of dimensions is accompanied by an increase in R-Square values. This value relates to the proportion of variance that is accommodated by the MDS procedure and ultimately signifies the fit of the MDS model (Malhotra 1993; Haire et al 1992). Whilst Haire et al (1992) note that values of 0.60 or better are both desirable and acceptable, both Malhotra and Haire indicate that an aim is to achieve a 'best fit with a least number of dimensions'. Whilst subjectivity and experience may help a researcher determine the number of dimensions, Haire et al indicate that more than 3 dimensions inhibits interpretation. Thus, as Haire et al suggest, a scree plot of stress values or use of an index of fit (R-Squared correlation) is available to minimise subjectivity. It would appear from available research that 3 dimensions is ideal; 2 dimensions portray items on planes, whilst 3 dimensions represent items in space (Manly 1994).

Whether or not some MDS solution is 'good' or 'bad' is achieved through using a stress measure, frequently Kruskal's Stress Formula 1. Haire et al (1992) indicate that stress

signifies the amount of agreement that exists between the distances created by an MDS map and a respondent's evaluation of items. With the 'stress' statistic, lower values rather than higher ones signify greater agreement (i.e., a better fit) between the MDS map and respondent assessments (Malhotra 1993; Haire et al 1992). Haire et al note, however, a connection between dimensions and stress measures; that is, more dimensions yield lower stress measures. To gauge the relativity of high and low stress values, Kruskal's values are reproduced in Table 6.1 and appear as cited in Malhotra 1993 (p.679).

Table 6.1 Kruskal's Stress Values

Stress %	Goodness of Fit
20	Poor
10	Fair
5	Good
2.5	Excellent
0	Perfect

Thus, with MDS, value may be seen not only in the multitude of numbers derived in any given solution, but also in the manner of that solution. Whilst Malhotra (1987) indicates difficulty in assessing a 'best way' for determining some multidimensional space, Manly (1994) suggests that the determination of that space by means of dimensions is not known until one has tried a number of dimensions, a feature of working with real data.

6.2.4 Cluster Analysis

'Cluster', as the word suggests, is a batch, bevy or bunch of items similarly grouped. When referenced as 'cluster analysis' (and essentially inferring the same thing), various authors nonetheless invoke their own description of this multivariate procedure. Arabie and Hubert (1994) write in terms of grouping similar objects, whilst others note the substantiation of homogeneous groups or sub-groups (Malhotra 1993; Norusis 1988; Klastorin 1983). Punj and Stewart (1983) were more deliberate, suggesting the empirical formation of groups and thus the dependence of cluster analysis on mathematical processes. However simply it may be described, cluster analysis is seen as a classification procedure (Arabie and Hubert 1994;

Malhotra 1993; Haire et al 1992; Punj and Stewart 1983). Its overall objective is to attain the best achievable grouping of objects, people or markets such that internal homogeneity and external heterogeneity is high on both counts (Haire et al 1992). Seen similarly but noted earlier, groupings occur such that a within-group variance is minimised and a between-group variance is maximised amongst those entities being measured (Arnold 1979). In short, cluster analysis is about searching for and identifying similarities and differences in data sets. However, as Malhotra (1993) indicates, there is a unique relationship between 'similarity' and 'distance'. Similarity on one hand assists grouping like objects, whilst on the other hand, distance maintains a separation between dissimilar groupings.

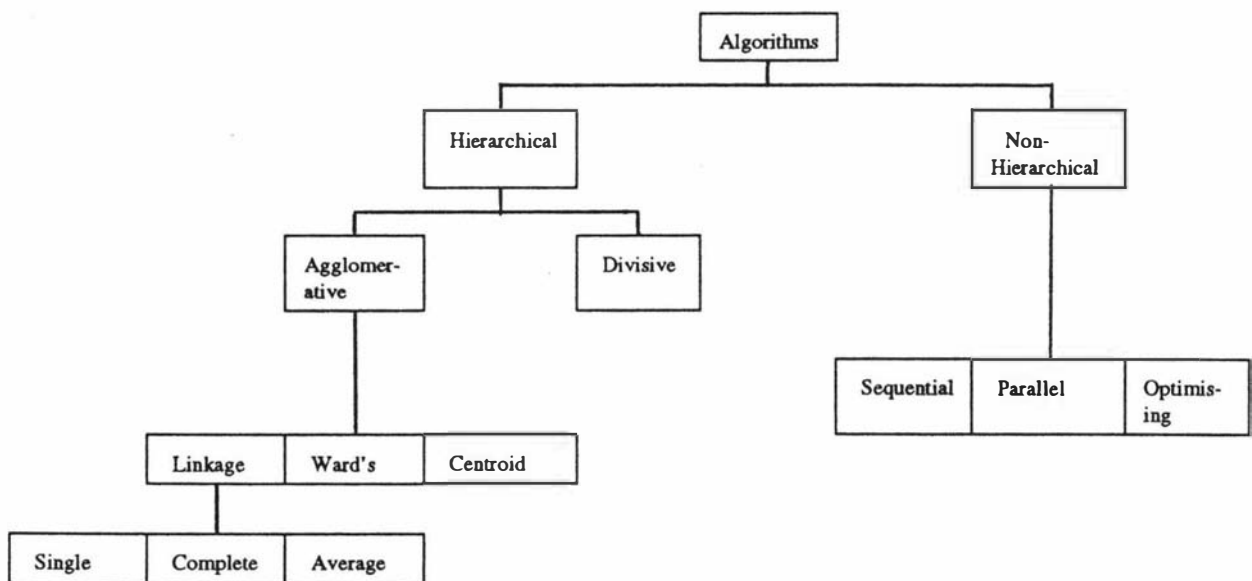
In a generic sense, cluster analysis classifies objects, not variables (Malhotra 1993; Haire et al 1992; Klastorin 1983) into similar yet reduced space. Any clustering process in general attempts to identify distinct groupings (Haire et al 1992; Punj and Stewart 1983), though as a technique it shows some similarity to discriminant analysis, another well known tool for classifying data. However, it differs from this procedure in that no a priori judgement is made about group membership and the number of groups is also unknown (Malhotra 1993; Wilkinson 1989; Norusis 1988; Punj and Stewart 1983). As a technique, Malhotra (1993) draws attention to the fact that cluster analysis has some comparison with MDS and factor analysis regarding the treatment of similarity data. Malhotra further suggests flexibility in the technique in that it is possible to use it in parallel with MDS to facilitate comparable explanation of the same data set.

Cluster analysis is known by several names: classification analysis, Q analysis and numerical taxonomy (Malhotra 1993; Haire et al 1992). In fact, an assortment of algorithms constitutes the broad subject area of cluster analysis (Punj and Stewart 1983; Arnold 1979). This largely reflects the diverse background of the subject area which has no primary origin. According to Haire et al (1992) and Punj and Stewart (1983), disciplines such as econometrics, psychology, sociology, biology, engineering and business all have developed their respective solutions and names, though no doubt aiming with good intentions to group various data on the basis of natural relationships (Haire et al 1992; Wilkinson 1989) or similarities (Arnold 1979).

In addition to the disciplines noted, marketing specifically can be added to the list as a primary contributor since the mid 1960s (Arnold 1979). In this regard, the discipline is most renowned for the consistent use of cluster analysis in the study of market segmentation and assessing the stability of market segments (Arabie and Hubert 1994; Malhotra 1993; Punj and Stewart 1983; Arnold 1979). This range of authors also points to the use of the technique across a diverse range of subject matter, including its customary use as a data reduction technique identifying aggregates (Malhotra 1993). Notable in the general area of marketing's use have been studies that aimed to understand the buyer behaviours of groups, testing new product opportunities, test market selection, classifying stores, lifestyle analysis and the determination and assessment of selection attributes (e.g., banks, retail outlets).

With application in a number of diverse disciplines, it is little wonder that different procedures (algorithms) have eventuated. The customary manner of examining these is to broadly categorise them as hierarchical and non-hierarchical, the former being the more popular or common (Malhotra 1993; Haire et al 1992; Norusis 1988). Each of these broad categories is represented by a number of divisions. For convenience, these are shown in Figure 6.1 in structural fashion, an adaptation based on Malhotra 1993 (p. 652).

Figure 6.1 Structural Nature of Algorithms



As noted by Figure 6.1, hierarchical methods are divided between 'agglomerative' and 'divisive', the latter also known as K-means. An agglomerative process signifies that 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 (Malhotra 1993; Haire et al 1992; Norusis 1988). These processes are what Funkhouser (1983) earlier referred to as building up and breaking down methods respectively.

The most common form of clustering method used is agglomerative (Malhotra 1993; Norusis 1988). Beyond this, it would appear that it is a matter of researcher choice regarding method; that is, Linkage, Ward's or Centroid. As seen by Figure 6.1, three varieties of linkage are available for use, the main difference between these revolve around the treatment of distance. Single linkage constructs clusters on the basis of minimum distance or shortest distance between points in comparative clusters. It is often referred to as the 'nearest neighbour' routine. By contrast, complete linkage clustering is built around maximum distance or furthest neighbour, and average linkage virtually speaks of itself; that is, an average distance between cluster members in any cluster is attempted. By contrast, Ward's method handles distance as a sum of squares across all variables, whilst the Centroid approach groups objects on the basis of cluster averages (means). Although this latter technique is not troubled by outliers (suggesting that others are), it does require metric data whereas other linkage methods do not (Malhotra 1993; Haire et al 1992).

The issue of non-hierarchical clusters has not received as much attention in the literature as hierarchical. However, its three approaches base themselves on the application or selection of a cluster seed or centre (Haire et al 1992) which acts as a specified distance (a number selected randomly or computer generated). Items located within a space defined by the specified distance are included in that cluster. The sequential method first selects one seed, clusters items and then moves on to a second seed and so forth until all items are clustered. Once an item is placed in a cluster it can not be placed in a subsequent cluster. The Parallel procedure makes use of several cluster seeds at once and items in close proximity to these seeds become the resultant cluster members. The Optimising method shares common ground with the two previous methods, however, items can be reallocated to other clusters in the attempt to gain the best fit of items to clusters. Haire et al (1992) point out that seed

selection is of prime concern in that each method's results can be affected by the manner of selecting a cluster's centre point. It is suggested that this be accomplished non-randomly.

Whilst a variety of cluster techniques (algorithms) have been applied in numerous areas, its general employment is not without reservation, problems and critics. This situation may well reflect the diverse nature of the technique's multiple origins, as well as any explicit weaknesses in various algorithms that have been developed over time. Hence, considerable scepticism (Punj and Stewart 1983) surrounds the use of cluster analysis and resultant findings. However, Punj and Stewart also note that the problems facing cluster analysis is also applicable to multivariate statistics. After all, cluster analysis is recognised as a collection of multivariate techniques (Haire et al 1992; Wilkinson 1989). However, in a general sense, the problems encountered are likely to span questions concerning cluster boundaries, choice of variables and the use of the right metric measure.

Problems concerning the boundaries of derived clusters and number of clusters are often cited by researchers; that is, with reference to nothing being prescribed, no clear guidelines provided, ill-defined expanse of boundaries and mutually exclusive or overlapping boundaries (Malhotra 1993; Hagerty 1985; Klastorin 1983; Arnold 1979). Haire et al (1992), however, is equivocal in noting that there is no objective method for designating number of clusters. Earlier, taking a slightly wider view of boundaries and operating on the issue tangentially, Arabie et al (1981) raised questions about 'essential' clusters.

Related to the boundary and cluster situation is concern shown for variables used in any solution. Several authors (Malhotra 1993; Haire et al 1992; Norusis 1988; Punj and Stewart 1983) note that unnecessary variables (and even missing variables) can distort results or mislead interpretation. Hence, there is a strong need for researchers to have regard for the selection of variables, justifying those selected on the basis of past research, theory or the research problem at hand (Malhotra 1993; Haire et al 1992). Malhotra also notes the likely impact of judgement and intuition in this process. It also has been found that distortions are sensitive to additions or deletions in data sets (Arnold 1979). On the subject of sensitivity, Punj and Stewart (1983) note that, "a cluster solution will be reached even when there are no natural groupings in the data" (p.145), a feature which supports a concern expressed by

Arnold (1979); that is, partitioning in cluster analysis occurs with or without natural groupings. Situations like this make it doubly difficult to assess the suitability of any one cluster solution regardless of whether the procedure (algorithm) used was hierarchical or non-hierarchical.

Another specific problem noted in the research involves scales. Norusis (1988) notes the impact of unequal scale differences on the Euclidean measure of distance, whilst Hodgkinson et al (1991) draw attention to the disparity in solutions caused by unequal scales, particularly in relation to hierarchical clustering techniques. A method of combating the irregularity caused by different scales rests with standardisation, an imposed step aimed at regulating the data using the means and standard deviations present in the data set. Earlier, however, Punj and Stewart (1983) intimate that the selection of a distance measure is non-critical and of lesser importance than the selection of an algorithm.

In all, the likelihood of obtaining unstable results using cluster analysis can be seen as high if misuse is not guarded against. Thus, careful evaluation of any cluster program is warranted. Further, given this state of affairs, it is little wonder that researchers may rely on some theoretical base, practical consideration or some other rational basis for determining the number of variables or the resultant number of clusters (Malhotra 1993; Haire et al 1992; Punj and Stewart 1983). Thus, it may be necessary to treat cluster analysis findings with care and caution. There is a strong intimation here that signals results are merely suggestive, not definitive or conclusive. Hence, the application of a clustering technique perhaps should be limited to exploratory assessments.

6.3 Utility Measures

Utility is an abstract concept implicating economic, psychological and social domains (Runyon and Stewart 1987). It can be thought of as a residual of an economist's explanation of consumer demand for goods expressed as the theory of utility. In microeconomics, utility (or satisfaction) is viewed as something that is 'maximised'. There are well recognised shortcomings to this view in that perceived utility is determined by a number of phenomenon and situations in life capable of affecting or otherwise influencing behaviour and ultimately

choice. However, the concept of utility and its measurement is differently described depending on one's perspective. Other economists (noted as the 'new theorists'), for example, Ratchford (1975), Lancaster (1971), Muth (1966), Gorman (1956) and Georgescu-Roegen (1954) might argue that achieving utility is represented in terms of preferences and expectations for features and benefits contained in products (not goods) which, through the application of priorities, affects choice or behaviour. This 'new' order in economics provides the notion of an 'efficiency frontier' and presents and recognises a multiattribute view of demand, and ultimately that of decision making (Runyon and Stewart 1987).

In geography, Huff's model of spatial behaviour reflects utility as the benefit derived from comparing different alternatives of stores' locations (Reynolds and Wells 1977). In business, the term can imply usefulness, though applied to research and measurement using conjoint procedures, the term utility not only infers preference amongst features (attributes and their levels), but also it implies relative importance and value. In the context of this use, two major alternative approaches for gathering data used to determine subsequent mathematical utilities have been identified; these are, trade-off and full-profile procedures. To facilitate understanding, it is necessary to provide some background prior to discussing each of these individually.

6.3.1 Conjoint Measurement

General

The term conjoint when applied to decisions (or judgements) infers, amongst other things, that that which is judged is jointly examined along multiple factors or elements and, that when measured, yields relative values amongst items (Johnson 1974). Thus, conjoint measurement is multiattribute in nature and represents a research approach which grew in importance and popularity during the 1970s. It possesses the ability to model choice and in essence set the stage for quantifying and predicting consumer preference (Green and Srinivasan 1978; Green 1974; Green and Rao 1971).

The origin of conjoint measurement is generally credited to the seminal work of Luce and

Tukey (1964), a mathematical psychologist and statistician respectively. However, Green and Rao (1971) are credited with being the first to introduce conjoint measurement into marketing (Green and Srinivasan 1978; Green and Wind 1975). As noted by Green and Rao (1971), conjoint measurement was seen as a useful tool for estimating component utilities from preferences, a feature which was far stronger for it than the declining though well established array of expectancy-value models (Green 1974) such as Wilkie and Pessimier (1973), Fishbein (1967) and Rosenberg (1956). According to Green and Srinivasan (1978), conjoint measurement built on the well established ground work laid by the literature in both expectancy-value and the new breed of economic theory (the latter offered by Lancaster 1971 and others and noted previously). This aside, expectancy-value models aimed to assess preference judgements from a compositional perspective; that is, 'utility' estimates were based on the evaluation of individual attributes. By contrast, conjoint measurement presented itself as a decompositional technique whereby utility was estimated from the evaluations of some total object not its parts (Green 1974). Utility in this instance was noted as a numerical scale for each attribute's level.

Conjoint measurement was continually used in psychometrics, economics and marketing during the 1970s and into the 1980s. Louviere (1994) notes additional users from geography, transportation, urban planning and sociology. This expansion together with its uptake by commercial research interests ultimately led to the development of several algorithms. The entire growth process in application was further facilitated by the development of computers generally and eventually the specific growth in personal computers (Haire et al 1992). These changes have witnessed a wide development of specific conjoint measurement programs such as Conjoint Designer, SPSS - Categories, Conjoint Analyzer, Bridger, Linmap, Consurv and others (Louviere 1994; Green and Srinivasan (1990). Given the focus of quantifying judgements and searching for the underlying elements of decision activities, the realm of decision theory itself has been an avid proponent of conjoint measurement, assessing as it were, the trade offs people make amongst criteria or attributes and their respective levels.

The term conjoint measurement was replaced by conjoint analysis (Green and Srinivasan 1978), "to cover models and techniques that emphasise the transformation of subjective responses into estimated parameters." (p.103) In this regard, conjoint analysis has come to

be viewed as representing several techniques and methods based around the integration of information and the quantification of consumer preference (Louviere 1994; Haire et al 1992). The paramount use of conjoint analysis is the recreation of decision activities and evaluations of competing products and their characteristics (Louviere 1994; Morgan 1990). Such research provides any researcher with insights into the relative importance attached to attributes given a choice situation (Malhotra 1993). Choice, however, involves trade offs amongst alternatives and conjoint analysis is widely recognised as facilitating an understanding of this (Kohli and Mahajan 1991). To this end, conjoint analysis in its three decade history has been applied, in varying degrees of sophistication, to such endeavours as store image and determining vacation sites (Amirani and Gates 1993) and to a range of consumer and business products and services (Dolan 1993; Malhotra 1993; Wittink and Cattin 1989). It has been used for segmentation purposes (Haire et al 1992), reactions to new products and new product concepts (Green and Srinivasan 1990; Wittink and Cattin 1989) and hotel design (Wind et al 1989). In all, each use reflects divergent aspects of choice.

Conjoint Utility 'Model'

Addressing this topic here in a non-technical manner ensures discussion of basic aspects. In examining the material, it is evident that there are a number of underlying assumptions with conjoint analysis. One of the primary considerations concerns respondent evaluations. It is suspected that value (or utility) is estimated on the basis of mixing various amounts of perceived utility believed to be delivered by and present within each attribute that defines some object. Taken further, this mixing or adding together (the additive model), assumes utilities (part-worths) are summed, thus developing an overall total value which equates as preference or liking (Haire et al 1992). In terms of the additive model, Green and Srinivasan (1990) make the point that the assumed compensatory model in conjoint analysis predicts well even with decisions that are involved and non-compensatory. Thus, any model will represent the sum of part-worth values derived from measuring each level of each attribute used to describe an object. Perhaps it is, as Louviere (1994) suggests, the "behaviour of numbers" (p.253) that researchers address as a theoretical foundation. However, Louviere does note that, "if the numbers supplied by people satisfy the axioms and assumptions of conjoint models, one can derive rich insights into the behaviour of people." (p.253)

Notwithstanding this, Malhotra (1993) exhibits an elaborate looking model not too dissimilar in style and appearance to an expectancy-value model. By contrast, Haire et al (1992) simply present a general additive model showing that total worth is the sum of the part-worths of the levels of each attribute for however many attributes are present. Much earlier, Brown (1980) graphically depicted a basic conjoint measurement model expressed as a linear additive equation such that:

$$U = a_i X_i + a_j X_j + \dots + b_k Y_k + b_l Y_l + \dots + c_m Z_m + \dots \quad (\text{p.576})$$

In the above equation, U represents the total utility of an object, 'XYZ' represents that object's attributes and 'ijklm' are the attribute levels. Under mathematical constraints, the conjoint procedure (algorithm) retrieves attribute level part-worths implicitly portrayed as interval scales (Brown 1980). Ten years later, Morgan (1990) provided further information about 'mathematical constraints' noting that utility values are derived through the application of such techniques as monotonic analysis of variance (MONANOVA), multiple regression or linear programming. Dolan (1993) is seen to add LOGIT to this list in terms of use with purchase probabilities. In addition to this notation, Dolan pairs regression with rating scores and MONANOVA with rank order procedures.

Reliability

The term 'reliability' has several connotations and is represented by a number of measures (Bateson et al 1987). Technically it is referred to as a consistency or stability measure; that is, the extent to which some measurement is error free (Bateson et al 1987; McCullough and Best 1979; Peter 1979). However, in this context, errors can be systematic and/or random in nature (Darmon and Rouzies 1994; McCullough and Best 1979; Peters 1979). McCullough and Best (1979) note that systematic error is constant and biased, whereas random error is self compensating, but the product of many causes. To this end, a true measure or score for reliability seemingly would be impossible to obtain (Bateson et al 1987), suggesting limitations in estimation methods. In addition, the concept of reliability is linked to the idea of validity; that is, the validity of some measure should be reliable (Haire et al 1992; Peter 1979; Elliott and Christopher 1973). Whilst this is the case, reliability's application to

conjoint analysis poses an engaging situation and requires consideration, given that conjoint analysis has a number of underlying conditions and assumptions which may undermine an accurate measurement of reliability no matter what method is applied.

Firstly, the outcome of a conjoint analysis measurement is a set of utilities derived under certain assumptions and reflecting respondent perceptions and preferences. These latter aspects are known to vary and indeed may reflect instability. Secondly, part of the assumption activity in conjoint analysis concerns respondent's (subjective) evaluations of attribute bundles which may change with respect to a situation faced. Thirdly, it is a well known fact that respondents will react to anything that is put in front of them (Haire et al 1992). Given these conditions, reliability may then be seen to act as a monitor, an imposed necessity to 'prove' value of a procedure or its findings. Whilst there is little doubt about the robustness of conjoint analysis itself, Peter (1979) notes that, "behavioural measures are seldom if ever totally reliable and valid, but degree must be assessed if research is to be scientific." (p.6) It is little wonder then that researchers go to great lengths to ensure that all essential characteristics of a conjoint exercise are identified and expressed, particularly those of a procedural nature. It is here that any systematic error is likely to occur.

Traditionally, reliability has been assessed in a number of ways; test-retest, split half samples, internal consistency (Cronbach's alpha) and alternative forms (McCullough and Best 1979; Peter 1979). Peter notes that these methods measure systematic variance, and Bateson et al (1987) draw attention to the fact that Peter (1979) argued against the existence of a reliability score, feeling that reliabilities existed only in terms of time and items. Alternatively, it has been argued that generalisability theory has a place in assisting the determination of reliability by assessing conditions of measurement (Bateson et al 1987; Peter 1979). This is a useful consideration given that Reibstein et al (1988) found that data collection procedures had a significant impact on reliability scores.

Notwithstanding this, Reibstein et al (1988), amongst other things, also noted that the conjoint method was reliable in an absolute sense. They note, however, that attribute selection had a minimal impact on reliability and that it was normal for researchers to try to lessen respondent weariness. Notwithstanding these findings, Reibstein et al's efforts also note the

issue of reliability as applied to conjoint analysis. They recognise that reliability measures are multifaceted. In this regard, they extend on Peter's (1979) notion by drawing attention to reliability applied not only on a time dimension, but also over stimulus sets, within attribute sets and across data collection methods. This application serves as a reminder and raises several important questions. For example, can a researcher achieve the same set of results (using the same material) at a different point in time?; would a different set of stimuli or profiles produce different results?; would one gain the same utilities for select levels if these were mixed within another set of attributes?; and, would one get the same results using a different collection procedure? These are vexing questions which few have fully addressed.

Temporal reliability or stability is an important issue. It involves the replication of respondents' judgements at different points in time (Bateson et al 1987; McCullough and Best 1979). Such measurements use the same judgement materials and respondents, and it is recommended that the interval between any retest should be long enough to combat any learning or memory effect (McCullough and Best 1979). Thus, at least a two week interval has been suggested. Bateson et al (1987) thought the time interval was a lesser concern than methodological choice. Efforts to obtain measures of temporal reliability may be aided by a variety of procedural inputs. For example, McCullough and Best (1979) suggest varying the stimulus objects, whilst Malhotra (1982) made use of a between subject design to combat any carry over effects or demand artifacts. Undertakings such as these try to account for systematic distortions before they occur (Darman and Rouzies 1994).

Arguably the questions raised previously and comments about temporal stability are at the core of scientific inquiry and should not be taken lightly. Indeed, they are not taken lightly. However, a considerable body of research of a **practical** nature is undertaken (Wittink and Cattin 1989). Whilst such research in principle follows 'scientific' design and execution, it is improbable that said research would be capable of answering the stringent questions concerning reliability posed above. In a practical sense as Louviere (1988) points out, "one normally has to make tradeoffs to obtain practical results." (p.55) In this regard, replications are often seen as impossible, if not solely from a perspective of costs and commercial sensitivity. However, this perspective adds a further dimension of consideration when compiling attribute lists and levels.

Attributes

Attributes are those items used to describe objects, products or concepts. Conjoint analysis makes use of attribute combinations (Louviere 1994) described in terms of levels for each attribute (Haire et al 1992). As noted previously, it is assumed in conjoint analysis that assessments of items occur using attribute bundles, and it is further assumed that one can describe some entity as a series of attributes or benefits. It is not a simple matter of prescribing attributes which is of concern, rather it is ensuring that determinant or salient attributes and their levels are exhibited. It is equally important that they are comprehended by respondents to a study (Malhotra 1993; Haire et al 1992; Louviere 1988). As noted by Churchill (1991), the reason for ensuring this alignment of attribute levels is to facilitate believability and thus enhance the value of respondent evaluations. Management discussions, secondary research and qualitative research are means by which a researcher can replicate respondent 'values' (Malhotra 1993; Churchill 1991).

It is readily recognised that 6 or 7 attributes is a maximum number for most conjoint studies (Malhotra 1993; Haire et al 1992; Churchill 1991). As the attributes increase, the number of levels increase. As conjoint analysis centres on the assessment of levels, a compounding effect on respondent requirements increases with additional attributes. In addition, the pool of stimuli in a fractional design magnifies. For example, moving from 5 attributes each with 3 levels to 7 attributes each with 3 levels raises a design from 243 combinations to 2,187 combinations. However, another issue involved with attributes is the actual number of levels. Whilst circumstances or even attributes themselves may dictate the number of levels, care is needed with assigning levels in that attribute importance increases as the number of levels are added (Steenkamp and Wittink 1994; Haire et al 1992). For example, an attribute with 4 levels is perceived as being more important than others that may have been cast at 3 levels or 2 levels. Steenkamp and Wittink cite Currim et al's (1981) efforts concerning commensurability of scale values. Working with rank order data in a trade-off matrix, Currim et al found differential effects between 3-level and 2-level attributes, the former being found to be more important. Haire et al (1992) specifically indicate that attempts should be made to ensure levels are the same across all attributes. However, given the basis of determining attributes and levels, this may be an ideal condition and not feasible in reality.

To facilitate any downsizing of attribute numbers, a number of data reduction techniques are available. Many of these have already been discussed in this chapter. It is noted that Green and Wind (1975) register the use of conjoint analysis in combination with one or more of Factor Analysis, Perceptual Mapping (MDS) and Cluster Analysis. Green and Wind (1975) note that, "all these techniques can - and frequently are - applied in the same study. As such their combined use can heighten different aspects of the same general types of input data." (p. 117) The combined use of these procedures seemingly would facilitate the reduction of another concern; that is, the representativeness of attributes and levels and their correlations (Moore and Holbrook 1990; Green et al 1988; Huber and McCann 1982; Green and Srinivasan 1978).

A further issue with respect to attributes involves their ordering (Kumar and Gaeth 1991; Green and Srinivasan 1978). The concern is that the order in which items appear can effect the rating of attribute importance. To combat the potential effect of this phenomenon, Kumar and Gaeth (1991) suggested, for example, the random ordering of items both within and between subjects, the use of several different orders and the provision of suitable instructions for respondents to follow.

Moving forward, two conjoint analysis techniques for the quantification of respondent preferences are trade-off analysis and full-profile analysis.

6.3.2 Trade-Off Analysis

All conjoint analysis activities require some form of trade off; that is, trading a certain amount of one variable to gain or retain a certain amount of some other. This basic process, however, should not be confused with the 'trade-off' analysis technique, otherwise known as 2-factor evaluation (Malhotra 1993) or pairwise tables (Haire et al 1992). In the early days, Johnson (1974) referred to the technique as a row-column-tradeoff-matrix. However the procedure is named, the trade-off analysis process requires rank ordering attribute level pairs one at a time until all possible pairs for any given set are accommodated. Figure 6.2 provides a fictitious illustration of two attributes (variables), each with three levels. In each case the '1-2-3' for each variable represents 'high-medium-low' levels respectively. The numeric

values within the matrix represent resultant rankings of Variable pairs from 1 to 9.

Figure 6.2 Trade-Off Analysis Matrix

		Variable A		
		1	2	3
Variable B	1	1	2	5
	2	3	4	8
	3	6	7	9

As seen by the first ranking, the high level of each attribute is most preferred (as might be expected). However, subsequent to this it is suggested that there is a willingness to trade off Variable A and thus maintain a high level of Variable B prior to any trading or sacrificing of Variable B. In trading this latter variable, a high level of Variable A is demanded in compensation. Thus, the relative importance of each attributes' levels is visible in matrix form. According to Haire et al (1992), the trade-off procedure reflects ranking in terms of preference only. However, Dolan (1993) draws specific attention to the fact that one might prefer one alternative, yet buy some other. Through the use of an algorithm, the rankings are converted to an interval-scaled output or utility (Green and Rao 1971) purported to be stronger than the rank orders themselves (Johnson 1974). Whilst this may be the case, in view of Dolan's notation, preference then could be argued as being relative only, not definitive.

Haire et al (1992) notes that rank-ordering may be easier than rating and that the output could be more reliable. Morgan (1990) provides an indication that a precise judgement is provided possibly because the demands of the overall task are divided across several pairs as a matrix. Despite these positives, Wittink and Cattin (1989) note the decline in trade-off analysis usage by commercial researchers, which Haire et al (1992) are inclined to believe is the result of the procedure's limitations. On this latter issue, Malhotra (1993) believes that realism is relinquished and hence trade-off analysis may not accurately represent choice. This indeed may be the case given that trade-off analysis represents preference (liking) only as opposed

to 'intention', the two necessarily not being the same. By contrast, Haire et al (1992) are more condemning noting that a greater number of evaluations, confusion, fatigue, likely bias and administration difficulty are limiting issues not easily resolved. In addition to these aspects, Morgan (1990) registers incomplete (part at a time) presentation, task repetitiveness and task understanding as restrictions. Whilst trade-off analysis forces judgements (Johnson 1974) and is seen to be appropriate for use with a small set of attributes (Churchill 1991), criticism seemingly far outweighs support for the procedure.

6.3.3 Full Profile Analysis

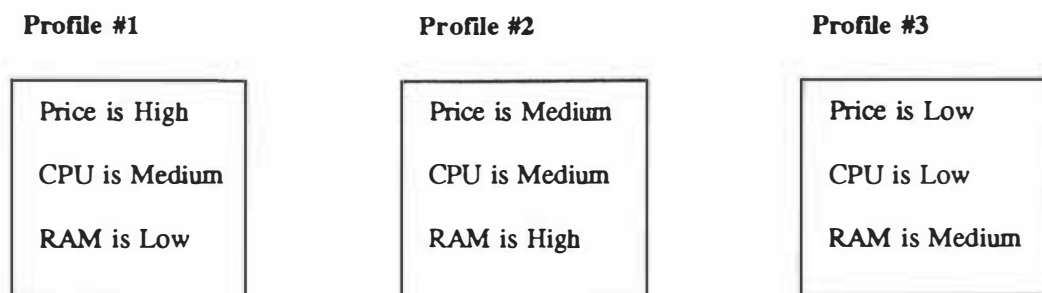
The term 'full profile' refers to the combination of all levels of all attributes in constructing a conjoint exercise. Thus, they represent a complete array of stimuli or full descriptions of an item in a study (Malhotra 1993; Haire et al 1992). Such completeness is also known as a full factorial design which is the compilation of all possible combinations (possible profiles) of attribute levels (Louviere 1994; Morgan 1990; Green 1974). Full factorial designs, depending on the number of attribute levels can generate a large number of possible profiles. For example, five attributes each with three levels can create 243 combinations; that is, $3 \times 3 \times 3 \times 3 \times 3$. Total combinations for this example is known too as a symmetric orthogonal array (Green 1974); that is, there is an equal number of levels for each attribute. When the number of levels for each attribute varies (e.g., five attributes with three levels and two attributes with two levels), the array is noted as asymmetric in nature.

As might be imagined, a complete list of all combinations would be impossible to assess without some form of reaction from potential respondents. Thus, sub-sets or samples of possible profiles, all of which are representative, are obtained and these are known as fractional factorial designs, or alternatively, orthogonal arrays (Louviere 1994; Malhotra 1993; Haire et al 1992; Churchill 1991). Needless to say, there are several schemes available for assisting with establishing these arrays, and conjoint programs generally have the facility to design and generate such arrays (Haire et al 1992). The advantage here is that several samples can be generated and checked for consistency. Although a reduced size in potential stimuli results, it is much more manageable. The designs created result in an efficient estimate of main effects, or attribute level effect (Malhotra 1993). The potential samples of

'x number of profiles' are what Louviere refers to as 'main effects plans', or what several others (Haire et al 1992; Green and Srinivasan 1990; Morgan 1990; Wittink and Cattin 1989) simply refer to as full profiles which are utterly capable of measuring overall judgements, albeit with fewer items or concepts.

The full profile approach is argued to better represent realism, in that a full description of all items in any one profile or scenario are complete (Haire et al 1992; Morgan 1990). In this regard, respondents assess some phenomenon as a totality; that is, some full combination of both good and not so good attribute values or levels are presented. Full description is essentially a strong point favouring the full profile approach. Figure 6.3 provides a fictitious example for a computer assessment using Price, CPU and RAM as three attributes each with three levels; that is, high, medium and low. Portrayed are three profiles, a sub-set of the 27 possible profiles (3x3x3).

Figure 6.3 Full Profile Conjoint Assessment



As noted by Figure 6.3, complete information is presented in card-like fashion, one of several suitable presentation alternatives (Malhotra 1993). Other methods include full or part paragraph descriptions, pictorial representations or physical objects. Churchill (1991) sees these alternative methods as adding to the flexibility of the full-profile approach. Others (Malhotra 1993; Haire et al 1992) view aspects like this as aiding respondent understanding, facilitated perhaps by demanding fewer judgements. The full-profile method is also seen as being explicit, convenient and easy to administer, even by mail.

Regardless of the selected presentation method, judgement is required. Here too, relative to

trade-off analysis, greater flexibility is offered. Full-profile analysis is capable of handling both ranking and rating system inputs, but importantly it can cope with different kinds of judgements; that is, preference, intentions to buy, likelihood of buying (or accepting), and chance of adopting (Haire et al 1992; Green and Srinivasan 1990; Morgan 1990). Such measures are invaluable in assisting the determination of new product 'success' in the marketplace and no doubt help account for the increasing popularity of full-profile measures (Malhotra 1993; Wittink and Cattin 1989).

Whilst a number of positives favouring a full-profile approach are evident, the approach is not without some drawbacks. A limit on the number of attributes capable of being handled is an often cited shortcoming. Six or seven attributes as a maximum is noted or recommended, though this limit is also applicable to trade-off analysis (Haire et al 1992; Green and Srinivasan 1990). As the number of attributes increase, the potential number of possible combinations magnifies. There is a danger that the number of attribute combinations requiring judgements could cause respondent overload, or alternatively result in less discerning respondent judgements (Haire et al 1992). This notion seems to capture Morgan's (1990) concern about any respondent's mental capabilities; that is, just how much information is capable of being assessed at any one point in time? In order to cope with larger numbers, sometimes a research reality, hybrid conjoint analysis and adaptive conjoint analysis have emerged. However, the output from these according to Haire et al (1992) are less reliable than that associated with part-worth processes. Certain drawbacks aside, there is an expressed concern about item order bias of attributes (Haire et al 1992), a feature requiring the rotation of items across respondents. However, given that the full-profile approach portrays everything at once (Malhotra 1993), it is little wonder that conjoint analysis is seen as suitable for examining respondent information integration (Louviere 1988).

6.4 Summary

Factor analysis generally and principal components specifically are ideal devices for exploring large and often complex (interrelated) data sets. Their usefulness extends beyond being a major data reduction tool to the identification of independent (orthogonal) factors capable of being used in subsequent research. Its limitation in application to small samples is

acknowledged, but this should not preclude its use.

Multiple Correspondence Analysis (MCA) is a descriptive and exploratory technique. It is capable of decomposing respondent and variable information simultaneously to assess the existence of any underlying structure and pattern in a data set not otherwise discernable. Its main strength lies in its ability to accept a variety of data input material (tables, multiple choice, rank order) and represent this in graphic form (maps) along various dimensions created by its algorithm. It has the potential of displaying similarity amongst groups for the dimensions it exhibits. With increased familiarity, the technique should prove useful as an evaluative and versatile research tool.

Multidimensional Scaling (MDS) is similar to MCA in its ability to expose underlying dimensions in a data set. However, its strength lies not just as a data reduction vehicle, rather it extends to include exhibiting geometric relationships amongst similar and dissimilar observations in data, a feature created by respondent perceptions or judgements. On this level it is not too dissimilar to conjoint analysis, another tool for handling respondent judgments. Whilst certain limitations are evident (incapable of testing hypotheses, can not account for variations in perception), MDS is a robust analytic tool capable of providing insight and alternative solutions in dimensional space.

Cluster Analysis is another multivariate technique. Its design is such that on one hand it classifies or groups similar objects, whilst on the other hand, it ensures distance between groups is maximised. Whilst its ability to classify is similar to discriminant analysis, no preconceived knowledge of likely groups exists or is known. Thus, the groups formed exist on the basis of natural relationships modeled largely by the use of a linkage hierarchical clustering technique. Three varieties of these exist, each capable of defining different groups. Problems concerning cluster boundaries, number of clusters and variables used exist, though the latter is of particular concern given its ability to distort solutions. Cluster solutions should be thought of in terms of suggested rather than definitive groupings.

Utility is a concept of divergent expression though ultimately one that implies some form of perceived value or benefit. Used in conjoint research, it represents preference and importance

for items of a multiattribute nature. Conjoint measurement is a research technique that is decompositional in nature and one that provides evaluative and modelling capabilities that quantify preference. As such, models of this calibre have displaced expectancy-value configurations as a definitive and explanatory expression of choice. Choice, in this instance, is based on the measurement of salient attributes utilising some mathematical procedure (e.g., LOGIT, MONANOVA, multiple regression) resident in whatever computer programme is used.

Questions about conjoint analysis will invariably involve matters of reliability and attributes. On the matter of reliability, a number of conditions (perceptions, evaluations, response conditions) will ultimately contribute to an overall assessment of reliability. However, the realities of practical research versus scientific enquiry create a situation in which tradeoffs are required between purity and realism. As for attributes, it would appear that 7 items operate as a maximum number considered appropriate for use in a conjoint analysis study. Thus, it is necessary to carefully choose amongst possible alternatives utilising a variety of other research techniques (discussions, qualitative research, reduction techniques) to assist the maintenance of realism both in terms of attributes and their respective levels.

Two collection techniques, trade-off analysis and full profile analysis dominate discussion of conjoint analysis despite the current expansion of hybrid and adaptive conjoint procedures. Trade-off analysis, whilst accommodating rank order data, exhibits a number of severe limitations. Notable in this regard is the inability of trade-off to accommodate more than two pairs of attributes at a time. By contrast, full profile analysis is able to represent reality (seen here as a total picture) based on available and predesignated attribute levels.

CHAPTER SEVEN

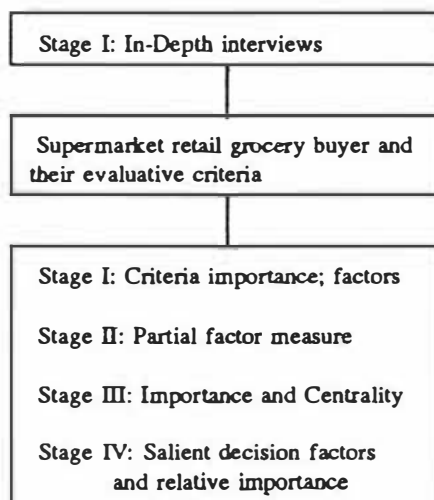
METHODOLOGY

7.1 Introduction

The research for this thesis was staged and accomplished at different points of time over a four year period. Despite its timing, the various phases were interlocked and facilitated a greater understanding of the grocery retail buying process, buyers, buying committees and their respective evaluative criteria and evaluative process. It also fostered a stronger base from which to assess the data gathered and thus provided a value-added dimension to the research generally and its process. The approach adopted for the research has not only built a solid foundation of knowledge, but also it has engendered continued cooperation amongst the sample population, an essential aspect of any research.

Figure 7.1 reproduces the methodology portion only of the PhD Study Process displayed in Chapter 1; that is, the research activity/area. The figure usefully serves the purpose of highlighting not only the various phases of research activities, but also its sample base and procedures followed. For clarity, Stage I incorporates the in-depth interviews and was seen as an integral part of the total research.

Figure 7.1 Staged Research Phases



With the foregoing in mind, the structure of this Chapter is such that the research objectives are first reiterated. Various dimensions of the sample (organisations and people) are next discussed and this followed by an extensive discussion of procedures used for the staged phases of the research. A discussion of the research's limitations follows and precedes a summary.

7.2 Objectives

It should be recalled that the main focus of the research was the examination of the forces and conditions underlying the acceptance and rejection procedures (evaluative process) from an internal (company) perspective of new products (private labelled national brands) at the 'me too' end of the new product continuum. The established objectives for the research were earlier specified as:

1. to ascertain how the term "new" product is defined amongst supermarket grocery buyers and gain some indication of the number of "new" products with which buyers are confronted;
2. to identify the nature and make-up of buyers and buying committees and to ascertain the role and influence these people and store management have in decision processes involving new products;
3. to determine the role and influence played by company policy and requirements in the process of new product acceptance or rejection;
4. to identify and measure important criteria associated with the evaluation trilogy (product-supplier-presenter) and to assess the interrelationships amongst criteria; and,
5. to determine and measure the importance and centrality of salient decision factors, their interrelationships and their relative importance in determining likely initial acceptance or rejection of new products.

With the foregoing objectives in mind, attention is drawn to the remaining sections of this chapter.

7.3 Sample

The sample population broadly speaking can be considered as being made up of respondents at two levels; one, organisations operating major retail grocery chains; and two, specific people within these organisations who had anything to do with the acceptance and rejection of new product propositions from suppliers. For the purposes of this section, the two levels are treated separately.

Organisations

When the study commenced, eight (8) defined retail operations existed. They comprised three (3) regionally independent Foodstuffs cooperatives (Auckland, Wellington, Christchurch), Foodtown (and its associate 3 Guys), Woolworths, Countdown and Rattrays. The latter company was a wholesaler with limited South Island only retail stores. As a result of acquisitions, mergers or buy-outs, five (5) groups remain: three (3) Foodstuff operations, Woolworths and the rest under one corporate umbrella, Foodland Associates Limited. To all intents and purposes, the organisations are still structured independently as far as buying is concerned.

Initially, the chief executives of the eight (8) organisations were approached with an outline of the intended research, an invitation to participate and a request for contact management within their respective organisations with whom further correspondence could be conducted. A sample copy of the initial letter is shown in Appendix B. This procedure yielded top down commitment and further provided respondent names and positions. Initially, all organisations with the exception of Foodstuffs (South Island) were participants in the research activities. Foodstuffs (SI) were given two opportunities to participate in the study but refused (see Appendix C) on both occasions claiming that it was against company policy to engage in outside research activities. All other organisations have been willing participants and have continued their involvement throughout the four (4) stages of research activity. Thus, the majority of organisations (7 out of 8, or 88%) have participated in the research on a continuous basis. These participating companies offer what could be described as a virtual census at this level.

It should be noted that participating organisations vary in size, are structured differently and operate their buying activities diversely from one another. For example, some operate solely under a category management system, whilst others utilise this system but do so in conjunction with a buying or ranging committee. Still others operate with buyers reporting to, and final decisions being made by, a committee.

People

The people making up the sample were drawn from the seven (7) participating organisations and were engaged in a range of job activities. In all cases participant names from each organisation were provided by management. It was understood that the nominated people represented all those who were either buyers or had some involvement with buying committees and the buying process in their respective organisations. Whilst the number of potential respondents from each organisation was unequal, a reflection of size and company structure, they nonetheless add a further dimension to the notion of a virtual census.

Although buyers formed by far the vast part of the sample base, others such as assistant buyers, merchandising managers, promotion and advertising people, likewise contributed to the numbers. In the case of buyers and assistant buyers, operation structures (category management usage or committee involvement) dictated either decision autonomy or imposed an internal control. In all, 47 potential respondents were identified and formed the initial sample base. Management of the organisations made it clear from the beginning that participation in the research would be completely voluntary. Despite this condition, the sample base for the various stages of research over the four years of conduct remained fairly constant. Any variation to the original number was the result of defections of a small number of respondents through job rotation, redundancy, movement to new business activities, bereavement or death. In one instance, two respondents left their organisations and were not replaced, whilst in another case, three respondents were identified early as being non-compliant. In yet another instance, a respondent was displaced due to company acquisition and the replacement was non-cooperative. In spite of these movements and events, the sample base for New Zealand grocery retail buying activity is still considered a virtual census.

7.4 Procedure

As outlined above, initial contact was made with chief executives with the aim of not only outlining the research programme, but also eliciting their cooperation and assistance with the research. All contact was by letter, though in one instance (Foodstuffs Wellington), a formal interview with the Chief Executive was required. Overall, the initiating approach taken proved beneficial in that all participating organisations became committed and willing participants. Following initial acceptance by senior management, support was given to contact operational management. At this subsequent level, further requests to approach buyers and others involved in buying was submitted so as to engage these people in the intended research programme which was to involve both qualitative and quantitative aspects. The programme commenced with initial in-depth interviews (with follow-up for clarification where necessary) and staged field research utilising mail out questionnaires. It should be noted that with the exception of the in-depth research, a common procedure was followed for all subsequent research stages. This included:

- management contact for research continuance and determination of potential respondents;
- a respondent alert letter, accompanying letter and follow-up letters where necessary;
- management contact to encourage respondent completion; and,
- telephone and facsimile contact with respondents to encourage completion.

Samples of the material for this contact procedure can be found in Appendix D. In terms of procedure, specific aspects of the various stages involving both qualitative and quantitative research follow.

7.4.1 Retail Grocers' Environment

Exploratory research was the primary basis of activity in Stage I. Undertaken over nine (9) months, the research consisted of both qualitative and quantitative approaches. The

qualitative research took the form of in-depth interviews, whilst the quantitative study consisted of a small questionnaire. Each of these approaches are described in the following sub-sections in more detail.

In-depth Interviews

Over a six (6) month period between December 1990 and May 1991, fourteen (14) in-depth interviews were undertaken. Three (3) of these were with operations management and the balance were with buyers. The entire process, together with initial top management contacts, covered all participating organisations. The in-depth interviews used the same structured format and covered such topics as business operations, buying section set up, use of committees, definitions of new products, proliferation of new products and evaluative criteria used to assess new product propositions. The framework is detailed in Appendix E. The interviews, all of which were tape recorded, took approximately one and a half hours and were conducted in Auckland, Wellington and Christchurch, the Head Office locations of the participating organisations.

Initial Questionnaire

The in-depth interview process yielded an excessive number of evaluative criteria. Close scrutiny of these revealed repetitions or replication by means of slightly different terms and phrases. With some effort the number of evaluative criteria were reduced to a list of forty one (41). Whilst such a list is large, it did represent the diverse opinion uncovered through the in-depth interview process. These criteria became the basis of inquiry using a small, mail questionnaire which had respondents assess the criteria in terms of importance (using a six-point scale) and gain respondent background information (see Appendix F). One week prior to the mail out, the forty seven (47) individually identified respondents were personally sent an alert letter (see Appendix D for an example). This letter related the area and purpose of forthcoming research, and additionally highlighted that the study had the full support and commitment of senior management.

The mail questionnaire, complete with accompanying letter and reply paid envelope, was

posted to respondents in mid August 1991. This was followed two weeks later by follow up procedures involving letters, facsimile and telephone calls to either management or respondents. In all, 38 usable responses were achieved, resulting in an 81% response rate. Samples of all correspondence are exhibited in Appendix D.

7.4.2 Select Criteria and Decision Factor Importance

Data obtained from respondent assessment of the importance of the 41 criteria in Stage I were subjected to principal components analysis. This treatment yielded 12 distinct factors and formed the basis for subsequent research. Full details of the 12 Factors are shown in Appendix G. However, in view of the mix of criteria loading heavily on the first factor, it was judged too early to have respondents assess a full listing of 12 factors without first having a better understanding of the interrelationship between some of the factors and some of the criteria loading on the first factor. This formed the basis of Stage II.

Forty one (41) respondents in the three main centres were mailed a questionnaire complete with covering letter and a reply paid envelope in May 1992. Preceding this the same respondents were alerted one week in advance to the questionnaire's pending arrival (see Appendix D for samples). In all, 32 questionnaires were returned after follow up activities involving facsimile and telephone calls were used. In two instances, respondents had left their organisations and the positions were not refilled. Disappointingly, three (3) respondents declared themselves as inappropriate candidates claiming their work tasks did not match the specific requirements of buyers. This occurred despite counter arguments concerning their committee involvement and reiterations of management origins of their status. All matters considered, a response rate of 89% was achieved.

The questionnaire comprised three (3) distinct sections; a constant sum to assess the relative importance of five (5) factors, a ranking of the top five criteria within the first factor (called The Product Offer) and a series of questions involving trade-off analysis of these top five criteria. Three version of the trade-off question were produced. Details of the full questionnaire is shown at Appendix H.

7.4.3 Central Importance and Salient Decision Factors

Stage III of the research was devoted to examining both the importance and the centrality of the full set of the twelve (12) decision factors, together with their interrelationships. Importance in its own right is a fairly common and standard measure within research circles. Its actual measurement is usually accommodated by itemized rating scales, or specific category scales (Tull & Hawkins, 1980) which can include such descriptors as 'very important', 'important', and so on. Implied in such scales is a ranking; that is, scoring Item A as very important and Item B as important implies that Item A is ranked higher than Item B. What one is left with, however, is an ordinal data set of limited value. Similar ordinal data could have been achieved by respondents actually ranking items (in this case decision factors), though twelve (12) items may have resulted in fatigue and reduced accuracy. What was desired was an interval measure, something that would provide a numerical distance between rated decision factors. This was achieved with the notion of a tree where the base of the tree represented '1' and positions up from the base and higher into the tree represented values of less than '1'. The ideal was accomplished; that is, a device that accommodated both a ranking and one that showed distance between ranked items.

The notion of centrality is borrowed from the topic area of attitudes. In this regard, the centrality of an attitude to a connected value is representative of strength of that attitude, and consequently its resistance to change. Whilst change does not focus as a specific issue here, the idea that some decision attributes could be more or less central to a decision is nonetheless appealing conceptually. To this end then, the more central a decision factor is to an accept or rejection decision, the stronger that decision factor is likely to be. As with importance rankings, an interval measurement was desired. Using the tree to measure the concept, the centre of the tree's trunk represented '1' and points either left or right of this were noted equally as less than '1'. The 'left/right' allowance, in no way arbitrary, adjusts for balance in a system where decision factors can share centrality. It must be pointed out at this stage that importance and centrality are not seen as one and the same concept. Indeed, it is believed that a decision factor can be central to a decision, yet vary in its importance rating. However, as with attitudes, a centrally important item is far more volatile (and thus more important) than some item simply noted as being more important than some other.

Given that respondents were required to mark a position on a tree to represent both importance and centrality of any decision factor, it was deemed that the two interval scale points defined a weighted point of influence in an acceptance or rejection decision. It was pertinent to assume that a multiplication of the two derived points identified the placement of weighted importance in a two-dimensional space for any decision factor. In essence, a 'utility point' for each decision factor was achieved. Complete details of the questionnaire is shown at Appendix I.

The questionnaire comprised of a single question involving three (3) steps: a rating of decision factor importance; a rating of centrality for each decision factor; and, the establishment of interconnections between the rated factors. The device used to assist the assessment of these three (3) tasks was a 'barren' tree. Respondents were informed to consider that the base of the tree would hold their most important decision factor and that the centre of the tree trunk symbolized centrality to a decision process. The higher up in the tree one placed a factor, the less important it was considered. The further out from the centre of the trunk, the less central was a decision factor. Respondents were asked to first mark positions on the tree for their factor placements, show the letter of a corresponding factor and finally, portray the interconnections between factors with lines.

A 10-point, bi-directional grid was developed and overlaid on respondent's scoring to determine importance and centrality ratings. These scores were multiplied to obtain relative central importance. A copy of the grid is shown in Appendix J.

Thirty eight (38) respondents in three main centres were mailed a questionnaire complete with covering letter and a reply paid envelope in July 1993. Again, preceding this respondents were alerted one week in advance to the questionnaire's pending arrival. In all, 32 questionnaires were returned (31 of which were completed) after follow up activities involving facsimile and telephone calls. In two instances, respondents varied to earlier field efforts. In one case, a respondent had left the company, whilst in the other a respondent advised of taking a vacation. In both cases replacements were notified. On this basis, a response rate of 81% was achieved.

7.4.4 A Two-Product Application of Salient Factors

The final phase in the research (Stage IV) centred around a conjoint analysis study involving eight (8) salient decision factors and two (2) products. Extended analysis of Stage III findings supported the combining of related factors to form the revised set. Invited input from a small number of respondents assisted in determining realistic levels for each decision factor. Given the assumed nature of one factor (Company Objectives), only seven (7) decision factors were finally assessed. In view of researching two (2) products, two rounds were commissioned; one, pertained to a non-food product, the second dedicated to a food product.

A computer programme package called CONSURV was used to construct a balanced block design of hypothetical product offerings for the conjoint analysis study. This process resulted in creating twenty seven (27) full profile 'statements'. The use of the term 'statement' here reflects different combinations of the assigned levels for seven (7) decision factors (see Appendix K). Being a balanced block design, the statements were distributed as three sets of nine, labelled for convenience as A, B and C. It was deemed improbable that respondents would answer all twenty-seven statements (3 pages of questions) given their time restrictions, so a decision was taken to present them with eighteen. Hence, three possible combinations of any block were created; that is, AB, BC and AC. Additionally, three versions of each set of eighteen statements was created by rotating both the order in which each profile appeared and the order of the seven (7) decision factors (see Appendix L for examples). This action resulted in nine (9) questionnaire versions, each identified by a different Greek symbol. Table 7.1 provides a basic illustration.

Table 7.1 Questionnaire Block, Version and Number

Block	Combinations	Version	Number
A	AB	3 x 5	15
B	BC	3 x 5	15
C	AC	3 x 5	15

Given the need to distribute an equal number of 'block' questionnaires (i.e., A, B and Cs)

across the sample population, five (5) copies of each questionnaire version were constructed (i.e., 3 x 5) resulting in 45 questionnaires in total, or 15 questionnaires for each of Blocks A, B and C respectively.

Regardless of the product being tested, the questionnaire then consisted of eighteen (18) full profile statements to which respondents had to gauge their likelihood of accepting the described product using a 10-point rating scale. This scale ranged from 'extremely unlikely to accept' (1) to 'extremely likely to accept' (10). The end points only of the scale were labelled. A copy of a questionnaire is shown at Appendix L.

Prior to commencing the last phase of research, contact was made with controlling management of all seven (7) participating companies to confirm continued support and importantly to elicit respondent numbers and names. This process netted forty four (44) potential respondents, the majority of whom had been present throughout the entire research process.

Commencing June 1994, all respondents were advised by mail of a pending research activity that would be conducted in two rounds, each round reflecting a focus on a different product (see Appendix D). No advice about the nature of the two products was given. Forty four of the 45 questionnaires were randomly distributed amongst the respondents in such a manner that no two respondents in any company received the same version of questionnaire. Additionally, in mailing the second round questionnaire dealing with a different product, no respondent received the same version of questionnaire as in the first round.

One week on from initial advice, forty four (44) respondents in three centres were mailed their first questionnaire complete with covering letter and a reply paid envelope. This first round questionnaire concerned a non-food product, namely laundry detergent. Follow-up activities involving facsimiles and telephone calls to individual respondents yielded 34 completed returns. In the process, one respondent death, one family bereavement and one totally incomplete response were identified. On this basis, the 34 completed questionnaires represented an 83% response rate.

In mid-August the second questionnaire was mailed to respondents utilising the same method as previously identified. On this occasion, however, forty three (43) respondents were mailed a package, the focus in this round being on a food item, namely a health food bar. The same follow-up procedure was followed which resulted in 31 completed responses. The case of family bereavement had side-lined one respondent, whilst two others returned totally incomplete questionnaires. On this basis, the 31 respondents represent a 78% response rate.

7.5 Limitations

This PhD research into retailer grocery buying unfolded as a study that encompassed certain externally imposed limitations. These limitations involved the amount and extent of contact allowed with respondents; that is, management insisted that the research not impose excessive demands on respondent's time and energy, or distract in any way from their employment activities. These conditions meant that the research, if it was to be undertaken, had to be compact, self contained, and not too demanding timewise. Thus, the research favoured a staged design carried out over an extended period of time. However, it also meant that certain types of desired information, for example a longitudinal study aimed at determining the number and type of new product submissions (including exposition on decision rationale), could not be undertaken. Even on a shortened time horizon management were not prepared to allow participants to undertake any research activity that distracted from or added to their regular employment responsibilities. A longitudinal and expositional study would have done just that.

The scope of the study is limited to identifying and assessing the evaluative process and evaluative criteria of New Zealand retail grocery trade buyers. No attempt to extend the study to the supply side of the trade (supplier or manufacturer) was made.

Comment within the study pertains solely to the initial list of criteria obtained from in-depth interviews. Arguably the list may have been too long, however, it represented what initial respondents revealed. It is possible that some item order bias accompanies this list in that only one version of the list was used to determine item importance in the first phase of research.

Some might regard the sample size used in this study small and thus an issue. Readers are reminded that the sample represents a virtual census of New Zealand's retail grocery trade. Every effort was made on two separate occasions to involve one further respondent company and a selection of their buyers. Each effort failed to gain their support or acquire any extra participants. The addition of one more organisation and 3 or 4 willing respondents, whilst desirable, would not necessarily have changed the final outcomes in a measurable manner.

Initial limitations exist in the form of using principal components analysis to determine underlying patterns in the initial data set, given that this set was drawn from a sample whose numbers matched the number of evaluative criteria; that is, forty-one. Whilst a number of data reduction techniques exist (e.g., discriminant analysis, MDS, cluster analysis), none possessed the desired stability and positive track record of principal components needed for a study of the nature intended and conducted.

A limitation exists in the use of a new, untried graphic measurement device, vis a vis a 'tree' and the three-in-one requirement of question completion; that is, importance, centrality and decision factor interconnections. Only one version was created, thus the measurement of twelve decision factors may carry with it some item order bias. However, a common base for item identification was needed. In addition, little opportunity existed for actual field testing before use. The instrument was tested amongst colleagues and no problems were detected, though this does not validate its application. Small samples can preclude meaningful field trials. Such attempts with business respondents would have been insensitive and regarded as a waste of their time. As well, it would have been a repetitive task for those involved in the study and added to any disruption to respondents' normal job requirements. Achieving a good response in business research is difficult to achieve and often requires considerable tact and diplomacy.

The use of twelve decision factors more than adequately fulfils the technical requirements of using MDS, indicated by Malhotra (1993) to be 8 to 20 items. However, the connectivity matrix upon which the results were based was drawn from a slightly smaller sub-set of respondents (26 of 31) some of whom exhibited varying degrees of response patterns. Thus, a limitation exists concerning the likely representativeness of decision factor interconnections.

However, the main purpose of using MDS was solely to reduce attribute numbers with a minimal disruption to realism. Several respondents commented on the accuracy of the final list.

A limitation exists in that only seven of the eight decision factors were measured. The impact of Company Objectives relative to others is thus unknown since this factor was judged to be present and constant. In addition, arguments about an appropriate sample size for conjoint analysis treatment measuring seven salient attributes also could be mounted. However, for the direction of the research and type of results concerning retail grocery product acceptance, no other suitable research tool is available. Whilst observation could have been used, it would have been far too cumbersome to negotiate, time consuming and expensive.

Some bias could be present with using summed individual utility values. The three blocks of eighteen profiles are not of themselves orthogonal despite the full design being so. The balanced block design results in an unequal distribution of profiles amongst different respondents. Thus caution is urged in assessing the results associated with summed individual utility values, particularly where these are developed for sub-sets of respondents. At this level one is making use of individual utility values.

7.6 Summary

The staged research design was deliberate in nature given externally imposed conditions. Its unfolding over a longer period of time facilitated the development of relationships, both with retail management and buyers.

The samples for this study comprise both organisations and select individuals within respective organisations. In all, 7 out of 8 possible organisations were involved in the study from its inception. These remained intact as separate operating units despite the acquisitions and mergers that occurred within the supermarket retail industry. A detailed, elaborate and involving process of engaging participation was followed, one which proved successful.

People involved in the research as respondents remained fairly static over time. They ranged from managers and buyers in the initial qualitative stages to buyers and others having anything to do with buying decisions in all subsequent research phases. Whilst the initial numbers of potential respondents was reasonable, their participation was voluntary - another imposed management condition facing the research activity. Notwithstanding this, respondent numbers remained good despite a few defections for various reasons.

For each stage of the research, the same approach was followed. This involved management contact, respondent alert letters, questionnaire mailing with letter and reply paid envelope, telephone and FAX follow-up and management contact again to encourage responses where these were lagging. Such activities resulted in very good response rates, these varying from 81% to 89%.

A number of procedural and technical limitations exist. Some of these were outside the control of the researcher in that they were imposed by the management of responding organisations. These had to be observed. Other limitations were conditional in nature; that is, they were created as a direct result of the sample size, or the voluntary nature of respondent participation. Every step was taken to ensure compliance with required technical dimensions was met where possible, however, given the nature of the research and the sample base, not all was manageable.

CHAPTER EIGHT

EXPLORING THE RETAIL GROCERS' ENVIRONMENT

8.1 Introduction

To obtain a basic understanding of New Zealand retail grocery buying activities, procedures followed, criteria used to evaluate new products and the environment in which buying occurs, a two phased research programme involving in-depth interviews and a mail questionnaire was undertaken. All retail grocery organisations except one (Foodstuffs South Island) were involved in the research programme signifying a virtual census of New Zealand retail grocery buying.

The research was undertaken to gain first-hand experience and ground the research on local conditions and knowledge. All too often insufficient attention is given to understanding the local environment, especially from an operating perspective. Thus, over a nine month period of 1991, both a qualitative and quantitative research programme focused on topic areas such as retail grocery operations, buying activities, evaluative criteria, new product assessments, number and kinds of new products and criteria importance. In gaining a grounded knowledge of the industry and its players, the early qualitative research made substantial contributions to the quantitative study which occurred later in the year (August), and also subsequent quantitative stages. However, the initial dual approach provided a fuller appreciation of the intricacies of New Zealand's retail grocery buying operations.

This chapter in addition to providing a brief overview of the objectives pursued during the earlier stages of research, highlights the buying operations of supermarket retailers including the existence of buying committees. Buyer activities and procedures, new product definitions and proliferations, and buyer assessment of suppliers' current offerings are likewise discussed. Buyer's evaluative criteria form a major component of this chapter and are discussed from a number of perspectives (e.g., rankings, reliability, factor analysis). A summary of central discussion points concludes the chapter.

8.2 Research Objectives and Propositions

Considerable amounts of information were derived from this research phase not only in terms of relevant objectives, but also in terms other areas of operations. In summary, a fuller understanding of the term "new" product has been gained, together with some indication of the numbers and types of new product submissions from suppliers. A greater understanding of acceptance conditions, evaluative criteria and internal practices of respective supermarket chains has also been achieved, along with the role and influence of company objectives. Information about the trilogy of grouped evaluative criteria has been obtained as has that pertaining to the variability in criteria across specific background elements.

The structure of this Chapter follows the fixed and broad topic points covered during the in-depth interviews (see Appendix E). Some variation to this occurs, however, this tends to reflect additional information collected from respondents. Part of this additional information relates to the analysis of data derived from the mail questionnaires and concerns specific evaluative criteria and their perceived importance.

8.3 Buying Operations

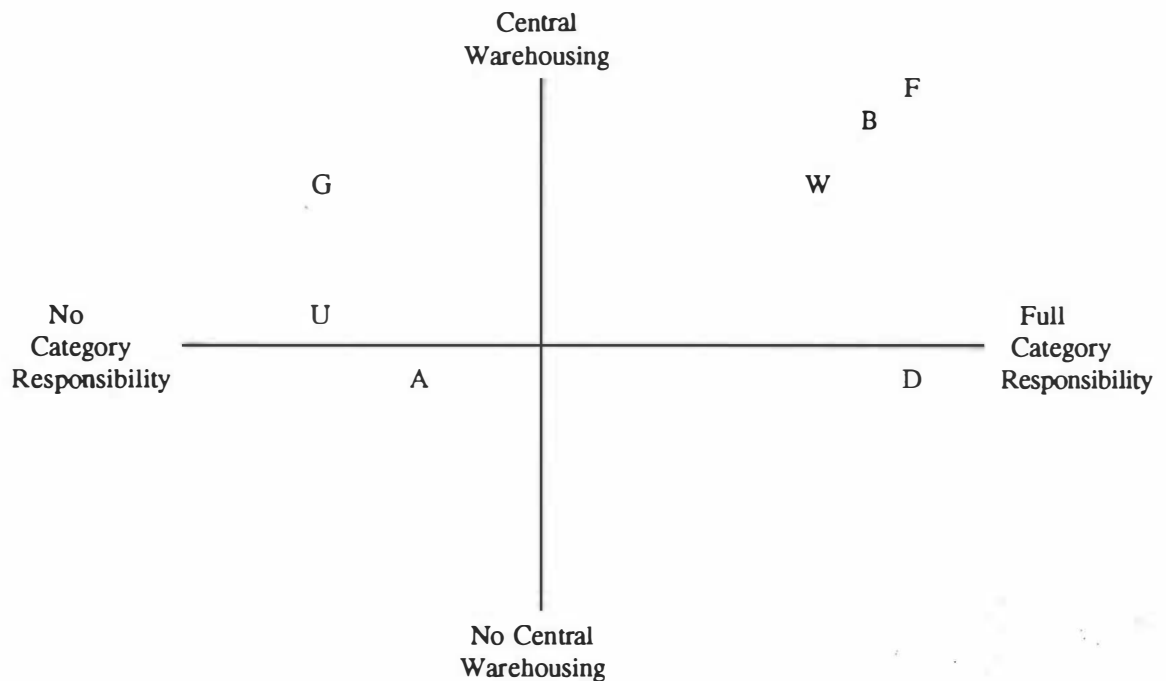
Respondents were asked to talk about their company's buying operations as they saw them both in general and specific terms. Information obtained is best characterised as involving both 'philosophy' and 'structure'.

Management Operations Philosophy

One important finding to emerge in this area is the variability that exists amongst competitive organisations in respect of basic business operations; namely, product category management or responsibility and central warehousing, each of which represents a management philosophy. By definition, category management is itself suggestive of control and autonomy together with responsibility and accountability. On the other hand, central warehousing, although presenting an additional cost factor, can be viewed as a strong measure of stock control, audited directly through the mechanism of category responsibility.

Leaving aside the pros and cons of these business practices, four (4) of the seven (7) participating organisations use some form of category management or responsibility, whilst all exhibit varying degrees of central warehousing. Using available information on these two variables, a two-dimensional position map can be envisaged. Figure 8.1 shows the estimated relative position of New Zealand supermarkets to each other on these practices.

Figure 8.1 Perceived Positional Map of New Zealand Supermarkets



Note: Fictitious initials used to identify supermarkets

As seen by Figure 8.1, the positions perceived to be occupied by organisations suggests not only a strategic stance in the marketplace, but also that buyers within these organisations may place a different emphasis on certain evaluative criteria used to assess new products. For example, those firms operating at higher levels of central warehousing may be more concerned about the availability of space at their warehouses, or equally concerned about fast throughput at the warehouse (that is, fast as opposed to slow moving goods). By contrast, those utilising product category management, may show more concern for the ability of a product to maximise the profit of a category or hold the ability of a presenter to make an on-the-spot decision more strongly than otherwise might be the case.

The combined impact of central warehousing and product category management has obvious implications for studies involving retail grocery buyers. Those operating full category management and central warehousing undoubtedly exhibit greater amounts of autonomy and accountability. No doubt buyers in these organisations exert a greater degree of control over the actual decision process of product acceptance or rejection, including continuance and discontinuance. This control element may well reflect upon the importance these buyers place on various evaluative criteria.

By contrast the absence of full category responsibility or lower levels of central warehousing witness the emergence of ranging or buying committees. These bodies are seen as a means of diffusing the risk inherent in sole responsibility for decisions and are a primary contributor to direct delivery arrangements between suppliers and retail outlets.

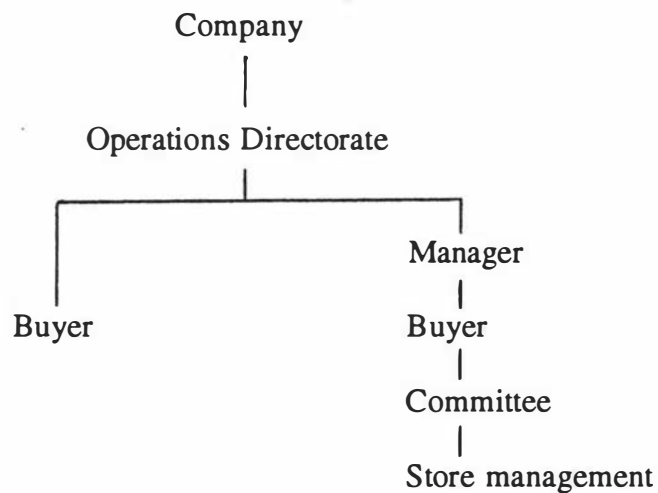
Traditionally it has been useful to think of supermarkets spanning a service continuum ranging from 'full service' to 'no service', however, this idea has severe limitations when applied to buying operations. In the main, the service continuum is an outward looking, strategic market offering aimed at a customer base. By default this service offering provides little insight into the likely rationale underlying buying activities of companies carried out at head office locations.

Organisation Structure

Another point to emerge about buying operations, though of slightly lesser consequence, is that buying staff are themselves managed under what appears to be one of two set patterns of organisational structure. This structure element varies between firms not only in terms of philosophy, but also in terms of actual design. For some, buyers report to a 'merchandising manager' or 'marketing manager', who in turn report to an operations level. On the other hand, buyers may report as a group to an 'operations director'. Whilst this is representative of a front line echelon, it by no means reflects subsequent tiers, especially with respect to final decisions of product acceptance or stocking at store level. Here, and it varies by company, the emergence of a buying committee is witnessed together with the indirect involvement of store management. This involvement includes limited presence at committee

meetings and making decisions about whether to stock head-office-accepted items on their supermarkets' shelves. A basis for potential conflict emerges here in that some store managers may not see a buyer's acceptance decision in a beneficial light and actively resist stocking a stock listed item. This resistance in effect can retard the diffusion process of newly accepted products. The extent to which a 'sub-adoption' process exists at store level is an area requiring further research. This issue aside, a basic operations structure is shown in Figure 8.2.

Figure 8.2 Buying Operations Structure



The issue of buying or ranging committees within New Zealand supermarket structure appears to be one of either/or; that is, one either has one or one does not. However, it should be noted that all organisations have experienced them at varying points in time in their respective operating histories.

To some, buying committees are a bane, absorbing valuable time in terms of preparations and actual meetings. For these, individual buyers are responsible for decisions. For those who maintain buying committees, time is not an issue. Here, it would appear that committees operate as a 'safety net' for a buyer in that they (the buyers) are somewhat relieved from the pressures of a direct sell, but must in turn sell the product to others. Whilst a certain amount of direct responsibility exists, the final decision ultimately appears as a group phenomenon.

8.4 Buying Committees

It is important to note that where a buying committee exists, the number of participants and their titles vary. The issue of these committees is obviously an extension of a management philosophy which embodies elements of control and authority. In New Zealand the size of committees ranges from three (3) to ten (10) with no specific rationale evident for these numbers. It does appear, however, to have some bearing on the size of the organisation in that the larger companies involve greater numbers in their respective committees.

As with the variability of size, there is a considerable mixture of titles in committees. Merchandising managers, buyers, store owners, operations management, stock controllers, space managers, advertising and promotions managers are not uncommon participants and establish senior management involvement. Each organisation utilising a committee applies its own 'flavour' as to the final composition and representation, hence no common pattern exists. However, it seems obvious that those committees embodying higher levels of management participation reflect greater amounts of direct control on decision processes.

Given that final decisions on new product acceptance is likely to be a group phenomenon under the existence of a committee, it seems evident that a suppliers' overall presentation of a new product must be outstanding, and hence increases in importance especially from the point of view of its final impact on the buyer. To this end, it is believed that a good to excellent presentation of a new product is paramount to final acceptance in that a buyer is likely to remember and support specific aspects of such presentations over ones that are mediocre or less than inspiring.

8.5 Buyer Activities and Procedures

Overall, a buyer's activities and procedures can be grouped under three (3) broad categories; namely, tasks performed, processes followed and drive orientations. Within these categories are a number of findings which are important to the initial study.

Tasks Performed

The overall tasks undertaken by a buyer embody a considerable amount of routine which largely centre around three (3) specific dimensions; that is, ranging products, pricing and review. Ranging ensures that a buyer is in constant contact with suppliers of existing products (and their offering of new ones) together with sourcing other new products and suppliers. This activity also can cover the deletion of "old" product lines. Pricing here refers not only to overseeing the initial price determination, but also that the price set remains competitive in the marketplace for the firm and its customers. Review involves assessments of prices and sales performances. In terms of reviewing sales performances, it is extremely noteworthy that buyers are unlikely to review all products under their care at one point in time. A buyer may have responsibility for four or five categories and hence several hundred individual products per category. As a means of coping, buyers may review say only the top 300 or 400 items (the 'bread and butter' earners known to them through experience). This is often done in association with internal financial periods.

In fulfilling these tasks in the areas for which a buyer is responsible, buyers see themselves at the front end of business operations and as such become the mediators of the firms' expectations. To this end, they are the monitors of image constituents like products accepted and that product's price in relation to what the firm is trying to deliver to its customer base.

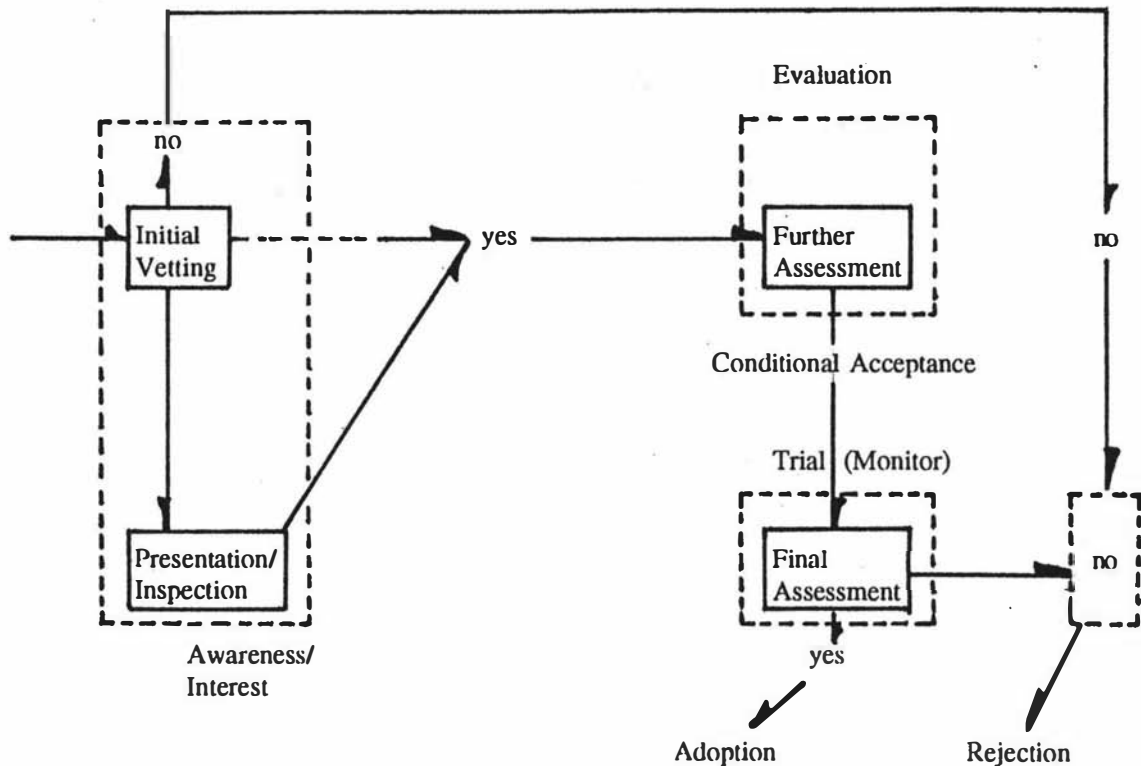
Processes Followed

Of particular interest to the study are the processes that buyers go through in assessing new product propositions. Overall, a buyer's activities in assessing new products involves a vetting process applied both for the good of the firm or its owners (e.g., profit and sales objectives, product image) and for the reputation and continuance of the buyer concerned. It is not uncommon for buyers to have their own personal 'menus', thus reflecting a subjective overtone to the application of reputation and continuance.

The process has both formal and informal dimensions which engage two (2) or three (3) tiers. A basic schema of this is shown in Figure 8.3 by the solid lines. The dotted lines

surrounding various elements of the diagram represent the staged aspects of an adoption process; that is, awareness-interest, evaluation, trial and adoption-rejection.

Figure 8.3 Staged Vetting Process



It should be acknowledged that the initial vetting process, often conducted over the phone, accommodates a number of phenomena for a buyer. In the first place, it establishes who the company is (Watties versus Blackwater Enterprises) which signals immediate respect or warning. This initial contact, in addition to providing a basic description of the product and its features, also establishes the parameters of an accompanying financial proposition. Taken together, these points including the source company, can begin to ring bells for buyers or even turn them cold. In effect, the initial phone call operates not only as a signal of 'awareness and interest', but also establishes a 'gatekeeper' effect to a potential flood of would-be products which otherwise would stand little chance of success in the marketplace. However, relative to a buyer's review cycle, an invitation to present or a request to re-submit at a much later date may eventuate. To some extent, a buyer's own personal agenda (menu) also can be a feature influencing a product's progression.

Telephone vetting as a process is largely informal, but something which almost all buyers find themselves doing. It is part of a buyer's repertoire of trade dealings. However, for many firms a formal vetting process exists and this takes the shape of a set form that must be completed by suppliers before or during any new product submissions. Whilst the form itself varies between companies and includes buyers' inputs, it accomplishes in 'black and white' the exact details of what the new proposition is all about and potential reaction to it.

Whilst the vetting process is assisted by a buyer's learning curve and expertise in a product category or area of responsibility, the buyer is conscious of the fact that retail activities are profit centres with limited space. Thus several of the criteria used to assess new product propositions have 'profit' orientations (e.g., effect on sales mix of category, potential profitability, potential growth, financial aspects). Whilst several of the criteria used do reflect profit dimensions, a number of other filtering points are evident. These vary widely from visual appeal and landscape/portrait shelf packaging to having a knowledgeable and enthusiastic presenter capable of making a decision on the spot. The range of criteria available for use as determined by interviews is shown in Appendix F.

Drive Orientations

The final categorisation of buyers activities deals with drive orientations. With changes in competition and company culture buyers have become more hard nosed, less interested in "partnership" and more 'buy driven' or sales oriented. Equally, they have become more demanding regarding their expectations of product performance and continually find themselves in an array of review activities; namely, internal reports of product movement at varying time intervals, regular scheduled meetings with suppliers and reports from some suppliers at irregular intervals. Underlying these tasks is a definite recognition that suppliers just cannot keep adding products into the supermarket system without some 'voluntary' withdrawal of others.

Buying activities are also recognised as being personality driven. It is not uncommon to have buyers indicate that if a presenter is liked, then buyers will go out of their way to help. This is balanced by other objective means such as company creeds or policies that embody main

evaluative criteria and new product assessment forms to assist screening and provide definitive guidelines and an ultimate rational safeguard. Hence, any new product consideration has a strong conditional underpinning surrounding it. Although the rational and objective co-exist, it does so within the buyer's own experience and learning curve. To this end, gut reactions or gut feelings about product propositions are often at the fore.

8.6 New Product Definitions and Proliferation

Definitions

New products have a considerable array of meanings to retail grocery buyers depending on what exactly one specifies as the boundaries to the word "new". It is not uncharacteristic to have difficulty in operationalising a definition for the word, and for grocery buyers it would appear that 'new' can be placed on a continuum somewhere between innovation and duplication depending on meaning; that is, it can span from the brand new or never before seen on the market to range extensions and me-too's. Definitions even included reference to products not already stocked. By far the majority of 'new' products seen and reviewed are at the range extension and me-too end of the spectrum.

It is believed by most buyers that new products in the range extension and me-too area often offer more profit potential than those situated at the other end of the spectrum. This phenomenon may result from what is best described as a "piggyback effect"; that is, similar products entering the market later in a product life cycle enjoy the benefits and build up of earlier entries, are handled at lower cost levels and are sold through with more attractive financial incentives for the retailer. It is believed that each type of new product brings with it the ability to help achieve growth. For some buyers, and this may depend on the area of product category responsibility, new products can form the life blood for buyers through the ability of that new product to stimulate the category overall.

Product Proliferation

Product proliferation cuts two ways; firstly, in respect of profitability measures and secondly

in respect of absorbing limited space. Whilst it is sometimes beneficial to talk of the number of new products seen or reviewed, it is equally necessary to regard the number of "old", non-performing products that are removed from the system. In the buyer's mind, supermarket shelf space is limited and buyers cannot continually accept new products unendingly. To this end, part of a buyer's task as outlined previously is the review of products within various categories to ensure that non-performers are weeded out. For some, this review process occurs on a weekly basis, and certainly for all, the process is followed for new products at anywhere from six (6) weeks to three (3) months. Reviews with the aim of continuance or discontinuance are a vital part of a buyer's activities.

It would appear that some product categories are more active than others and hence offer potential movement and profits for retail buyers as well as those in new product development. Information collected during interviews indicated that the top five (5) moving categories are pet food, biscuits, beverages, confectionery and cereals. These are followed by snack foods, fruit juice and drinks, coffee, jams and marmalades and muesli. Where there is known activity or movement, there is an associated interest especially when increased stock turns at warehouse becomes a likelihood. However, this dimension must be balanced against other considerations.

Number of New Products

Knowing that there is an array of meaning given to "new" and that some product categories are more active than others, it is little wonder that buyers interviewed indicated varying levels of new product propositions presented to them. In all, and without regard to a tight definition of "new", it is possible that some 2,000 propositions per year are witnessed by some buyers. A narrowing of focus sees this figure reduced substantially to anywhere between 250 and 900. This is shown in Figure 8.4.

Figure 8.4 New Product Propositions by Product Definition

Me-too's, Range Extensions	New, never before seen
2,000	900
	250

Importantly, the acceptance rate is narrower still with some 130 to 200 new products accepted per year. However, these figures need to be assessed cautiously given varying and poor levels of recall in an area where some buyers maintain records, whilst most do not. In assessing new products, retail buyers indicated that they tend to look for differential benefits or something that adds value. This can be in the form of unique features and benefits to an already existing product.

8.7 Measurement of Current Offerings

In their assessment of new product propositions, buyers were asked to comment on how well they thought new products measured up to expectations and 'promises'. The responses received were both qualitative and quantitative in that buyers were asked to indicate what proportion of new products previously accepted were still around. In the material gathered, anywhere from 60% to 100% of new products previously listed were still carried. Based on the upper limit of the previously mentioned product acceptance rate figure (200), anywhere from 120 to 200 new products listed over the past year are still on supermarket shelves. This figure is generalised and without regard for the different definitions of 'new' products as this was not easily discernable. However, from the interviews it was obvious that the proportions varied not only by company, but also by buyer. It is possible, given the absence of definitive figures, that the proportions indicated are overstated or that buyers might, in a stroke of defense, inflate their 'success' rates.

In addition to the above quantitative component, buyers also expressed a very strong qualitative aspect. To this end, success is seen to be linked to the supplier's advertising and promotions endeavours. Some buyers are of the opinion that suppliers see these undertakings as the "price of entry" and "getting it (the product) up and running". Whilst advertising and

promotions certainly create energy and interest (both with the buyers and the market), the 'price of entry' perspective is seen by buyers as short sighted. Product entry under such conditions could lead to early dismissal of products that venture into the market without some form of continuous advertising and promotional support. In short, the "hiss and roar" of some launches is not as comprehensive as it could be and as a consequence, buyers try to seek assurances that suppliers will solidly stand behind their promises to deliver. The seeking of assurances, the completion of new product forms, the subjective interpretations of product propositions, the existence and use of company policy and the vetting process of product consideration are all strongly supportive of the idea that new products submitted for consideration are conditional entrants into the supermarket's product stable.

8.8 Evaluative Criteria and Their Use

General

The in-depth interviews yielded a considerable array of evaluative criteria, some of which were repeated or phrased differently. In all, 41 criteria were determined with the bulk of these being product related (n=19). Some of the remainder (n=9) were oriented towards 'supplier' and 3 related to 'presenter'. The 10 remaining criteria had a focus outside of these in that they were company, transaction or 'deal' related. Notwithstanding the different orientations, respondents were asked to rate all criteria using a six point importance scale ranging from 'very important' (5) to 'very unimportant' (1). An additional value (0) was available to those who found any criterion 'not applicable' to their situation.

In total, the mean scores for the 41 evaluative criteria ranged from a high of 4.74 to a low of 3.21 yielding a range value of 1.53. Relatively speaking, this is a low dispersion value which suggests not only a rather close basis for assessment amongst respondents, but also a rather broad application of importance across a large number of criteria. Of the 41 criteria, 33 (80%) achieved a mean score of 3.60 or higher.

Ranking

Based on mean values, all criteria were subsequently ranked from highest to lowest in order to assess each criterion's relative position. Full details of this ranking process are shown in Table 1 of Appendix M and include the identification of standard deviations for each item. Of particular importance for discussion at this point are the top 10 criteria. However, these are best exhibited in relation to the top 20 items as shown in Table 8.1.

Table 8.1 Top Twenty Evaluative Criteria

Rank	Criteria	Mean	SD
1	Financial aspects	4.74	.446
2	Company profits & sales objectives	4.71	.460
3	Likely consumer demand	4.63	.541
4	Promotion & advertising commitment shown	4.58	.500
5=	Availability of product	4.55	.602
5=	Ability of product to maximise profit		.504
7	Potential profitability of product	4.45	.724
8	Overall impact of product within product category (vol, \$)	4.42	.599
9	Potential growth in product category	4.37	.589
10=	Supplier track record/performance	4.29	.515
10=	Package labelling & what's on it		.956
10=	Ability of presenter to make decisions		.768
13=	Initial visual appeal of product	4.21	.528
13=	Unique product benefits/features	4.21	.577
15=	Knowledgeable presenter	4.16	.594
15=	Number of existing products in the category	4.16	.886
17=	Promotional mix specification (dates, program, media)	4.10	.764
17=	Minimum purchase requirement/order size	4.10	.981
17=	Life of product (shelf/use by)	4.10	1.008
20	Affects on the sales mix of product category	4.08	.587

As can be seen by Table 8.1, 'financial aspects' achieved the top rank position. However, the extremely small separation between its mean value and that of the second ranked item (company profits and sales objectives) suggests that both criteria should be considered key items. Further, relative to the other criteria listed in Table 8.1, the top two items demonstrate the lowest standard deviations, thus highlighting a narrow dispersion of opinion. As a further note, logic itself suggests an obvious pairing between the two criteria in that profit and sales objectives naturally lead to concerns about financial matters.

Despite the foregoing, a very small actual difference in mean values (0.19) separates the six criteria sharing the top 5 ranks. The placement of the remaining variables (other than the top 2 criteria noted previously) in this top 5 set seems to establish these in supportive and subordinate roles to the key items. For example, it could be argued that 'likely consumer demand' and 'promotion & advertising commitment' assist meeting company profits. Also, the 'ability of a product to maximise profits', 'potential profitability', 'impact of product within a category' all seem directly linked to 'company profit and sale objectives'. Equally, elements of consumer demand and a supplier's promotion commitment ultimately will have effects upon product categories. The actual pairing or binding of any of these criteria into inter-related groups will be the subject of further investigation under Factor Analysis.

Despite any connections and interrelationships that may exist amongst the first ten (10) criteria, they could be described or classed as "hard core" elements within a buyer's decision framework; that is, they must be satisfactorily met or addressed by any supplier or manufacturers' product submission. By contrast, the next 8 criteria (ranks 13 through 20, see Table 8.1) seem somewhat "softer" in orientation. The top items in this set involve such criteria as 'initial visual appeal', 'unique product benefits' and 'knowledgeable presenter'. These items, together with several number and time elements, are suggestive of some sort of 'personality-impact' phenomenon operating on decision process.

Given the notion of a "hard core" grouping of criteria and the proposition that manufacturers' submissions must meet these, one might expect very little variation of opinion about the importance of these items. Some support for this exists as evidenced by the relatively low standard deviations shown in Table 8.1. However, the prime exception to fully accepting this

generalisation is slowed by the larger standard deviation noted for 'potential profitability of product', 'package labelling & what's on it' and 'ability of presenter to make decisions' relative to others. In this general area, the lower relative standard deviations recorded by 'initial visual appeal', 'unique product benefits' and 'knowledgeable presenter' suggesting here that there is a fairly central opinion about the importance of these 'softer' criteria.

Varied amounts of dispersion are evident amongst the top 10 criteria. Criteria in this grouping only were subjected to crosstabulation with select background variables in order to further investigate influences to any dispersion of opinion. As seen by Table 8.2, four (4) criteria show no significant variation in mean scores. These involve company profits and sales objectives, the ability of a product to maximise profit, the impact of the product and the supplier's track record. However, it should be noted in Table 8.2 that no one background element is common across all criteria though the presence of a ranging committee, particularly its size, features prominently for a number of criteria. Further, 'category management' and 'company' each feature with three (3) criteria. The presence of these background elements operating in such a way is perhaps a reflection of management philosophy discussed earlier.

Table 8.2 Criteria Variation by Background Elements

Criteria	Background Elements	Difference
Financial aspects	number in ranging committee	p=0.032
Company profits & sales objectives	nil	n.s.
Likely consumer demand	% central warehousing category management ranging committee number in ranging committee	p=0.049 p=0.058 p=0.077 p=0.007
Promotion & advertising commitment shown	age	p=0.085
Availability of product	years as a buyer company ranging committee	p=0.035 p=0.018 p=0.006
Ability of product to maximise profit	nil	n.s.
Potential profitability of product	company	p=0.027
Overall impact of product within product category (vol, \$)	nil	
Potential growth in product category	company category management number in ranging committee	p=0.012 p=0.005 p=0.022
Package labelling and what's on it	years as buyer % central warehousing	p=0.046 p=0.088
Supplier track record/ performance	nil	
Ability of presenter to make decisions	category management	p=0.019

Details of the significance scores between means across all criteria using years with a company, years as a buyer, respondent age, % central warehousing (proportion), company, category management, ranging committee and number in ranging committee are shown in Table 2 of Appendix M. Noteworthy here is that no one criterion systematically varied across all elements. In fact about 44% (n=18) of criteria showed no significant variations in mean

scores across the above mentioned elements suggesting a relatively strong and unwavering level of importance in many instances. In passing it is also worth noting that the majority of variations occur between company (24% of criteria showed significant differences) and again the use or non-use of a ranging committee (22% of criteria varied). There is the suggestion here that the importance of criteria as seen by an individual buyer varies to that of buyers who report to a buying or ranging committee. The issue is the impact of individual versus group assessment.

Ranking Method Comparisons

Whilst it is useful to assess data on the basis of mean scores and rank various outcomes in this way, this alone does not offer the fullest perspective. In an attempt to determine a relative ranking of criteria, the proportions of respondents assigning 'very important' and 'important' to criteria were assessed to determine ranks. These were subsequently compared to the ranks of the same criteria determined on the basis of their mean values. Whilst full details of this is shown in Table 3 of Appendix M, Table 8.3 shows the comparison for the top 20 criteria (based on mean value rankings). The column 'Proportion' refers to the proportion of respondents who assigned either 'very important' or 'important' to any criteria.

A visual examination of the relative ranks shown by the proportions in Table 8.3 yields some particular observations. Important in this process is the maintained top rank positioning of 'financial aspects' and 'company profits & sales objectives'. However, sharing this top rank position is the entry of 'promotion & advertising commitment' and 'ability of the product to maximise profit'. This is accompanied by the apparent demise of 'likely consumer demand' and to a lesser extent 'availability of product'.

Table 8.3 Ranking Method Comparison of Top Twenty Evaluative Criteria

Mean Value Rank	Criteria	Proportion %	Relative Rank
1	Financial aspects	100	1=
2	Company profits & sales objectives	100	1=
3	Likely consumer demand	97	5=
4	Promotion & advertising commitment shown	100	1=
5=	Availability of product	95	7=
5=	Ability of product to maximise profit	100	1=
7	Potential profitability of product	92	12
8	Overall impact of product within product category (vol, \$)	94	10=
9	Potential growth in product category	95	7=
10=	Supplier track record/performance	94	10=
10=	Package labelling & what's on it	89	13=
10=	Ability of presenter to make decisions	87	15=
13=	Initial visual appeal of product	95	7=
13=	Unique product benefits/features	97	5=
15=	Knowledgeable presenter	89	13=
15=	Number of existing products in the category	79	22
17=	Promotional mix specification (dates, program, media)	87	15=
17=	Minimum purchase requirement/order size	82	18=
17=	Life of product (shelf/use by)	78	23=
20	Affects on the sales mix of product category	87	15=

Of particular interest in the relative rank positions is the seemingly upward shift in importance attached to 'initial visual appeal of product' and 'unique product benefits/features'. Correspondingly, a reduced emphasis (in rank terms only) is given to 'potential profitability of product' and 'overall impact of product within product category'. In all and relative to earlier comments about a "hard core" group of criteria, the relative importance measures just explored seem to have expanded this fictitious group. However, included with them are a number of criteria with "softer" orientations.

In terms of the relative importance of criteria, 12 items showed summed importance scores of 90% or more which equates to 29% of criteria. A further 9 criteria (or 22%) achieved summed scores of between 80% and 89%. Thus, slightly more than half of all criteria (51%) achieved at least an 80% importance score, and slightly less than three quarters were scored at 70% importance or greater. Details of this are shown in Table 8.4.

Table 8.4 Grouped Relative Importance of Criteria

Groups	n	%	Cum.%
90% - 100%	12	29	29
80% - 89%	9	22	51
70% - 79%	8	20	71
60% - 69%	5	12	83
59% or less	7	17	100

Whilst the foregoing 'redistribution' of criteria is noteworthy and impacts on an overall assessment of the criteria, it needs to be stated that there is no significant difference in the ranks of the two treatments. The coefficient of rank correlation (r') equals 0.7594. The critical value at a level of significance of .05 equals 0.4495. As r' is greater than the critical value, a significant correlation exists.

Frequency Variability

In all, twenty (20) criteria attained a relative importance score (the sum of very important and important ratings) of 79% or less (see Table 8.4). Whilst it is accepted that not all criteria will assume the same level of importance, it is important to understand what contributes to these twenty (20) criteria exhibiting lesser levels of importance, especially given the small universe from which the sample is drawn. A close examination of Table 2 of Appendix M highlights that nine (9) of these criteria exhibited some significant difference in mean scores for some background elements. These criteria and their significant scores are shown in Table 8.5.

Table 8.5 Mean Scores on Variable Criteria

Criteria	Background Elements	Difference
Number of existing products in the category	Company	p=0.044
Company image and product image matching	Company	p=0.008
Current size of the product category	Years as a buyer	p=0.053
Availability of space at warehouse	Category management Age	p=0.064 p=0.084
Supplier information on likely performance of product	Company	p=0.006
Supplier information about the market	Company	p=0.045
Life of product	Company	p=0.015
Whether the product is carried by competition	Years as a buyer	p=0.021
Landscape or portrait shelf packaging	Years as a buyer	p=0.082

As can be seen in Table 8.5, some explanation for variation is offered in the form of the 'company' involved; that is, some companies in the industry (or at least some buyers within these companies) are likely to place a different emphasis on the criteria in question. Further, the variation may well be credited to the buyer's own experience; that is, years as a buyer or even the buyer's age.

In order to assess this, crosstabulations of the twenty (20) criteria against background elements was undertaken. This process showed that both use and non use of a ranging committee and respondent age yielded significant or near significant chi-square values on seven (7) and six (6) criteria respectively. In all, these thirteen (13) criteria account for 65% of the sub-set and as such the background elements in question are seen as central operatives. Full details of significant or near significant values appears in Table 4 of Appendix M.

The vast majority of the twenty (20) criteria are at a point in the total distribution of evaluative criteria (high to low values) where respondent assessment has been either neutral or unimportant. Full details of the distribution of responses is exhibited in Table 5 at Appendix M. A close examination of this information indicates an increasing incidence of lower importance scoring from 'number of existing products in the category' onwards.

Criteria Reliability

Earlier, reference was made to the constituent structure of the 41 criteria; that is, its product, supplier, presenter and 'deal' componentry. To reinforce a point, the criteria were derived from in-depth interviews amongst industry representatives. It was only later in trying to manage their numbers (and relative to assessing the literature) that the artificial grouping of criteria identified here emerged. The existence of these possible groupings raises several questions, not the least of which is whether or not the groupings identified are realistic, or whether another set is more appealing? The underlying premise in moving towards grouping the multitude of criteria rests with the idea of managing the data by reducing individual criteria to salient variables.

The 41 criteria were subjected to a reliability test using the Statistical Package for Social Sciences (SPSS/PC) as a total group and as the 4 groups noted above. In each case, the groupings are indentified as 'scales' and a number of important statistics can be obtained, including Cronbach's alpha (a reliability coefficient which ranges from 0 to 1), scale means, mean item variances and inter-item correlations. Full details of the results of the statistical run are shown in Appendix N, whilst key results are summarised in Table 8.6.

Table 8.6 Summarised Reliability Test Results

Scale	n	Mean	Mean Item Variance	Alpha	Inter-item Correlation
All	41	3.99	.7437	.9097	.1834
Product	19	4.10	.6876	.8697	.2476
Deal	10	3.79	1.0566	.7463	.2085
Supplier	9	4.02	.6230	.6090	.1106
Presenter	3	3.97	.5616	.4222	.2148

As seen in Table 8.6, some variability between the scales exists. Particular attention is drawn to the number of items in the scales, their means and mean item variances. Although a very strong alpha value is recorded for the full scale 'All', the same cannot be said for the remaining scales. It should be noted that the higher an alpha score, the better the reliability. Alpha scores ranging upward from .70 are respectable for constructed scales. On this basis, the alpha scores for 'Product' and 'Deal' are good and average respectively, whilst the scores for 'Supplier' and especially 'Presenter' are questionable; that is, the constructed scales are not seen as reliable. However, it should be noted that the reliability of a scale increases with the number of items in a scale (Norusis, 1988). Despite this major weakness, the inter-item correlations registered for all scales are favourable and indicate at least that the items included in the scales are independent; that is, there is a relatively low incidence of information overlap between the scales. In relative terms, values in the range of .30 to .40 might be regarded as 'medium', whilst correlation values above this are deemed relatively high. As the values increase, the worth of a scale decreases, ending with several scales essentially measuring the same thing. In total, whilst some of the results are favourable and encouraging, the weakness of alpha values, a central issue for reliability, for two of the four scales suggests that some other method of grouping criteria into more manageable lots is desirable.

Placing the individual criteria into their suggested respective groupings and then 'mapping' these against their identified mean values provides a basis for examining the 4 target scales in a slightly different manner; that is, the relative visual placement of all criteria. This visual impact is presented in Table 8.7 where, for convenience, the various criteria have been abbreviated in their respective SPSS/PC variable format to save space and essentially preserve an intended one-line-per-item visual impact excepting shared rank positions. A full list of the abbreviations and their accompanying SPSS/PC variable description is provided in Table 2 of Appendix N.

Table 8.7 Spatial Location of Scale Items

Mean	Supplier	Deal	Product	Presenter
4.74	Finaspec	Profsale	Cdemand	
4.71				
4.63	Promcom		Maxprof	
4.58				
4.55				
4.45	Trackrec		Potprof	Decision
4.42				
4.37				
4.29				
4.21				
4.16	Promspec	Minpurch	Exprod	Presentr
4.10				
4.08	Suppmark		Life	
4.03				
4.00				
3.97	Leadtime	Regleg		
3.95				
3.82				
3.79				
3.76	Suppinfo	Custbase	Similar	
3.71				
3.60	Consult	Storeman	Season	Enthused
3.58				
3.47				
3.32	Relatns	Prodimag	Lorppack	
3.24				
3.21				
		Space	Carried	
n	9	10	19	3
Mean	4.02	3.79	4.10	3.97

With respect to Table 8.7, a number of pertinent observations can be made. Firstly, the top 3 criteria are not concentrated in one scale, rather they are dispersed across 3 scales, notably Supplier, Deal and Product. Secondly, a number of distinct ‘gaps’ appear in some scales. For example, with the scale Deal a sizeable gap is noticeable between its first and second ranked items, whilst in the case of Presenter, a sizeable gap exists between the top two items and third rank. Finally, although Product has the largest number of criteria, a very high concentration of many of its criteria is noted. Many of these criteria fill the relative ‘gaps’ in other scales, and indeed, this high concentration in part accounts for this scales’ higher

mean value. Whilst the scale Product holds dominance in terms of number of criteria, mean value and ultimately concentration of criteria, items within other scales (albeit limited) assume higher degrees of influence. Arguably, aspects related to Supplier and the Deal are more prominent than Product aspects.

8.9 Factor Analysis

General

As an alternative to the four scales developed and tested under reliability, the data set was submitted to factor analysis (principal components) in an attempt to determine an array of components that would reduce the number of criteria involved in the study to a manageable level. This was done for both the total sample and what is best described as the 'majority' sample. The majority sample involves those who scored criteria as neither important or unimportant (3) through to very important (5). Depending on the criterion in question, the majority sample ranged from n=38 to n=30. In all, 29 criteria were affected by a sample reduction which ranged from 1 to 8 cases for any criteria in this grouping. Table 8.8 depicts the unaffected and affected criteria, the number of 'missing' cases and the ranks of the criteria.

One observation emanating from Table 8.8 is that 8 of the 12 'unaffected' criteria are ranked in the top 9 positions and the remaining 4 are irregularly dispersed between 13th and 31st ranks. It is perhaps not too surprising to find that the vast majority of the affected criteria and the larger number of 'missing' cases come the lower ranked criteria. It is also noted that more than half of the criteria have 3 or more missing values. Ultimately, the impact of this data manipulation should result in changes to final factor analysis results.

Table 8.8 Unaffected and Affected Criteria in the Majority Sample

Unaffected Criteria	Rank	Affected Criteria	n	Rank
Finaspec	1	Potprof	1	7
Profsale	2	Trakrec	4	10=
Cdemand	3	Paklab	1	10=
Promcom	4	Decision	1	10=
Avalable	5=	Unique	1	13=
Maxprof	5=	Exprod	2	15=
Impact	8	Promspec	2	17=
Potgrow	9	Minpurch	1	17=
Visapeal	13=	Life	1	17=
Presentr	15=	Thruput	1	21=
Salesmix	20	Suppmark	2	21=
Suppinfo	31	Cursize	4	23
		Regleg	2	24=
		Prodsiz	2	24=
		Economic	1	26
		Leadtime	2	27
		Custbase	3	28
		Similar	3	29=
		Credpol	3	29=
		Season	4	32=
		Storeman	5	32=
		Inoffice	4	34
		Enthuse	6	35=
		Consult	4	35=
		Relatns	3	35=
		Lorppack	4	38
		Prodimag	7	39
		Space	8	40=
		Carried	7	40=

At the outset, it should be recognised that the sample size (n=38) combined with a large number of criteria (n=41) produces limitations, notably with respect to sample adequacy. Here the Kaiser-Meyer-Olkin (KMO) statistic of sampling adequacy was .1971 for the total sample, and .3152 for the majority sample. Although neither is strong (0.5 or greater is considered adequate), it should not be felt that it detracts from the results achieved given that the sample represents the near universe of all possible respondents.

Factor analysis using Varimax rotation produced twelve (12) Factors for both data runs which yielded 81% and 84% of the total variance respectively. In both instances the Factor sets represent the data given the limitations already outlined. Set out in Table 8.9 are the

percentage variances of each Factor for both treatments. Despite any limitation, the first four (4) Factors account for 50% and 52% of the variance respectively with the next four (4) Factors taking the cumulative variance to 69% and 71%. In both cases the remaining Factors are responsible for the balance of variance at 12%. This is suggestive of a spread of influence across the Factors with some concentration occurring with the first eight items.

Table 8.9 Factor Analysis Variations

Factor Number	% Variation	
	Total	Majority
1	26.4	26.7
2	10.6	11.0
3	6.8	7.6
4	6.6	7.0
5	5.2	5.8
6	4.9	4.7
7	4.3	4.6
8	3.9	4.0
9	3.6	3.8
10	3.1	3.2
11	2.9	2.8
12	2.6	2.6

Factor Loadings

Details of the Factors, contributing criteria and their main loadings for both the total and majority samples is shown Table 6 of Appendix M. From this information it is possible to attempt naming each Factor and then to assess how the two sample approaches compare. Despite the limitations outlined, it is encouraging to see that the first Factor (The Product Offer) achieves the primary position under both sample treatments. This and a full comparison is shown in Table 8.10.

Table 8.10 Factor Rank Comparison

Total Sample		Majority Sample	
Factor	Factor Name	Factor	Factor Name
1	The Product Offer	1	The Product Offer
2	Supplier Information	2	Conditions
3	Demand	3	Supplier Information
4	Appeal	4	Category Impact
5	Category Impact	5	Presenter Enthusiasm
6	Conditions	6	Life Appeal
7	Presenter Enthusiasm	7	Reputation
8	Reputation	8	Demand
9	Life Value	9	Company Objectives
10	Promotion Specification	10	Promotion Specification
11	Approvers	11	Approvers
12	Company Objectives	12	Promotion Commitment

The comparison in Table 8.10 clearly establishes the existence of ten (10) Factors common to both sample treatments, suggesting strength in these items. Highlighted in the table are those Factor items not matching. 'Appeal' and 'Life Value' from the total sample combine to form 'Life-Appeal' in the majority sample suggesting the possible existence of an eleventh (11) factor albeit based on the instability of the items. An obvious basis for inclusion rest with the idea that the criteria loading of 'Life' dominates in both samples. However, secondary loadings on these Factors change the emphasis slightly and hence the derived name.

Table 8.10 notes the presence of 'Promotion Commitment' for the majority sample. It suggests that under a majority sample consideration, greater value is associated with the general notion of promotions. What is equally important to note here, however, is the change in rank order between the two treatment methods. A rank order correlation of the two lists produces a value of 0.787 which is marginally above the critical value of 0.708 at 99%. Whilst there are mathematical procedures to determine the importance of these shifts (i.e., correspondence analysis), a close examination of the factors that have changed indicates alterations in either the criteria associated with the factor, or a change in loadings onto factors.

8.10 Summary

Whilst it is useful to think of supermarkets on the basis of services offered, such thinking provides little depth in relation to understanding retail grocer buying. A useful approach to examining retail buying by supermarkets is by central warehousing and product category management. This approach not only separates firms on basic operations philosophy, but also extends to appreciating their physical buying operations and hence their strategic stance in the marketplace. Buyers operating under particular schemes appear to conduct their buying differently and this impacts variously on the importance and use of evaluative criteria.

Decision control, like buying operations, varies between organisations and operates through management philosophy involving central warehousing and category management. Of particular importance is the effect that management philosophy has on final decisions. Within a system utilising category management, the buyer has direct and sole control over the flow of goods into the supermarket chain. For some organisations the two philosophies are linked and coincide with full responsibility, accountability and control of final decisions. A large part of the control element is removed from a buyer where buying committees exist. In such instances, group deliberations create a final decision. To this end, the success of a new proposition may well depend upon how well a buyer remembers, defends or otherwise justifies the inclusion of the new product into the company's existing product array and distribution network.

It is important to appreciate the interrelationships that exists between tasks, processes and drives in that these influence not only the buyer, but also the buyer's evaluations of product propositions and criteria deemed important. Evaluation is a transitory phenomenon which begins very early in a decision process. Current models do not readily account for this especially in relation to retail buying. Pre-evaluation involves a vetting process by buyers some of which is personal and involves buyers review cycles, whilst some is dictated by existing company policy and requirements.

No clear cut definition of "new" product exists, though buyers are very clear about the type and limited concentration of new products they evaluate. This concentration likely conditions

their assessments, thus care is needed in extending propositions to buyers from a research perspective. However, this statement is not intended to suggest that only one type of "new" product be examined, rather that awareness of differences and the impact of this on product assessments may be an issue that needs future attention.

It goes without saying that the evaluation of new products witnesses the use of many criteria. Also, it should be recognised that the acceptance of importance ranks based on mean scores is at best tenuous, if not misleading for all but a few central criteria. This aside criteria like 'financial aspects', 'company profits & sales objectives', 'consumer demand' and 'promotional commitment' appear to occupy top of mind prominence with most buyers. However, different statistical treatments provide different ranks for most criteria excepting those that may be regarded as core elements. The core elements feature as important to supermarket retailers and these show some variation across background variables.

Given the intention to reduce the number of variables to a more manageable number, four as suggested by initial research activities, it is essential to test their suitability. Such a test was undertaken using Cronbach's alpha which suggests that there is too much instability in the scales to support their use as they are currently constructed. Whilst some support obviously was present, it may well be the case that 4 'scales' are too few and would not adequately reflect the richness of criteria in decision activities and thus the realities buyers face.

In spite of factor analysis limitations in using a small sample and a large number of criteria, twelve (12) factors suitably explain the underlying and unknown latent variables in the data set. The strength of these factors is seen not only in terms of the percent variation accounted for, but also the commonality of derived factors between total and majority sample treatments on one hand and factoring involving principal components and principle axis on the other. Twelve factors should form the basis of future research in the study amongst buyers, however, the nature of such studies and the environment into which they are sent may well define a smaller set of factors.

It is possible that some of the variation evident in the data set is a reflection of the cross-section of respondents for the initial survey. The data was gathered from those whose

activities embraced grocery purchasing decisions without regard for their area of responsibility, or indeed job specifications. This deviation is not seen as major, however, it does instil the need for future research to achieve either a tighter focus as far as respondents are concerned, or maintaining a tight control on the product categories surveyed. Notwithstanding this, survey participants should continue to be drawn from the respondent pool of buyers and ranging committee members as these reflect the decision making entities of grocery products.

CHAPTER NINE

UNRAVELLING CRITERIA AND DECISION FACTOR IMPORTANCE

9.1 Introduction

A wealth of qualitative and quantitative information was obtained from exploratory activities and discussed in Chapter Eight. This information presented both a challenge and complexity. The challenge rested in obtaining a better understanding of the decision factors, whilst the complexity presented was achieving a greater appreciation of the inter-relationships amongst not only the decision factors, but also the decision criteria loading on the first factor. These considerations were raised in the light of principal components analysis determining twelve decision factors in an unforced manner using eigenvalues only. Given the '% variance' across these factors, it is suggested that a predetermined, mathematically based rank order exists. On its own, it could be assumed that this mathematical ordering likewise represents importance. However, to what extent is this mathematically determined ordering of decision factors, at least in part, replicated by the realities of buyer judgement? Further, what is the relative order of some of the primary criteria loading on this first factor? The answers to these questions represents the content of this chapter.

To address these questions, the questionnaire developed for this phase comprised of three distinct sections: a constant sum to assess the relative importance of five factors; a ranking of the top five criteria within the first factor (The Product Offer); and, a series of questions involving a trade-off analysis of the top five criteria. In this latter context, the trade-off analysis routine provided the opportunity to assess respondent reaction to the procedure, often thought of as being awkward and demanding of respondents. Details of the full questionnaire are shown in Appendix H.

This chapter briefly highlights the objectives being pursued prior to examining such select findings as the relative influence of decision factors and the ranking of criteria within the first decision factor. A detailed assessment of trade-off analysis follows with specific attention devoted to utility values and their variability by background elements used in the research.

9.2 Research Objectives and Propositions

The focus of this Chapter is primarily one of evaluation though this occurs at two levels; one, between select (the top five) decision factors, and two, within a decision factor (the top factor). To this end, both the interrelationship of select factors and select criteria within a factor are central in the assessment process. In pursuing this end, policy issues and influence are explored. The research proposition involving rank order comparisons forms part of the introduction to this chapter.

9.3 Relative Influence of Selected Factors

Of the twelve (12) principal component factors derived from the data set, and using a constant sum scale, respondents were asked to allocate 100 points across five (5) selected and named factors. The five (5) factors used accounted for close to 56% of the variation in principal components analysis. Respondents were provided with a brief description of each of the five (5) named factors and asked to indicate the relative importance of each factor by assigning more points to the more important factor. The order in which the factors were presented to respondents varied to that determined by principal components analysis. It should be noted that the coefficient of rank correlation between the two sets of data is - 0.1, virtually signalling no correlation.

Although the five (5) factors are viewed in isolation to the full set, the evidence at hand suggests that 'demand' and 'category impact' are of prime importance to retail grocery buyers. This is shown by the relative ranks of these two factors based on the mean scores of points allocated as displayed in Table 9.1. Thus, despite the supposed ordering offered by principal components, the essence of 'consumer demand' and its consequence on 'category impact' override such factors as 'the product offer', 'supplier information' and the 'appeal' of the product. The mean scores achieved for each variable are reflected by their respective clustering according to point groups.

Table 9.1 Relative Importance of the ‘Top’ Five Factors

Point Groups	Supplier Information %	Demand %	Product Offer %	Appeal %	Category Impact %
5 or less	14	3	11	3	3
6 - 15	42	8	42	55	22
16 - 25	30	47	36	39	39
26 - 35	14	28	8	3	28
36 or more (n=36)	-	14	3	-	8
Mean	16.97	26.53	17.06	16.00	23.44
Relative Rank	4	1	3	5	2

Thus, the specified factors form the likely ranked basis by which retail grocery buyers assess new products ventured forth by suppliers. It could be argued that once past the top two (2) items, that the remaining factors are similar in likely effect especially in respect of their ‘point group’ clustering. Hence, their effect on a decision would be purely on an individual preference basis. The overall ordering is further suggested by the magnitude of the t-test significance scores between sample means shown in Table 9.2. There is no significant difference between demand and category impact despite a 3-point separation in mean scores.

Whilst certain sample means for the expressed factors exhibit a significant difference amongst themselves, very few background elements seem to contribute to this. It is worth noting that the use or non-use of ‘category management’ exhibits a significant difference (Chi Square) with the factors ‘category impact’ ($p=0.059$), ‘supplier information’ ($p=0.076$) and ‘the product offer’ ($p=0.089$), and that the ‘proportion of central warehousing’ shows a significance with ‘supplier information’ ($p=0.015$).

Table 9.2 T-Test Significance Scores of Sample Means

	Supplier Information	Demand	Product Offer	Appeal	Category Impact
Supplier Information	x	.001	.969*	.578*	.008
Demand	-	x	.001	.000	.244*
Product Offer	-	-	x	.506*	.023
Appeal	-	-	-	x	.004
Category Impact	-	-	-	-	x

* denotes not significant

9.4 Ranked Criteria of The Product Offer

Respondents were provided with a list of five (5) criteria and given the indication that these criteria were strongly associated with the factor 'The Product Offer'. They were asked to rank the items in terms of importance from '1' (most important) to '5' (least important). Equal sharing of rank positions was allowed and space was provided at the bottom of the listing for respondents to add and rank further criteria they thought were important in the context of the factor under examination.

Of the thirty-six respondents, six (17%) provided and ranked additional criteria. In the majority of instances (5 of the 6), one or two additional criteria were mentioned and these concerned such aspects as 'carton size' and 'supplier terms'. One respondent provided a list of seven items. In both cases, most of the criteria mentioned are either covered by the five factors in the study at hand, or covered by virtue of other principal component factors (e.g. reputation of supplier, promotional support, presentation).

Respondents, whilst knowing that the five (5) criteria were strongly associated with The

Product Offer, did not know that the criteria were those that 'loaded' heaviest on the factor. Of all the criteria surveyed, it is noteworthy that such elements as 'package labelling', 'leadtime', 'throughput at warehouse', 'minimum purchase' and 'credit policy' assumed primacy over more 'concrete' elements like financial aspects, promotional support and supplier reputation. These latter items were all ranked higher in importance than the criteria under investigation.

As highlighted by Table 9.3, 'package labelling (and what's on it)' followed by 'throughput at warehouse' clearly evolve as first and second ranks in importance respectively. This is followed somewhat distantly by 'minimum purchase', 'leadtime' and 'credit policy'. The ranks achieved here are very similar to the assigned ranks under principal components analysis. A rank correlation coefficient of + 0.70 was determined.

Table 9.3 The Product Offer Criteria Ranks

Rank	Package Labelling %	Leadtime %	Throughput at Warehouse %	Minimum Purchase %	Credit Policy %
1	42	6	51	6	14
2	44	17	20	19	-
3	11	22	9	39	19
4	3	36	9	25	22
5	-	19	11	11	42
6	-	-	-	-	3
Mean	1.75	3.47	2.09	3.17	3.86
Rank	1	4	2	3	5

Given that 'Demand' achieved top rank as a factor, it is surprising that demand related criteria likewise did not score highest here. There is, however, no significant difference in the first two rank positions (package labelling and throughput at warehouse), though these two criteria themselves do exhibit significant differences to all other criteria. Arguably, however, demand related criteria though not in a top position are nonetheless present in the form of throughput at warehouse, minimum purchase and leadtime, all being underlying elements to demand. Details of significant differences are shown in Table 9.4.

Table 9.4 T-Test Significance Scores of Ranked Criteria

	Package Labelling	Leadtime	Throughput at Warehouse	Minimum Purchase	Credit Policy
Package Labelling	x	.001	.280*	.000	.000
Leadtime	-	x	.001	.260*	.109
Throughput at Warehouse	-	-	x	.002	.000
Minimum Purchase	-	-	-	x	.020
Credit	-	-	-	-	x

* not significant

Whilst the use or non-use of category management featured strongly as a significant background element (Chi Square), its influence on the ranks of criteria examined here was minimal. The only criterion to show significance with this variable was 'minimum purchase' ($p=0.02$). Two other background elements, the respondent's role in the purchase decision and their area of purchase responsibility, featured as being significant with single item ranks. Ones role in the decision; that is, absolute control versus shared or committee decision, was significant with 'credit policy' ($p=0.037$). On the other hand, ones area of responsibility (i.e., purchase of food or non-food) was significant with 'leadtime' ($p=0.064$).

As a ranked item, 'leadtime' also featured significantly with respondent's age ($p=0.033$) and the number of years a person has been a buyer ($p=0.024$). These two background elements showed a significant association with 'credit policy' ($p=0.074$) and 'minimum purchase' ($p=0.093$) respectively.

9.5 Trade-Off Analysis of The Product Offer Criteria

In addition to ranking the top five (5) criteria associated with 'The Product Offer', respondents were asked to complete a series of questions involving a trade-off of the involved criteria, each criterion having three specified levels. In all, ten (10) pairs of criteria were presented in table form, each table having nine (9) cells. Respondents, using the numbers '1' to '9', were asked to show their order of preference for each of the specified levels (combinations) in each of the ten (10) pairs of criteria. A '1' represented the most preferred combination, a '2' the next most preferred, and so on. As this question was central to the research exercise, three (3) versions were produced and rotated amongst respondents and their companies. Explanatory notes for the criteria were provided for clarification of meanings (see Appendix H).

The outcome, using a trade-off analysis computer programme, was a series of 'utility' scores ranging in value from +1 to -1. A positive score offers an attraction, whilst a negative score indicates an avoidance. The higher the positive score (and the closer it is to the maximum +1), the stronger is the preference. In the case of a negative, the larger the value, the greater the avoidance. These scores (also known as part-worths) describe a respondent's preference in terms of both level (one criterion over another) and degree (how much of one has to be given up to gain something of another).

9.5.1 Utility Values

The utility values for each level of the five (5) criteria are shown in Table 9.5. Overall preference favours 'credit policy' (+ 0.444) followed by 'package labelling' (+ 0.404) and 'throughput' (+ 0.397). 'Leadtime' (+ 0.363) and 'minimum purchase' (+ 0.332) complete the basic ranking. Importantly, with the exception of the first rank position of 'credit policy', a reasonable parallel between different ranking methods exists. The positioning of 'credit policy' seems responsible for a negative rank correlation coefficient (- 0.1) between the ranks offered by utility scores on the one hand and both respondent ranks and principal component ranks on the other. This pattern may well be the result of having respondents deal in 'degrees' for each item as opposed to single entities.

Table 9.5 Total Sample Utility Values

	Level	Utility	Utility Range	%
Credit Policy (for returned goods)	100%	+ .444	0.887 *	22
	95%	- .001		
	90%	- .443		
Package Labelling (and what's on it)	Good	+ .404	0.875 *	22
	Average	+ .066		
	Poor	- .471		
(Weekly) Throughput (at warehouse)	< 10 outers	- .428	0.807	20
	10 - 90 outers	+ .048		
	> 90 outers	+ .379		
Leadtime (required with supplier)	5 days	+ .362	0.730	18
	15 days	+ .006		
	30 days	- .368		
Minimum Purchase (requirement/order size)	60 outers	+ .332	0.664 *	17
	120 outers	.000		
	240 outers	- .332		
			3.963	

* significant at 95%

Whilst the magnitude of the difference between the part-worth scores are not of themselves great, enough difference does exist between the utility range values to render a significant difference (at 95%) between 'credit policy' and 'package labelling' on the one hand, and 'minimum purchase' on the other. Of notice is the fact that the top two criteria account for about 44% of the total utility, and that adding the third ranked criteria accounts for nearly two-thirds (64%) of the total. The implication of this is that any change in these criteria; that is, a reduction in level, either individually or as a group, will have a greater and negative impact on the attitudes and satisfaction of buyers, and subsequently on their likely acceptance of product propositions from suppliers. This notion is strengthened further by the observation that respondents are generally attracted to an ideal proposition that has as its 'product offer' a 100% credit policy for returned goods, package labelling that is good, a greater than 90 outers weekly throughput at warehouse, a 5 day leadtime with supplier and a 60 outers minimum purchase or order size.

Although the above information represents an overview, it is essential that the diversity of opinion (scoring) is recognised. To this end, whilst a particular utility range may be emphasised, examining the variety of individual scores underlying the utility range offers a different viewpoint. For each of the criteria examined, a diverse range of opinion, as registered by utility values, exists. Table 9.6 demonstrates the ranges of individual utility values under two schemes; one, an unabridged version, and two a version that has removed respective extreme values (low only).

Table 9.6 Range of Individual Utility Scores

Criteria	Score Range 1	R	Score Range 2*	R
Credit Policy	0.117 - 0.644	.523	0.268 - 0.664	.376
Package Labelling	0.189 - 0.616	.427	0.327 - 0.616	.289
Throughput at Warehouse	0.144 - 0.625	.481	0.259 - 0.625	.366
Leadtime	0.182 - 0.533	.351	0.258 - 0.533	.275
Minimum Purchase	0.113 - 0.587	.474	0.212 - 0.587	.375

* Individual utility scores less extreme lows

Under the unabridged version, score ranges tend to show a wide range of part-worth scores and these are expressed by 'R', a single expression of diversity. The one exception is 'Leadtime' with an R value of .351. This criterion, however, shows a rather compact distribution of utility scores compared to others. The removal of all extreme low utility scores, as seen by Score Range 2, results in obvious reductions to all R values (an average of 25%). The rationale underlying the removal of the low values rests on the idea of trying to eliminate 'negative' influences on the positive levels and direction of the data being examined. Such a move establishes a majority view. The 'negatives' could exist as a result of respondent misunderstanding of the initial question. Despite the data manipulation and subsequent R value reductions, it is evident that the impact of change involving the five (5) criteria is tempered by some resident variation offered by the majority of the sample. The variation evident under Score Range 2 is more realistic in terms of this majority. However, the significant differences noted in Table 9.5 for utility range values alters, leaving only 'credit policy' and 'minimum purchase' showing a significant difference with the removal of

the low extreme values. No significant difference is registered by the upward shift in the utility scores at each of the three levels of the respective criteria. In essence then, a 'truer' reflection of degree and level of utility scores is achieved for the majority sample. A revised schedule of utility values, ranges and proportions is shown in Table 9.7, where no change in rankings occurred.

Table 9.7 Majority Sample Utility Values

	Level	Utility	Utility Range	%
Credit Policy (for returned goods)	100%	+ .485	0.966 *	23
	95%	- .004		
	90%	- .481		
Package Labelling (and what's on it)	Good	+ .419	0.911	22
	Average	+ .073		
	Poor	- .492		
(Weekly) Throughput (at warehouse)	< 10 outers	- .453	0.856	20
	10 - 90 outers	+ .049		
	> 90 outers	+ .403		
Leadtime (required with supplier)	5 days	+ .373	0.751	18
	15 days	+ .005		
	30 days	- .378		
Minimum Purchase (requirement/order size)	60 outers	+ .363	0.723 *	17
	120 outers	- .003		
	240 outers	- .360		
			4.207	

* significant at 95%

9.5.2 Utility Values and Background Elements

Details of the utility values associated with each of the five (5) criteria and a select number of background elements are shown in forthcoming Tables. Background elements include the respondent's role in product acceptance decisions, years with the company, years as a buyer, respondent age, use of category management and use of ranging committee. These six elements can be grouped into three broad descriptors; that is, decision involvement,

experience and business philosophy. These descriptors form the basis of subsequent analysis that follows using utility range values as a focal point.

Decision Involvement

For the purposes of discussion, 'decision involvement' refers to the role a buyer has in any decision involving the acceptance or rejection of new products. This role reflects a buyer's accountability and responsibility within respective organisational structures. In some instances, 'absolute' control is exercised, whilst in others sharing occurs, seen either as a 'large input' or 'committee decides'. These three categories reflect what was determined by early qualitative research.

Based on the information in Table 9.8, the importance weights associated with the five criteria vary depending on decision involvement. In the case of those with 'absolute' control, package labelling followed by throughput at warehouse and credit policy assume the top ranked positions respectively. Emphasis, however, is centred on package labelling. By comparison, those having 'some input' reflect the status quo in that importance ranks and proportions mirror the total sample. Here emphasis switches marginally to credit policy.

Table 9.8 Utility Range Values by Decision Involvement

	Total	%	Absolute	%	Some	%	Committee	%
Credit Policy	.887	22	.759	20	.899	23	1.090	26
Package Labelling	.875	22	.911	23	.874	22	.808	19
Throughput at Warehouse	.807	20	.788	20	.821	21	.815	20
Leadtime	.730	18	.713	18	.707	18	.802	19
Minimum Purchase	.664	17	.728	19	.663	17	.642	15
Totals	3.963		3.899		3.964		4.157	

Where decisions are made by 'committee', substantial (and arguably ultimate) weight is attached to credit policy, followed almost equally by package labelling, throughput and leadtime. In respect of credit policy, it is noteworthy that the importance attached to this criterion shifts considerably depending on the nature of decision control, it being strongest where decisions are made by committee. By comparison, package labelling and minimum purchase exhibit a reverse pattern; that is, they decrease in importance as one moves from 'absolute control' to 'committee decides'. Overall, increasing sensitivity amongst the five criteria is exhibited by the total utility range values as the nature of the decision process involvement changes from 'absolute control' to 'committee decides'.

Experience

As an operationalised category, 'experience' is seen as a complex encapsulation of three background elements; namely, years with a company (an adjustment to corporate culture), years as a buyer (the development of a track record) and age (arguably an arbitrary and often surrogate variable). All three elements undoubtedly have their own particular learning curve which, whilst ultimately culminating in a 'street smart' buyer, poses assessment problems in that they are not always linearly aligned; that is, one could have an older person with 5 to 10 years experience as a buyer being relatively new to a firm. This type of vagary is likely to produce inconsistencies in utility values and disrupt patterns of influence and importance. Evidence of this appears in Table 9.9.

Unlike decision involvement, it is evident from the total utility range values (Table 9.9) that a rather flat demonstration of sensitivity and importance of the involved criteria exists. Despite this, however, it is suggested that sensitivity is greatest in each of the three instances of early indoctrination; that is, people new to a company, relatively new buyers and younger persons all tend to be more sensitive to likely changes in the five criteria.

Table 9.9 Utility Range Values by Experience

	Total	Years with Company				Years as a Buyer				Age									
		<5 %	5 - 14 %	15 > %		<5 %	5 - 10 %	11 > %		<30 %	30-39 %	40 > %							
Credit Policy	.887	.742	18	1.037	27	.857	22	.813	22	.874	22	1.008	25	.772	19	.912	24	.939	24
Package Labelling	.875	.928	23	.758	20	.974	25	.943	23	.784	20	.921	23	.899	22	.803	21	.899	23
Through-put at Warehouse	.807	.913	22	.740	19	.731	19	.797	20	.850	22	.747	19	.890	22	.658	17	.831	21
Leadtime	.730	.694	17	.738	19	.750	19	.718	18	.739	19	.700	18	.729	18	.792	21	.700	18
Minimum Purchase	.664	.848	21	.576	15	.619	16	.809	20	.656	17	.621	16	.749	19	.672	18	.616	15
Totals	3.963	4.125		3.849		3.931		4.080		3.903		3.997		4.039		3.837		3.985	

Influences exhibited amongst the criteria between the three category contributors is far less straight forward. One feature evident is that package labelling is ranked highest out of all decision criteria and across the three background elements at the first category level (e.g. less than five years or less than 30 years). However, this higher level of influence or importance is replaced by credit policy in respective secondary positions which continues into final stages in all but 'years with a company' where package labelling again assumes prominence. In all cases, package labelling exhibits a 'v' shaped representation; that is, high in first and third positions yet low in middle regions. Time with an organisation or years in a job may account for some of this variation, though explaining it is mere conjecture and outside of the aim of this report.

Credit policy shows a positive (successive increases over stages) level of influence for two of the three categories (years as a buyer and age). It could be argued that with time, and thus experience, the importance attached to credit policy is enhanced. However, this explanation certainly cannot be applied to years with a company. Some other forces may be at work within this category and between the five criteria. For

example, it is noted that the relative influence associated with throughput at warehouse decreases with time, whereas the importance of leadtime increases. These shifts, whilst not of themselves great, may be enough on examining the proportions, to account for some of the disparity noted about the performance of credit policy.

In addition to throughput at warehouse experiencing a decrease in the amount of influence over time, minimum purchase likewise shows a decreasing pattern over time, though this occurs with both years as a buyer and the buyers age. In both cases the shifts may well be accounted for by the change in proportions noted for credit policy and, to some extent, the maintenance of package labelling.

Business Philosophy

Business philosophy refers to the manner by which a company decides to structure its buying approach in the marketplace. Some organisations have chosen to adopt category management, often seen as a cost effective method of operation. On the other hand, others persist in the utilisation of a ranging or buying committee which notably vary in size from four to ten members. These operating systems represent not only a measure of accountability and responsibility (as seen by decision involvement), but also a series of checks and balances on the former. It should be noted that having category management does not preclude the use of a ranging committee.

As shown by Table 9.10, the total utility range values for those operating category management or ranging committee (i.e., 'yes') in both instances exceeds its opposite. Thus, it can be said that the affirmative position for either operating system is sensitive to any change in the criteria. However, this sensitivity between operating systems appears to be criterion related.

Table 9.10 Utility Range Values by Business Philosophy

	Total	Category Management				Ranging Committee			
		Yes	%	No	%	Yes	%	No	%
Credit Policy	.887	.896	22	.876	23	.972	24	.744	20
Package Labelling	.875	.875	22	.873	22	.854	21	.907	24
Throughput at Warehouse	.807	.836	21	.763	20	.820	20	.785	21
Leadtime	.730	.717	18	.748	19	.754	19	.692	18
Minimum Purchase	.664	.699	17	.633	16	.656	16	.677	18
Totals	3.963	4.023		3.893		4.056		3.805	

Overall, it could be argued that credit policy plays a substantial role in the realm of influence and importance within the broad descriptor of business philosophy. This role is far greater in connection with the use of a ranging committee, however its influence, reduces substantially where no committee operates to a third rank position. The same cannot be said regarding the use of category management where credit policy, although showing a reduced utility range score, ultimately retains its first rank position. However, this position is virtually shared with package labelling under no category management.

Under category management, credit policy and package labelling retain top rank positions regardless of whether category management operates or not. As a result, there is a shift in emphasis to the remaining criteria. Notable here is an increased emphasis on leadtime accompanied by a decrease in importance with throughput at warehouse and minimum purchase.

By contrast, the operation or non operation of a ranging committee presents a different proposition. Clearly, where such committees operate, credit policy is a dominant form of influence, followed by package labelling and throughput at warehouse. However, the non operation of committees witnesses package labelling in prominence, followed by throughput at warehouse and credit policy, the latter two criteria forming a closer relationship in terms of utility range scores. Leadtime and minimum purchase form a closer pairing where no ranging committee operates though markedly at the lowest level of influence.

Company

Despite the ability to manipulate certain background elements into what appears to be natural groupings, it remains that the Company itself determines the overall operating environment. Up to this point, the comparisons involving decision involvement, experience and business philosophy have looked at differences within particular systems, whereas an examination of companies looks at differences between entities. In examining the data at this level, reduced sample sizes need to be noticed. These are shown as bracketed values under each company in Table 9.11. Given that numbers are smaller, patterns in the data as opposed to absolute differences are addressed here. However, the differences that are displayed need to be recognised as they suggest a diverse approach in assessing 'The Product Offer'.

In examining the total utility range values for 'credit policy' and 'package labelling', little real difference between the two items is noted. However, as seen in Table 9.11, the differences between these two criteria (and others) is quite marked as one moves from company to company. Certain companies place a higher value on 'credit policy' and it is the weight of this emphasis that gains the item top rank. Undoubtedly, had the item been placed at the top of every company's listing (note its placement with the first two entrants), a more substantive difference between the top two items would have resulted. Realities being what they are sees varying amounts of sensitivity to the criteria between companies.

Table 9.11 Utility Range Values by Company

	Total	Company *													
		Ww (4)	%	CD (4)	%	FSW (6)	%	Ft (7)	%	FSA (5)	%	3Gs (3)	%	Rts (2)	%
Credit Policy	.887	.572	16	.655	16	1.121	28	.842	21	.931	23	1.173	31	1.056	30
Package Labelling	.875	.858	24	.928	23	.786	20	.942	24	.969	24	.693	18	.849	24
Through-put at Warehouse	.807	.767	21	.891	22	.777	19	.797	20	.775	19	.845	22	#	
Leadtime	.730	.770	21	.751	19	.768	19	.635	16	.808	20	.586	16	.834	23
Minimum Purchase	.664	.631	18	.835	21	.562	14	.710	18	.611	15	.472	13	.831	23
Totals	3.963	3.598		4.060		4.014		3.926		4.094		3.769		3.570	

misdirected scoring lead to the removal of cases

* Ww=Woolworths CD=Countdown FSW=Foodstuffs Wellington Ft=Foodtown
 FSA=Foodstuffs Auckland 3Gs=3 Guys Rts=Ratrays

9.6 Summary

Principal Component Analysis provided an overview of the data set and identified twelve factors that explained the interrelationships between criteria. These factors are essentially ranked based on the percent variation accounted for by each factor. An assessment of the top five factors in isolation of the full set, implies that the assumed rankings of the top factors offered by Principal Components is not upheld. However, this may well be due to using the five factors (a short list) in isolation of the full set. Notwithstanding this, primary influence in decisions to accept products may well be attributed to such factors as 'demand' and 'category impact' ahead of others like 'the product offer'.

Unlike the ranking of the top five factors, the ranking of criteria loading heavily on the primary factor 'The Product Offer' showed a positive and fairly strong correlation. This suggests a reasonable amount of internal consistency in the data set, and strengthens the position these criteria occupy in the overall scheme of purchase activities.

As a passing observation of assessing the relative ranks of both factors and criteria within a factor, significant effects are presented by specific background elements. Here, mention is given to the use or non use of category management, role in the decision process, years as a buyer and the buyer's age. These elements are singled out as they have an obvious impact not only in purchase decisions, but also the ranking of criteria.

The introduction of varying levels to each criterion gave a measure of reality to otherwise 'sterile' items. This reality attempted to mirror what confronts buyers; that is, choice amongst alternatives and the display of personal preferences. Under such circumstances, it is little wonder that changes in rank orders occur. This process shed new light on the criteria and established that 'credit policy for returned goods' is valued more than initially indicated. It plays an important role in a buyer's repertoire of 'Product Offer' criteria used to assess new product propositions. This aside, some respondents experienced difficulty in using the trade-off matrix system, hence an alternative approach requires consideration in planned future stages.

As a means of handling a diverse range of opinion reflected by background elements, three broad categories reflecting the essence of a buyer's environment were developed; that is, decision involvement, experience and business philosophy. It is within this framework that meaningful and particular patterns of influence may be observed in the data. Notable here is the variability in the positions of top ranking criteria. Of particular issue are the primary positions of decision involvement and experience, where 'package labelling' assumes prominence over 'credit policy'. Often the placement of either criterion is at the expense of the other, signifying the importance of both in a decision process. It is evident on close examination that apart from the top two ranks that coalitions involving a mix of the remaining criteria often eventuate and that these form subsequent layers of influence in decisions. Presenters need to be aware of variations of these elements by companies.

Whilst artificial groupings of background elements can assist interpreting the data, a 'grass route' examination between companies themselves points to real differences in 'The Product Offer' criteria patterns, their value and sensitivity to change. Again, presenters and indeed suppliers generally, need to be aware of these variations.

CHAPTER TEN

CENTRAL IMPORTANCE AND SALIENT DECISION FACTORS

10.1 Introduction

The current research was devoted to examining both the importance and the centrality of the full set of the twelve (12) decision factors, together with their interrelationships. Importance in its own right is a fairly common and standard measure within research circles. Its actual measurement is usually accommodated by itemized rating scales, or specific category scales (Tull & Hawkins, 1976) which could include such descriptors as 'very important', 'important', and so on. Implied in such scales is a ranking; that is, scoring Item A as very important and Item B as important implies that Item A is ranked higher than Item B. What one is left with, however, is an ordinal data set of limited value. Similar ordinal data could have been achieved by respondents actually ranking items (in this case decision factors), though twelve items may have resulted in fatigue and reduced accuracy. What was desired was an interval measure, something that would provide a numerical distance between rated decision factors. This was achieved with the notion of a tree where the base of the tree represented '1' and positions up from the base and higher into the tree represented values of less than '1'. The ideal was accomplished; that is, a device that accommodated both a valid ranking and showed distance between ranked items.

The notion of centrality is borrowed from the topic area of attitudes. In this regards, the centrality of an attitude to a connected value is representative of strength of that attitude, and consequently its resistance to change. Whilst change does not focus as a specific issue here, the idea that some decision attribute could be more or less central to a decision is nonetheless appealing conceptually. To this end then, the more central a decision factor is to an accept or rejection decision, the stronger and more important that decision factor is likely to be. As with importance rankings nominated above, an interval measurement was desired. Once again using the tree as the measurement device, the centre of the tree's trunk represented '1' and points to the left or right of this were noted equally as being less than '1'. The 'left/right' allowance, in no way arbitrary, adjusts for balance in a system where decision factors can share centrality in a decision. It must be pointed out at this stage that importance and

centrality are not seen as one and the same concept. Indeed, it is believed that a decision factor can be central to a decision, yet vary in its importance rating. However, as with attitudes, a centrally important item is far more volatile (and thus more important) than some item simply noted as being more important than some other.

Given that respondents were required to mark a position on a tree to represent both importance and centrality of any decision factor, it was deemed that the two interval scale points defined a weighted point of influence in an acceptance or rejection decision. It was pertinent to assume that a multiplication of the two derived points identified the placement of weighted importance in a two-dimensional space for any decision factor. In essence, a 'utility point' for each decision factor was achieved.

10.2 Research Objectives and Propositions

Whilst the overall thrust of the research was to measure both importance and centrality, the underlying objective relates to the identification of important attributes associated with the evaluation trilogy. Centrality is seen as contributing directly to relative importance and thus is an issue which is seen to have a bearing on acceptance and rejection decisions of new products. Pursuant to measuring importance and centrality, two propositions exist; one, that importance and centrality measures will vary; and, two, that centrality diminishes as importance diminishes.

10.3 Comparison with Previous Research

In the previous Chapter, some of the discussion centred on the importance respondents attached to a reduced set of decision factors. In that regard, respondents were asked to rank order the top 5 decision factors which accounted for about 56% of the variance under Principal Components Analysis. At the time a caution was raised about the ranked outcome given that only a partial set of the twelve (12) decision factors was assessed. Before commencing discussions on the full set of decision factors, a comparison with previous research results seems pertinent. Table 10.1 shows the comparison of the two ranking procedures.

Table 10.1 A Comparison of Top 5 Ranks

Rank	Part Set	Full Set
1	Demand	Demand
2	Category Impact	Category Impact
3	The Product Offer	Company Objectives
4	Supplier Information	The Product Offer
5	Appeal	Supplier Information

It would appear that the two procedures are similar given the presence of four common decision factors. More important in this comparison is the identical rank positions given the top two items. Under the full set condition, Company Objectives is seen to emerge suggesting its importance. Appeal decreases in overall favour, ranking sixth in the full set. Some parity seems to exist between the two measures, an interesting notation given a 14 month separation between research activities.

10.4 Relative Importance of Decision Factors

Twelve decision factors were placed on the 'decision tree' according to the respondent's perception of importance and centrality. The base of the tree conceptually represented very important, whilst a decreasing degree of importance was established moving further up in the tree. Centrality moved from the tree's centre outwards. Overlaying a 10-point bi-directional grid provided the basis for extracting interval measures of relative position for both importance and centrality.

In terms of importance, the data was examined for the purpose of extracting **mean** values and ranges (difference between high and low scores) for each decision factor. This was undertaken in terms of 'unadjusted' and 'adjusted' results, the latter reflecting the removal of low values, thus providing a 'majority' view. Details of this is shown in Table 10.2.

As seen in Table 10.2, the unadjusted mean values varied from a high of 0.74 to a low of 0.23, whilst the adjusted values demonstrate a reasonably similar high to low distribution (0.79 to 0.38 respectively). Some shift in rank order occurs with the increase in values, but

the net result is not significant given the high coefficient of rank correlation ($r' = .972$). The adjustment, however, is seen to strengthen the mean values and reduce the variability shown by the ranges.

To aid general assessment, the decision factors in Table 10.2 were grouped relative to their unadjusted mean scores. This highlighted a 'hierarchy of importance' and identified not only the relative stand alone nature of both 'Demand' and 'Category Impact', but also a loose group of five factors suggestive of close interrelationships. With the adjustments to mean scores, another loose grouping of five decision factors is suggested in this instance amongst the lower ranked items.

Table 10.2 Relative Importance of Decision Factors

Decision Factor	Unadjusted		Adjusted*	
	Mean	Range	Mean	Range
Demand	0.74	0.96	0.79	0.54
Category Impact	0.62	0.94	0.67	0.62
Company Objectives	0.57	0.82	0.60	0.79
The Product Offer	0.55	0.94	0.59	0.78
Supplier Information	0.52	0.74	0.56	0.53
Appeal	0.49	0.65	0.50	0.63
Promotion Specification	0.47	0.76	0.48	0.61
Reputation	0.39	0.61	0.43	0.46
Conditions	0.34	0.97	0.45	0.77
Life-Value	0.33	0.55	0.38	0.43
Approvers	0.26	0.62	0.42	0.43
Presenter Enthusiasm	0.23	0.87	0.40	0.65

* low values of 0.20 or less removed

Despite previous observations, no specific pattern exists for range values. Higher ranked decision factors do not themselves exhibit a narrow opinion spread, the opposite applies.

What is evident is that the removal of low values results in a narrower band of opinion. For a few decision factors (Company Objectives, The Product Offer, Conditions), a sizeable range of opinion still exists. This is suggestive of a variable impact in their composition.

T-Tests for significance between unadjusted decision factor means were performed and the results are presented in Appendix O, Table 1. Of note here is the fact that of the sixty six (66) possible pairs of decision factors, fifty (50) or 76% of them exhibited significant differences (at a 90% confidence level or better). Whilst this might be expected given the mean scores for some decision factors, it nonetheless places further emphasis on the separation of decision factors. Given the volume of significant differences Table 10.3 offers a different perspective; that is, for each decision factor non-significant pairs are described.

Table 10.3 Non-Significant T-Test Decision Factor Pairs (Importance)

Decision Factor	Significant with all except ..
Demand	-
Category Impact	Product Offer, Company Objectives
Company Objectives	Product Offer, Supplier Information, Appeal, Category Impact
The Product Offer	Supplier Information, Appeal, Category Impact, Company Objectives
Supplier Information	Product Offer, Appeal, Promotion Specification, Company Objectives
Appeal	Product Offer, Supplier Information, Promotion Specification, Company Objectives
Promotion Specification	Supplier Information, Appeal
Reputation	Life-Value, Conditions
Conditions	Reputation, Life-Value, Approvers
Life-Value	Reputation, Approvers, Conditions
Approvers	Presenter Enthusiasm, Life-Value, Conditions
Presenter Enthusiasm	Approvers

In terms of the above, all relationships involving Demand are significant, whilst most of those involving Category Impact are likewise significant. This tends to reaffirm the dominant role these two decision factors play in terms of importance.

10.5 Centrality of Decision Factors

Centrality for respondents was broadly defined as how 'absolutely imperative' a decision factor was to an accept decision. Centrality was envisaged as the centre of the tree with decreasing amounts left or right of the centre (i.e., out on its limbs). Overlaying the 10-point bi-directional grid aided the determination of an interval measure of relative centrality.

Whilst relative importance mean scores exhibited a rather wide dispersion (0.51 between first and last ranks), the same cannot be said of centrality. Here, a tighter distribution was shown for both unadjusted and adjusted conditions (0.17 and 0.11 respectively). A cut off value of 0.65 was arbitrarily set below which cases were removed. Its effect varied from nil to 3 cases depending on decision factors. Thus, relative centrality ranged from a high of 0.91 to a low of 0.74 (unadjusted) and 0.94 to 0.83 (adjusted). Given the analysis undertaken to this point, it is reassuring to see high and tightly grouped mean scores for what can only be regarded as an critical measurement. Table 10.4 shows the relative position of centrality for all decision factors for the two conditions.

Table 10.4 Relative Centrality of Decision Factors

Decision Factor	Unadjusted		Adjusted*	
	Mean	Range	Mean	Range
Demand	0.91	0.62	0.94	0.28
Company Objectives	0.91	0.45	0.93	0.33
The Product Offer	0.88	0.50	0.91	0.34
Promotion Specification	0.85	0.55	0.90	0.32
Category Impact	0.84	0.58	0.90	0.32
Supplier Information	0.79	0.90	0.89	0.30
Life-Value	0.79	0.55	0.85	0.30
Conditions	0.78	0.88	0.87	0.25
Presenter Enthusiasm	0.78	0.55	0.82	0.30
Reputation	0.77	0.64	0.87	0.33
Approvers	0.77	0.73	0.83	0.30
Appeal	0.74	0.90	0.83	0.34

* low values of 0.65 or less removed

Whereas the importance measurement presented a six-tier hierarchal structure of decision factors, the same is certainly not the case for the centrality measure. No single decision factor stands alone, three (3) groups of decision factors emerge in what appears to be natural collections and the rank positions of the decision criteria vary in comparison to importance ranks. This latter aspect suggests the likely strength and value of a centrality measure over a simple importance measure. A further observation is the upward shift in rank order of Supplier Information, Approvers and Appeal under the adjusted scheme. Further comparison between the two measurement schemes is discussed in a later section.

T-tests for significance between decision factor means were performed and the results are presented in Appendix O, Table 2. Of the sixty six pairs of decision factors, thirty four or 48% were significant at a 90% confidence level or better. This lower number, in comparison to that recorded for importance, would tend to further highlight the tighter distribution in mean scores derived through the centrality measure.

Given the relatively tight distribution of mean score values, the number of non-significant relationships then is not surprising. Table 10.5 identifies the non-significant pairs for each decision factor.

Table 10.5 Non-Significant T-Test Decision Factor Pairs (Centrality)

Decision Factor	Significant with all except ..
Demand	Company Objectives, The Product Offer, Promotion Specification
Company Objectives	The Product Offer, Demand
The Product Offer	Demand, Company Objectives, Promotional Specification
Promotional Specification	Category Impact, Conditions
Category Impact	Demand, The Product Offer, Category Impact, Conditions, The Product Offer, Promotion Specification, Conditions, Supplier Information, Life-Value
Conditions	The Product Offer, Promotion Specification, Category Impact, Supplier Information, Life-Value, Reputation, Presenter Enthusiasm, Reputation, Approvers
Supplier Information	Category Impact, Conditions, Life-Value, Reputation, Presenter Enthusiasm, Approvers, Appeal
Life-Value	Category Impact, Conditions, Supplier Information, Reputation, Presenter Enthusiasm, Approvers, Appeal
Reputation	Conditions, Supplier Information, Life-Value, Presenter Enthusiasm, Approvers, Appeal
Presenter Enthusiasm	Conditions, Supplier Information, Life-Value, Reputation, Approvers, Appeal
Approvers	Supplier Information, Life-Value, Reputation, Presenter Enthusiasm, Appeal, Conditions
Appeal	Supplier Information, Life-Value, Reputation, Presenter Enthusiasm, Approvers

10.6 Central Importance of Decision Factors

Centrality, defined in this research as being absolutely imperative to an accept decision, is seen as a mediator of importance in relation to decision factors. To this end, it is prudent to first assess its likely impact. One assessment possibility is a comparison of the decision factor rank positions of importance and centrality. Table 10.6 outlines this comparison.

Table 10.6 Importance and Centrality Rank Comparisons

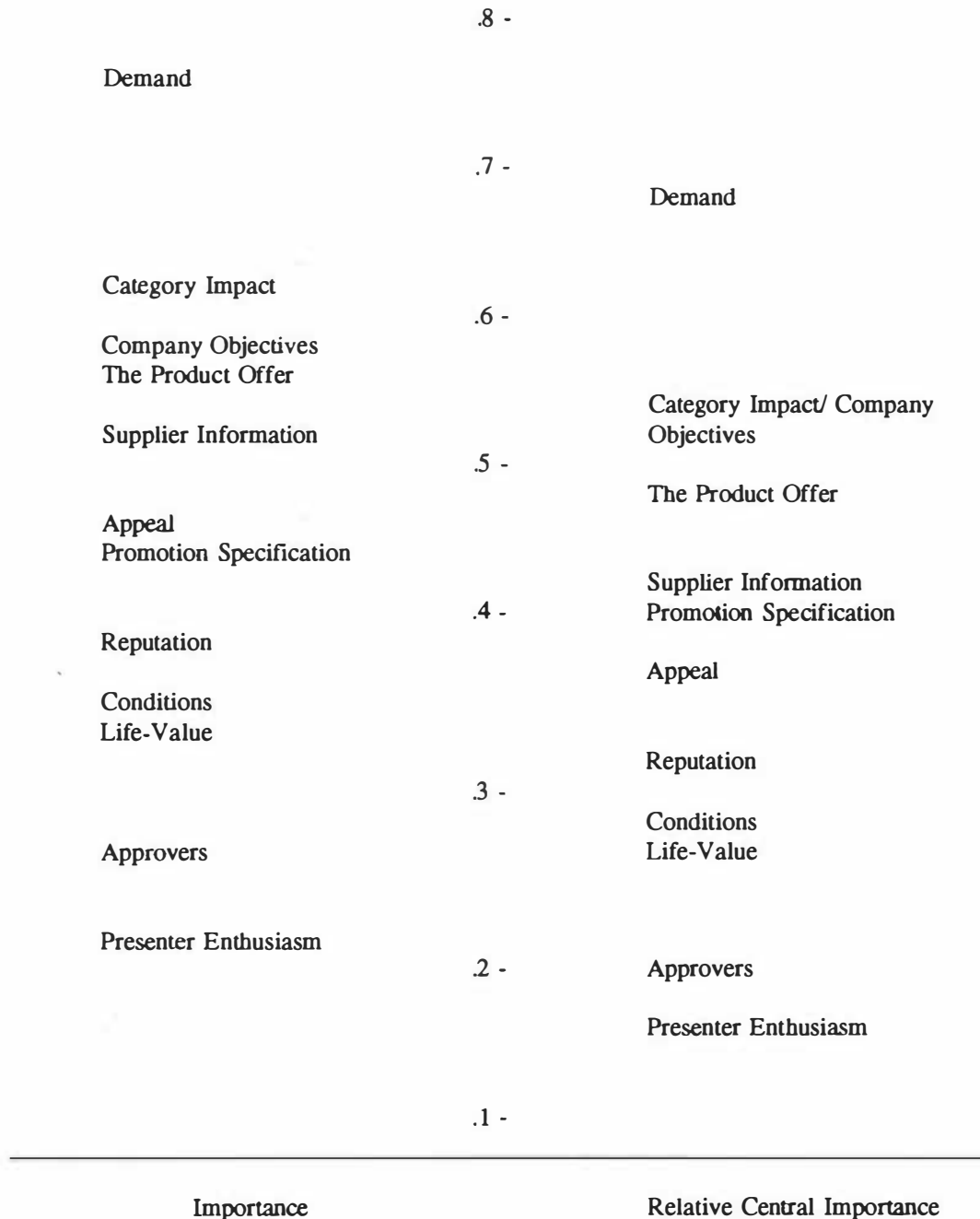
Decision Factors	Ranks	
	Importance	Centrality
Demand	1	1=
Category Impact	2	5
Company Objectives	3	1=
The Product Offer	4	3
Supplier Information	5	6=
Appeal	6	12
Promotion Specification	7	4
Reputation	8	10=
Conditions	9	8=
Life-Value	10	6=
Approvers	11	10=
Presenter Enthusiasm	12	8=

The issue of centrality impacts upon importance in a number of ways. Notable in the case at hand is the retreat in position of Appeal, Category Impact, Reputation and, to a lesser extent, Supplier Information. Advancing in varying degrees of prominence are decision factors such as Company Objectives, Promotion Specification, The Product Offer (supplanting Category Impact), Conditions, Life-Value and Presenter Enthusiasm. Whilst Demand remains categorically as the most important and absolutely imperative decision factor, buyers visualise a distinction between importance and centrality that notably favours the latter especially on a number of key decision elements. Stemming from this it can be said that whilst some decision factors may be regarded as important, it does not always follow that more important items are also the most central. Further support for this proposition is obtained from the fact that the coefficient of rank correlation (r') equals 0.682 which is less than the critical value of 0.708 at a 99% confidence level. Thus, the ranks for centrality lean heavily in the direction of being different to that of importance.

As a conceptual measure, central importance (referred to shortly as relative central importance) is conceived as the product (or multiplication) of importance and centrality scores which defines a two-dimensional point relative to other positions. To this end, each of the twelve (12) decision factors arguably could occupy their own position and thus neutralise, or at least minimise, tied points.

Whilst Table 10.6 provided a static view of importance and centrality ranks, and highlights the changed positions of decision factors, Figure 10.1 takes matters one step further by furnishing a visual impact of the centrality measure by comparing the ranks, positions and approximate values of both importance and relative central importance.

Figure 10.1 Importance and Relative Central Importance Comparisons

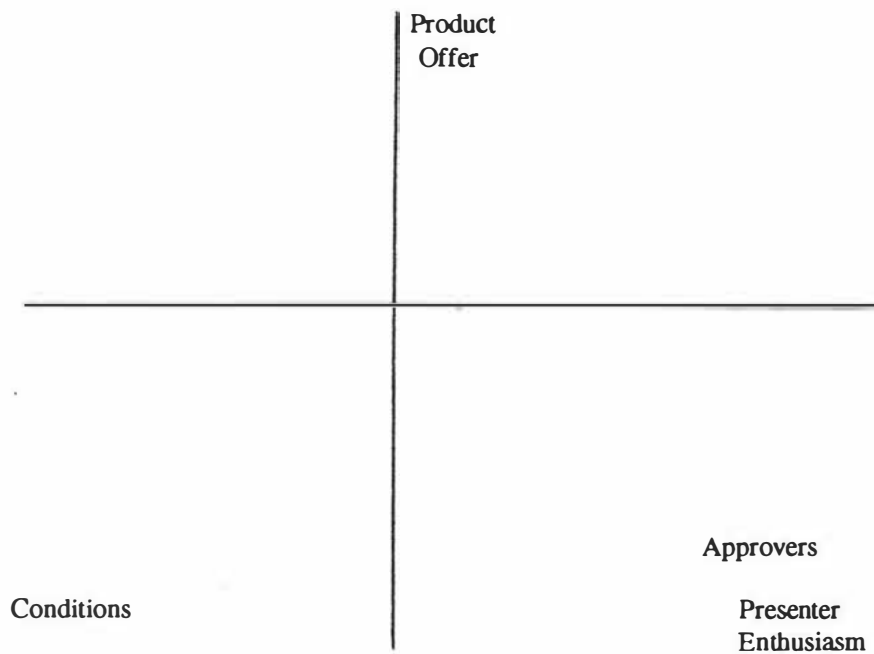


As witnessed by Figure 10.1, the measurable impact of centrality as applied to central importance redefines the relative positions and values of the twelve (12) decision factors. With the exception of the shared second ranks (Category Impact and Company Objectives) and the switch in positions for Appeal and Promotion Specification, the ranks of the remaining items are the same. The coefficient of rank correlation is sufficiently large thus supporting this statement ($r'=0.989$). However, it is suggested that whilst there may be strength in importance measures, the appraised values on their own are an inflated statement of worth.

Multiple Correspondence Analysis (MCA) was used to assess whether any noticeable and significant patterns existed in the data set; that is, the individual measures of importance and centrality, together with their product, relative central importance. It was determined that there was very little variation and therefore no patterns amongst the importance and centrality scores when viewed separately. Importantly, however, significant patterns in relative central importance emerged. The co-ordinates produced by MCA for this measure, though not large, yielded discernable values that show some variation.

The MCA procedure produces output in terms of a two-dimensional space which is similar to factors in Principal Components. This two-dimensional space is defined by influencers. In the case at hand, the decision factor influencers are Approvers, Presenter Enthusiasm, Conditions and The Product Offer. Figure 10.2 depicts the first two axes (dimensions) and the relative positions of the decision factor influencers.

Figure 10.2 The Two-Dimensional Space of Central Importance



The surprising aspect here are the specific decision factor influencers, most of which are lower in central importance positions. What this conveys is that other potential influencers show no discernable variation; that is, there is little or no disagreement about either their importance or centrality. Thus, the influencers shown here are likely to exert considerable leverage in an accept or reject decision.

Whilst Figure 10.1 depicted a comparison of central importance and importance, Table 10.7 provides a further description of unadjusted and adjusted **means** and ranges for central importance.

Table 10.7 Relative Central Importance of Decision Factors

Decision Factor	Unadjusted		Adjusted*	
	Mean	Range	Mean	Range
Demand	0.69	0.94	0.74	0.70
Category Impact	0.53	0.86	0.58	0.67
Company Objectives	0.53	0.87	0.55	0.78
The Product Offer	0.49	0.95	0.52	0.78
Supplier Information	0.42	0.70	0.45	0.55
Promotion Specification	0.40	0.65	0.42	0.56
Appeal	0.36	0.64	0.41	0.52
Reputation	0.31	0.61	0.37	0.51
Conditions	0.27	0.89	0.38	0.73
Life-Value	0.26	0.47	0.30	0.39
Approvers	0.20	0.54	0.33	0.40
Presenter Enthusiasm	0.18	0.83	0.30	0.67

* low values of 0.15 or less removed

Noted in Table 10.7 is the 'return' of wide dispersions of mean scores across decision factors (difference between high and low values) for both treatments; that is, unadjusted and adjusted, 0.51 and 0.44 respectively. The spread of these measures is a by-product of the wider dispersion in scores noted for importance, whilst the product of importance and centrality (relative central importance) is seen to account for the changes in decision factor groupings.

Again, a test for significance between decision factor means was undertaken and the results are presented in Appendix O, Table 3. Of the sixty six pairs of decision factors, fifty two or 79% were significant at a 90% confidence level or better. Given the change to the distributions of mean score values brought about by the multiplication of importance and centrality, the number of non-significant pairings is not too surprising. Table 10.8 shows these non-significant pairs.

**Table 10.8 Non-Significant T-Test Decision Factor Pairs
(Relative Central Importance)**

Decision Factor	Significant with all except ..
Demand	-
Category Impact	Company Objectives, The Product Offer
Company Objectives	The Product Offer, Category Impact
The Product Offer	Supplier Information, Promotion Specification, Company Objectives, Category Impact
Supplier Information	Promotion Specification, Appeal, Product Offer
Promotional Specification	Appeal, The Product Offer, Supplier Information
Appeal	Reputation, Conditions, Supplier Information, Promotion Specification
Reputation	Conditions, Life-Value, Appeal
Conditions	Life-Value, Appeal, Reputation
Life-Value	Reputation, Conditions
Approvers	Presenter Enthusiasm
Presenter Enthusiasm	Approvers

Whilst the non-significant pairings tend to cut across all levels, the actual number of non-significant pairs at any level is reduced in comparison to both importance and centrality significance results. This observation could be the result of changes to decision factor groupings as well as the arbitrating impact of centrality as a measure. It is also noted that Demand shows no non-significant pairings.

10.7 Relative Central Importance and Background Elements

Data was collected on a number of background aspects of respondents, for example the respondent's role in product acceptance decisions, years with the company, years as a buyer, respondent age, use of category management and use of ranging committee. Previously these background elements were grouped into three (3) descriptors; that is, decision involvement, experience and business philosophy. These broad descriptors form the basis of subsequent analysis using relative central importance mean score values as a focal point.

Decision Involvement

'Decision involvement' refers to the role a respondent has in any buying decision concerning the acceptance or rejection of new products. This role reflects a buyer's accountability and

responsibility within respective organisational structures. With some companies, 'absolute' control is exercised (business philosophy related), whilst in others a sharing occurs, seen either as a 'large input' or 'committee decides'. These categories were previously identified by qualitative research.

A multitude of variations tend to occur within some value that is used to represent a total. It is evident from an examination of Table 10.9 that this phenomenon is upheld. The variation in mean scores for type of decision involvement does not appear to be the main issue since there is little apparent deviation in mean score values. Whilst some values obviously change across categories, only one decision factor (Conditions) exhibited a significant difference in its mean scores across the two decision involvement roles. Conditions is seen as a decision influencer (see Section 10.3.4, Figure 10.2).

Table 10.9 Relative Central Importance and Decision Involvement Means

Decision Factor	Total	Absolute	Some	Committee
Demand	0.69	0.75	0.57	0.70
Category Impact	0.53	0.51	0.47	0.71
Company Objectives	0.53	0.57	0.51	0.43
The Product Offer	0.49	0.50	0.49	0.48
Supplier Information	0.42	0.36	0.46	0.52
Promotion Specification	0.40	0.35	0.42	0.54
Appeal	0.36	0.34	0.36	0.46
Reputation	0.31	0.31	0.31	0.27
Conditions	0.27	0.25	0.19	0.50
Life-Value	0.26	0.21	0.22	0.31
Approvers	0.20	0.23	0.19	0.12
Presenter Enthusiasm	0.18	0.19	0.17	0.17

Note: **Bold** figures show significant difference between means of at least a 90% confidence level

Clearly the more important focus is the comparison of decision factor ranks for the three

decision roles. It is evident from a close examination of Table 10.9 that as one moves from absolute control of a decision towards full committee involvement, there is a slight change in emphasis for some decision factors, especially those in the middle order. However, it is obvious from this examination that Demand remains prominent faltering slightly under Committee consideration. The issue of decision factor ranks is demonstrated in Table 10.10.

Table 10.10 Decision Factor Ranks by Decision Involvement

Decision Factor	Total	Absolute	Some	Committee
Demand	1	1	1	2
Category Impact	2	3	4	1
Company Objectives	3	2	2	7
The Product Offer	4	4	3	6
Supplier Information	5	5	5	4
Promotion Specification	6	6	6	3
Appeal	7	7	7	8
Reputation	8	8	8	10
Conditions	9	9	10=	5
Life-Value	10	11	9	9
Approvers	11	10	10=	12
Presenter Enthusiasm	12	12	12	11

Unquestionably a changed emphasis on decision factors emerges where final decisions are put to committees; that is, shared influence as to outcome. There should be little doubt about the likely influence of this on decisions. However, coefficients of rank correlation were calculated for all possible pairs and these are shown in Table 10.11. These coefficients demonstrate, at a 99% confidence level, that the ranks amongst decision factors involving various pairs show a significant correlation with each other; that is, they are similar. However, the 'Some-Committee' pair is different, while the 'Absolute-Committee' pair is borderline. Relative central importance for some decision factors is different between some types of decision involvement.

Table 10.11 Coefficients of Rank Correlation for Decision Involvement

	Total	Absolute	Some	Committee
Total	-	0.993	0.994	0.804
Absolute		-	0.976	0.741
Some			-	0.689
Committee				-

Note: The critical value at 99% significance is 0.708. **Bold** values exhibit a significant difference

Experience

'Experience' encapsulates three background elements; that is, years with a company (a possible reflection of corporate culture), years as a buyer (the development of a track record) and age (arguably an arbitrary and often surrogate experience variable). Each element undoubtedly has its own learning curve which, whilst ultimately culminating in a 'street smart' buyer, poses assessment problems in that they are not always linearly aligned; that is, one could have an older person with 5 to 10 years experience as a buyer being relatively new to a firm. This type of situation could produce inconsistent patterns in relative central importance measures, a feature exhibited in Table 10.12.

Table 10.12 Relative Central Importance and Experience Means

	Total	Years with Company			Years as a Buyer			Age		
		<5	5 - 14	15>	<5	5 - 10	11>	<30	30 - 39	40>
Demand	0.69	0.60	0.71	0.68	0.70	0.81	0.59	0.87	0.72	0.59
Category Impact	0.53	0.45	0.58	0.47	0.66	0.53	0.42	0.65	0.57	0.45
Company Objectives	0.53	0.54	0.51	0.58	0.56	0.53	0.59	0.47	0.55	0.53
The Product Offer	0.49	0.37	0.47	0.58	0.62	0.51	0.49	0.44	0.45	0.58
Supplier Information	0.42	0.19	0.43	0.46	0.49	0.35	0.43	0.32	0.41	0.46
Promotion Specification	0.40	0.29	0.41	0.42	0.36	0.40	0.35	0.55	0.37	0.40
Appeal	0.36	0.40	0.33	0.46	0.34	0.36	0.36	0.44	0.26	0.47
Reputation	0.31	0.22	0.26	0.41	0.24	0.29	0.33	0.24	0.28	0.36
Conditions	0.27	0.14	0.27	0.31	0.09	0.31	0.23	0.35	0.26	0.25
Life-Value	0.26	0.26	0.25	0.28	0.29	0.25	0.29	0.21	0.25	0.30
Approvers	0.20	0.20	0.18	0.23	0.27	0.18	0.21	0.22	0.18	0.21
Presenter	0.18	0.39	0.14	0.19	0.17	0.14	0.26	0.22	0.17	0.18

Note: **Bold** figures above show significant difference between means at or above a 90% confidence level

As highlighted in Table 10.12, five (5) decision factors showed significant difference amongst mean values. However, no one decision factor was significant across all three experience categories. Of these categories, 'years with a company' was the more pronounced and produced significantly different scores for supplier information, reputation and presenter enthusiasm, the latter noted by MCA as a likely influencer.

Apart from the small number of decision factors showing a significant difference in mean scores, some of the decision factors do exhibit specific patterns by experience categories. For example, five decision factors under 'years with the company' show increasing mean scores with time; that is, the longer one has been with a company, the more likely it is that certain decision factors assume greater levels of central importance. Notable in this regards is The Product Offer, Supplier Information, Promotion Specification, Reputation and Conditions. In addition, The Product Offer, Supplier Information and Reputation all exhibit increases in central importance with respondent age.

A further observation of the mean values is that the central importance of Category Impact

and The Product Offer decrease consistently with the length of time one is a buyer. Also, as age increases, central importance for Demand, Category Impact and Conditions is shown to decrease.

Whilst these changes may seem minuscule and the value transformations likewise small, they do reflect switches in the rank positions of decision factors which are noted in Table 10.13.

Table 10.13 Decision Factor Ranks by Experience

	Total	Years with Company			Years as a Buyer			Age		
		<5	5 - 14	15>	<5	5 - 10	11>	<30	30 - 39	40>
Demand	1	1	1	1	1	1	1=	1	1	1
Category Impact	2	3	2	4	2	2=	4	2	2	6
Company Objectives	3	2	3	2=	4	2=	1=	4	3	3
The Product Offer	4	6	4	2=	3	4	3	5=	4	2
Supplier Information	5	11	5	5	5	7	5	8	5	5
Promotion Specification	6	7	6	6	6	5	7	3	6	7
Appeal	7	4	7	7=	7	6	6	5=	8=	4
Reputation	8	9	9	7=	10	9	10=	9	7	8
Conditions	9	12	8	9	12	8	10=	7	8=	10
Life-Value	10	8	10	10	8	10	8	12	10	9
Approvers	11	10	11	11	9	12	12	10=	11	11
Presenter	12	5	12	12	11	11	9	10=	12	12

An examination of Table 10.13 suggests that a close parallel of rank orders exist. However, the exception to this is one level within 'years with a company'; that is, less than 5 years. The coefficient of rank correlation between the total sample and this group is 0.594 (see Table 10.14). This is well below the critical value of 0.708 (99% significance) indicating a significant difference between the two. The 'less than 5 years' group also exhibits lower coefficients when compared with most other aspects of the experience category. This variation could be the result of a small sample (n=5). However, it does pose the possibility that a person new to an organisation is not 'climatised' to its culture and hence opinion or perception changes with time. No other significant differences are evident and full details of coefficients are shown in Table 10.14.

Table 10.14 Coefficients of Rank Correlation for Experience

	Total	Years with Company			Years as a Buyer			Age		
		<5	5 - 14	15>	<5	5 - 10	11>	<30	30 - 39	40>
Total	-	.594	.993	.976	.923	.963	.909	.878	.995	.888
Years with Company										
<5		-	.573	.552	.657	.692	.738	.636	.530	.587
5 - 14			-	.965	.902	.970	.909	.899	.984	.874
15>				-	.892	.948	.909	.825	.972	.930
Years as a Buyer										
<5					-	.862	.902	.759	.886	.853
5 - 10						-	.906	.946	.951	.872
11>							-	.731	.843	.899
Age										
<30								-	.864	.734
30 - 39									-	.844
40>										-

Note: The critical value at 99% significance is 0.708. **Bold** values exhibit a significant difference

A further observation of Table 10.14 concerns the coefficients exhibited for age. On average these appear to be lower than others. This may reflect an underlying volatility with age as an element of experience and partially explain some of the shifting emphasis in ranks for several decision factors.

Business Philosophy

Business philosophy refers to the manner by which companies organise their buying activities. Some have chosen to adopt category management which is seen as a cost effective method of operation. Others, however, utilise ranging or buying committees which notably vary in size from four (4) to ten (10) members in this research . These operating systems represent not only a measure of accountability and responsibility (as seen by decision involvement), but also establish a series of checks and balances on the former. It should be noted that having category management does not of itself preclude the use of a ranging committee. It is evident from buyers that having category responsibility does not translate directly to meaning that the firm operates under the canopy of category management. This only adds to the variation in business philosophy and likely response patterns.

As previously indicated, regardless of how one examines the data, 'Demand' remains as the most centrally important decision factor. This is maintained within the context of Business Philosophy. This aside very little variation in the data between the use of either category management or a ranging committee exists other than slight changes in most mean values and overall rankings. However, in this array are the significant differences recorded for two (2) lower order decision factors within each area of Business Philosophy. The decision factors of Reputation and Approvers vary significantly between **use and non-use** of category management. In both cases, the **non-use** of category management mean values are greater. Appeal and Approvers are the two (2) decision factors under ranging committee use or non-use that show a significant difference. The mean value for Appeal is greater under the **use** of a ranging committee, whilst Approvers is greater under **non-use** of a ranging committee. All significant differences are at 90% confidence level or greater. Details of the mean values are shown in Table 10.15.

Table 10.15 Relative Central Importance and Business Philosophy Means

Decision Factor	Total	Category Management		Ranging Committee	
		Yes	No	Yes	No
Demand	0.69	0.70	0.67	0.67	0.71
Category Impact	0.53	0.57	0.46	0.56	0.51
Company Objectives	0.53	0.52	0.56	0.50	0.56
The Product Offer	0.49	0.45	0.59	0.54	0.45
Supplier Information	0.42	0.40	0.45	0.44	0.40
Promotion Specification	0.40	0.39	0.42	0.42	0.39
Appeal	0.36	0.36	0.37	0.44	0.29
Reputation	0.31	0.25	0.43	0.30	0.31
Conditions	0.27	0.24	0.34	0.29	0.25
Life-Value	0.26	0.25	0.30	0.26	0.27
Approvers	0.20	0.16	0.29	0.12	0.27
Presenter Enthusiasm	0.18	0.17	0.20	0.17	0.19

Note: **Bold** figures show significant differences between means at or above a 90% confidence level

One observation from Table 10.15 concerns the central importance mean values for use and

non-use of category management. Of the twelve decision factors only Demand and Category Impact under the use condition exceed their corresponding non-use mean value counterparts. All other decision factor mean scores are greater to varying degrees under the non-use condition. This may suggest that category managers, operating within the bounds of company objectives, are essentially interested in demand phenomenon. A similar pattern is not evident under ranging committee use or non-use. Here, there is an unequal distribution of yes/no ranging committee application which favours the yes condition. More of the decision factors are shown to be more important to those using ranging committees. In this case, ranging committees arguably are inclined to look at the bigger picture by diffusing their interest across a larger number of decision factors.

Some of the difference in central importance noted above may in some way be a reflection of the respective rank positions of decision factors under either form of business philosophy. These ranks are shown in Table 10.16.

Table 10.16 Decision Factor Ranks by Business Philosophy

Decision Factor	Total	Category Management		Ranging Committee	
		Yes	No	Yes	No
Demand	1	1	1	1	1
Category Impact	2	2	4	2	3
Company Objectives	3	3	3	4	2
The Product Offer	4	4	2	3	4
Supplier Information	5	5	5	5=	5
Promotion Specification	6	6	7	7	6
Appeal	7	7	8	5=	8
Reputation	8	8=	6	8	7
Conditions	9	10	9	9	11
Life-Value	10	8=	10	10	9=
Approvers	11	12	11	12	9=
Presenter Enthusiasm	12	11	12	11	12

The assumption of differences between respective groups based on rank positions is not supported. Whilst there are changes in positions of decision factors under either condition of business philosophy, these changes are of themselves not significant since the coefficients of rank correlation all exceed the critical value of 0.708. These values are detailed in Table 10.17.

Table 10.17 Coefficients of Rank Correlation for Business Philosophy

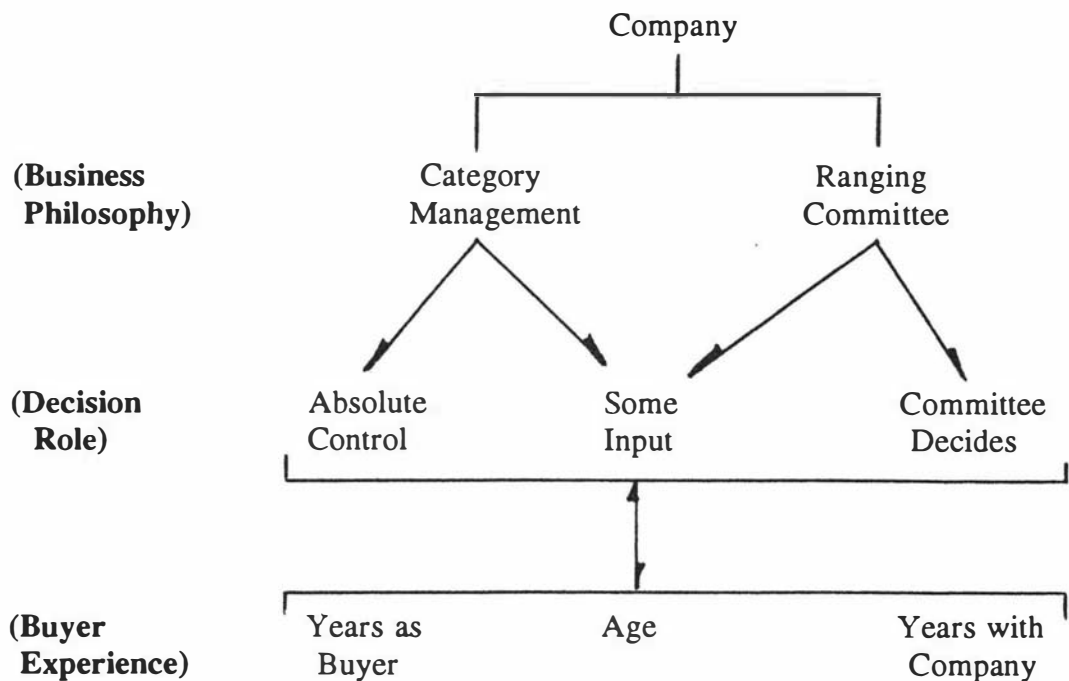
	Total	Category Management		Ranging Committee	
		Yes	No	Yes	No
Total	-	.981	.951	.974	.963
Category Management					
Yes		-	.939	.969	.956
No			-	.935	.949
Ranging Committee					
Yes				-	.909
No					-

Note: The critical value at 99% significance is 0.708

10.8 Central Importance and Company

As seen by the previous section, the variability of central importance appears to change and is dependent upon what particular background element or grouping of elements is chosen for examination. Whilst Company is another background element, it is a force with which to be reckoned, given that a company is positioned at the top of the pyramid; that is, each will decide on its business philosophy and the role people play within this. It is people who bring experience into the decision equation, though from a company point of view, there is a latent expression that this experience is that which is best for the company. Figure 10.3 portrays this thinking about interconnections of these elements.

Figure 10.3 The Interrelationship of Background Elements



In the retail grocery trade, it is argued that companies operationalise their activities according to a particular philosophy. This philosophy in part determines the role buyers will play, but certain companies also have a direct input into determining the final role a buyer plays. Buyers bring with them a range of experiences and apply these in a variety of ways for the ultimate benefit of the company.

Having posed the scenario, what then is its effect on central importance mean scores? Whilst there appears to be little variation between specifically grouped background elements, can the same be said about the Company? The short answer is that there appears to be considerable variation in terms of mean score values, patterns and rankings.

Of the twelve decision factors, Category Impact, The Product Offer and Promotion Specification exhibit the widest range of significant differences in mean values across most companies. Four other decision factors, Supplier Information, Appeal, Conditions and Approvers, show limited significant differences amongst companies. Some of the distinctions noted are the likely result of scorings by certain companies. However, it is noted that The Product Offer and Approvers, two decision factors that showed discernable variation utilising

MCA, are noted as exerting some influence on acceptance or rejection decisions (see Section 10.3.4, Figure 10.2). Full details of mean values are shown in Table 10.18.

Table 10.18 Relative Central Importance and Company Means

	Total	Count down	Food- Stuffs (W)	Food- town	Wool- worths	Food- Stuffs (A)	3 Guys	Rattrays
Demand	0.69	0.74	0.77	0.63	0.81	0.42	0.74	0.60
Category Impact	0.53	0.72	0.56	0.44	0.58	0.29	0.39	0.88
Company Objectives	0.53	0.63	0.50	0.49	0.61	0.41	0.64	0.37
The Product Offer	0.49	0.59	0.37	0.41	0.50	0.91	0.39	0.46
Supplier Information	0.42	0.29	0.35	0.37	0.40	0.46	0.63	0.62
Promotion Specification	0.40	0.31	0.40	0.41	0.39	0.42	0.29	0.72
Appeal	0.36	0.49	0.38	0.27	0.30	0.52	0.44	0.40
Reputation	0.31	0.21	0.27	0.24	0.40	0.45	0.27	0.31
Conditions	0.27	0.11	0.24	0.15	0.37	0.38	0.33	0.59
Life-Value	0.26	0.24	0.20	0.24	0.30	0.39	0.26	0.23
Approvers	0.20	0.15	0.04	0.25	0.32	0.14	0.19	0.14
Presenter	0.18	0.25	0.02	0.22	0.16	0.21	0.28	0.20

Note: **Bold figures** show significant differences between means at or above a 90% confidence level

Central importance mean scores and patterns, exhibited in Table 10.18, offer a contrast to the values identified for other background elements and groupings. This is especially evident amongst the top through to lower middle order decision factors. Notable is the fact that companies seemingly place a different emphasis or have a different regard for the value of decision factors. To this end, support exists for the proposition that companies drive the influence of decision factors, a feature outlined by Figure 10.3. This is further emphasised by the ranks shown for decision factors in Table 10.19. These ranks together with the patterns in the mean score values portray a strong picture of the influence of decision factors that vary by company.

Table 10.19 Decision Factor Ranks by Company

	Total	Count down (3)	Food- Stuffs (W) (5)	Food- town (8)	Wool- worths (7)	Food- Stuffs (A) (3)	3 Guys (3)	Rattrays (2)
Demand	1	1	1	1	1	6	1	4
Category Impact	2	2	2	3	3	10	5=	1
Company Objectives	3	3	3	2	2	7	2	6
The Product Offer	4	4	6	4=	4	1	5=	8
Supplier Information	5	7	7	6	5=	3	3	3
Promotion Specification	6	6	4	4=	7	5	8	2
Appeal	7	5	5	7	10=	2	4	7
Reputation	8	10	8	9=	5=	4	10	9
Conditions	9	12	9	12	8	9	7	5
Life-Value	10	9	10	9=	10=	8	11	10
Approvers	11	11	11	8	9	12	12	12
Presenter Enthusiasm	12	8	12	11	12	11	9	11

Whilst it could be argued that some of the above rankings look similar, a close inspection utilising coefficients of rank correlation suggests otherwise. There is a considerable degree of variation in ranks not only between total and individual companies, but also between companies. This further suggests that a varying level of decision factor importance exists. Detail of the coefficients are shown in Table 10.20. Foodstuffs (Auckland) stands out as prominent in its difference with all others.

Table 10.20 Coefficients of Rank Correlation for Companies

	Total	Count down	Food- Stuffs (W)	Food- town	Wool- worths	Food- Stuffs (A)	3 Guys	Rattrays
Total	-	.867	.944	.906	.906	.420	.827	.741
Countdown		-	.867	.902	.643	.315	.771	.538
Foodstuffs (W)			-	.899	.794	.378	.771	.769
Foodtown				-	.824	.332	.703	.587
Woolworths					-	.304	.694	.566
Foodstuffs (A)						-	.453	.252
3 Guys							-	.628
Rattrays								-

Note: The critical value at 99% confidence is 0.708. **Bold values** exhibit a significant difference

10.9 Interconnections of Decision Factors

In addition to indicating the importance and centrality of decision factors on the decision tree, respondents were asked to show the interconnections between these factors by joining their assigned points with lines. The underlying aim of this process was to establish a visible network of connections and attempt to answer the latent question; what decision factors are linked and networked with others?

Of the thirty one (31) respondents to this part of the survey, twenty six (26) or 84% complied with the requirement albeit to varying degrees. Some respondents were able to fully 'define' a specific network or array of connections, whilst others showed only limited or partial connections.

To demonstrate the connectivity between decision factors a matrix was constructed (see Appendix O, Table 4). This matrix was used to count the number of connections between pairs of decision factors and the number of times any decision factor was involved in an

interconnection with other decision factors. Whilst the process does not of itself exhibit a full, unadulterated, network-like configuration of various decision factors, it does provide a first-hand glimpse at specific pairs and the number of times each decision factor is involved with others. By examining the pairs (the parts of the whole) and totals, a better understanding of possible interrelationships amongst decision factors may emerge.

Based on an analysis of pairs (cell count only), 'Approvers-Presenter' attained the greatest number of interconnections; that is, 14 of the 26 respondents (54%) connected this particular combination above all others. This is found surprising given the knowledge that both of these items are lower order elements in all ranking schemes discussed in previous sections. To this end, expectations favoured high pair counts amongst 'Demand', 'Category Impact', 'Company Objectives' and 'The Product Offer'; that is, the top four (4) elements of central importance. However, as outlined in Table 10.21, this expectation is not fully met.

Table 10.21 Paired Central Importance Decision Factors

Decision Factor Pairs	Number of Connections	% of Respondents
Approvers - Presenter	14	54
Demand - Supplier Information	12	46
Supplier Information - Category Impact	11	42
Category Impact - Company Objectives	11	42
Company Objectives - Promotion Specification	11	42
Company Objectives - Supplier Information	10	38
Category Impact - Demand	10	38
Demand - Promotion Specification	9	35

Full details of decision factor pairs are given in Appendix O, Table 5. Although surprise is registered over the lack of pairings amongst the top four (4) elements of central importance, it is reinforcing and rewarding to see 'Approvers-Presenter' at the top of the decision factor pairs list. These two (2) decision factors featured strongly as items showing discernable variation under MCA discussed in Section 10.3.4 (see Figure 10.2. p.192).

In observing the cell counts of various pairs, it is worth noting that of the 66 possible

pairings, no connections occurred for five (5) pairs. These combinations involved 'Demand - Presenter', 'Demand - Approver', 'Approver - Supplier Information', 'Presenter - Company Objectives' and 'Presenter - Promotional Specification'. A close examination of these suggests that there is little interconnection between the high and low rank positions of relative central importance.

Whilst the 'cell count' of pair connections yields one type of information, another piece of information is revealed by examining **the number of times** any decision factor is involved in an interconnection; that is, a sum of all cell counts for any decision factor. Under such an outline, 'Supplier Information' heads the list of most mentioned. This could well signify not only the importance attached to this factor, but also the subsequent reliance and value that buyers perceive in its application. This notion does have some support given that the top placed item outrated 'Demand', 'Category Impact' and 'Company Objectives'. A full listing of total interconnections (mentions) is shown in Table 10.22 in general groupings and in descending order of mention.

Table 10.22 Total Interconnections of Decision Factors

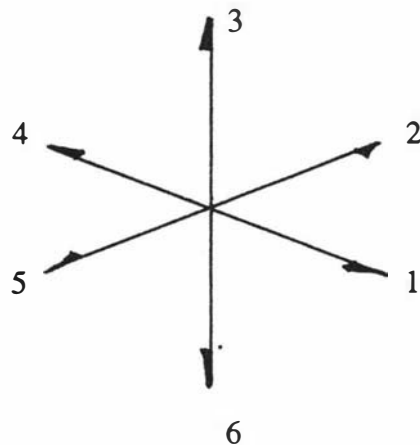
Decision Factor	Mentions
Supplier Information	63
Demand	61
Category Impact	61
Company Objectives	60
Reputation	60
Promotion Specification	59
The Product Offer	58
Life-Value	53
Appeal	50
Presenter	39
Approvers	37
Conditions	32

In order to extract further meaning from the data, Table 4 (Appendix O) constructed as a

matrix, was subjected to multidimensional scaling (MDS) utilising KYST-PC, an MDS programme. Multidimensional scaling, which measures distances and similarities, was used to gain a spatial overview of the data as opposed to the static treatment reported above. After three pre-iterations involving a maximum of five dimensions, a 4-dimension solution was reached. The stress value for this was 0.046, a good result according to Kruskal's values. Select output from the KYST-PC computer program run are shown at Appendix O, Table 6.

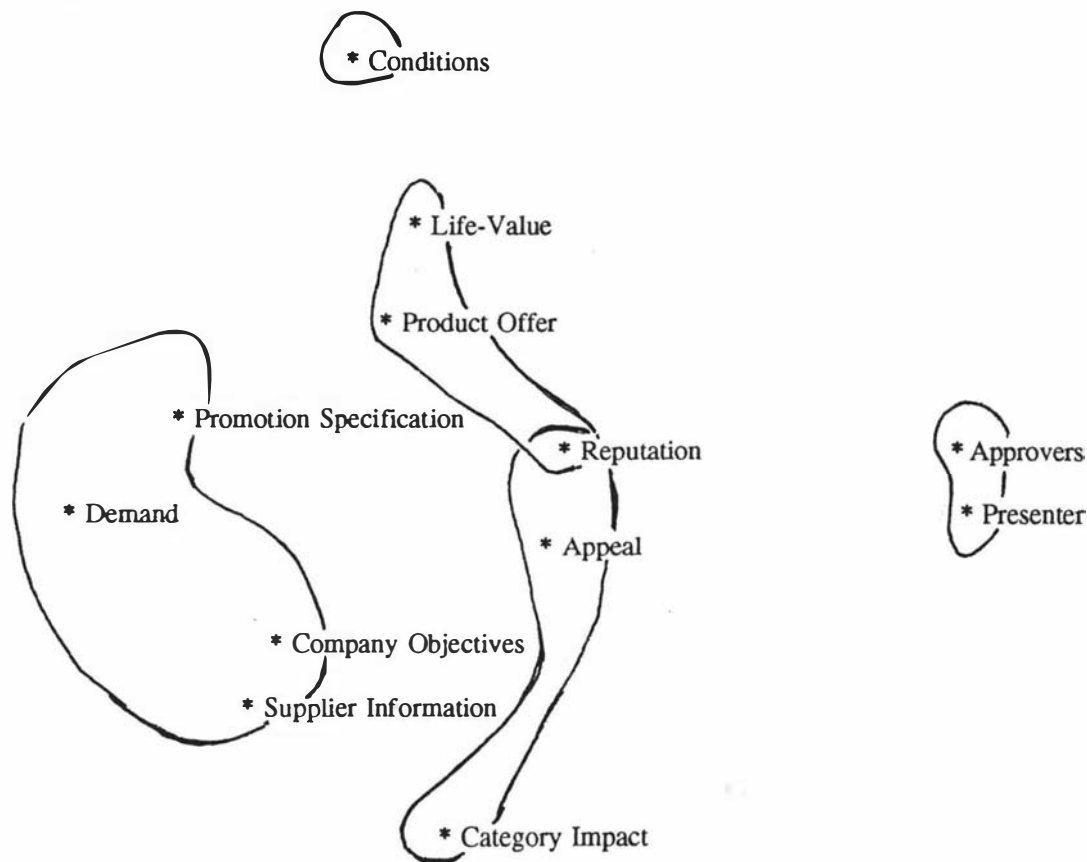
In processing the data, a 3-dimensional solution was settled upon which provided the 'best fit' for the most gain amongst the scattered points, even though the stress value was 0.081. However, 'best fit' is used here to signify that the chosen solution separated and grouped similarly related data points. In addition, a 3-dimension solution was settled upon for ease of interpretation. Figure 10.4 illustrates a fictitious example of this occurrence.

Figure 10.4 3-Dimensional Spatial 'Map'



Looking up, down or in on this figure from any of the 6 points noted in Figure 10.4 would result in viewing a flat, one-dimensional 'map' on which the collected data points were scattered. A replication of the actual results in a one-dimension space (viewed from '3') is shown by Figure 10.5.

Figure 10.5 Spatial 'Map' of Decision Factors



As seen by Figure 10.5, MDS has separated and grouped the twelve (12) decision factor data points. A cursory examination of these points suggests both distinctive and not so distinctive groupings. This examination implies that five (5) groups exist and for easy identification, they are encircled. The groups are:

1. Conditions
2. Approvers - Presenter
3. Promotion Specification - Demand - Company Objectives - Supplier Information
4. Life-Value - Product Offer - Reputation
5. Category Impact - Appeal - Reputation

The not so distinctive groups are numbers '4' and '5' given the sharing of the decision factor 'Reputation'. Subjectively, it is possible for this item to belong to either group. This aside, the derived groups noted above are determined to some extent by referral to the paired counts identified earlier and exhibited at Appendix O, Table 4. However, MDS on its own provides

basic approximations which Figure 10.5 depicts.

A closer look at the groupings, with the purpose of naming them, is both challenging and intriguing. The challenge comes in devising names, whilst intrigue is stirred in that the names decided upon (with a colleague's assistance) closely resemble the evaluation trilogy postulated at an early stage of the overall study; that is, supplier - product - presenter. The decision factor groups together with their 'names' are shown in Table 10.23.

Table 10.23 MDS Decision Factor Groups and Names

Groups	Names
Conditions	External Forces
Approvers - Presenter	Personal
Promotion Specification - Demand - Company Objectives - Supplier Information	Strategic Link
Life-Value - Product Offer - Reputation	The Daily Channel
Category Impact - Appeal - Reputation	Branding

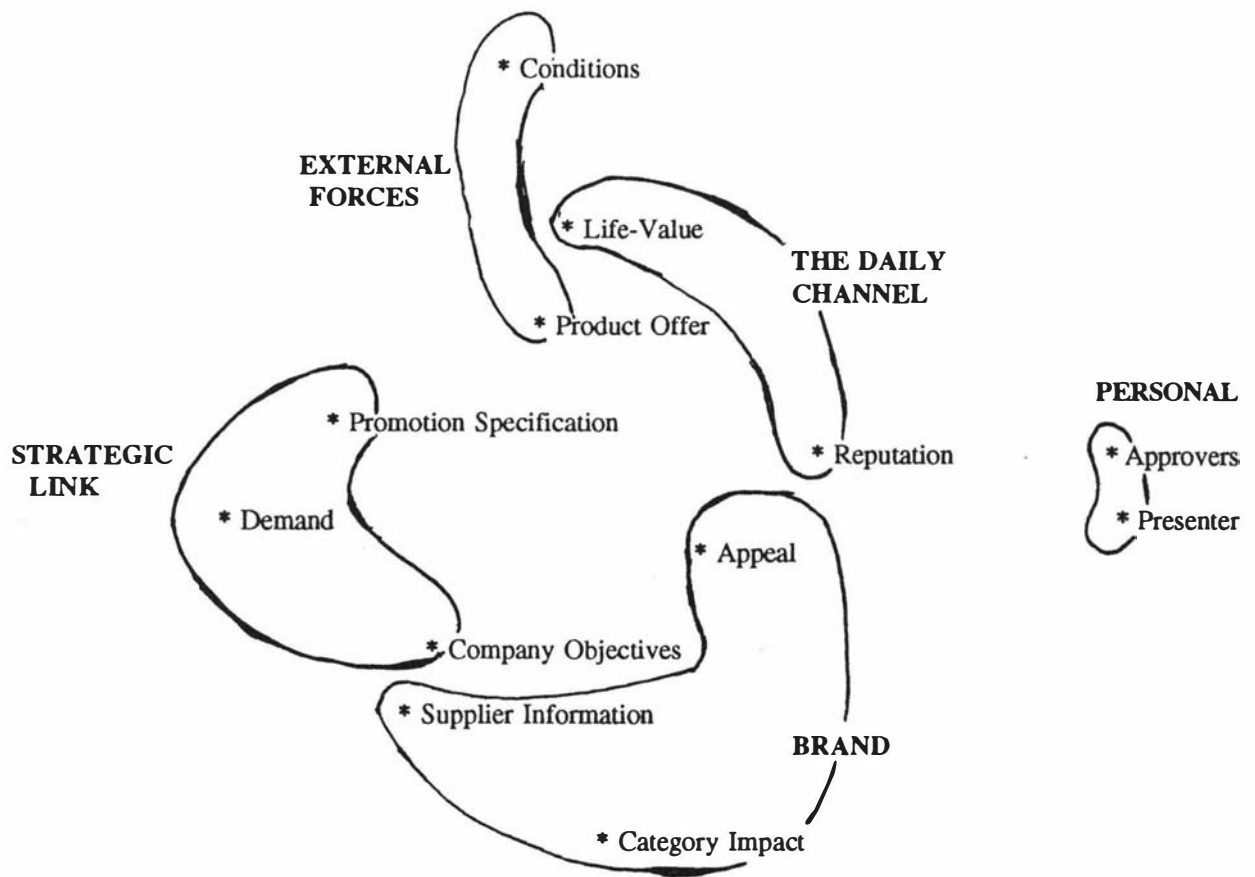
Whilst a certain amount of subjectivity is evident with both the identification and naming of the groups, intuition and familiarity with the data is also present. However, in order to balance the appraisal of the data, the coordinates from the 3-dimension solution were subjected to Cluster Analysis using a complete linkage algorithm. The result of this process **does not** negate the subjective interpretation, rather it refines it; that is, five (5) groups are identified, though three (3) small changes involving the placement of decision factors are noted. A comparison of the two (2) groups determination processes is shown by Table 10.24.

Table 10.24 Subjective and Cluster Group Comparisons

Subjective	Cluster
Conditions	Conditions - Product Offer
Approvers - Presenter	Approvers - Presenter
Promotion Specification - Demand - Company Objectives - Supplier	Promotion Specification - Demand - Company Objectives
Information	
Life-Value - Product Offer - Reputation	Life-Value - Reputation
Category Impact - Appeal - Reputation	Category Impact - Appeal Supplier Information

Clearly, the changes involve the placement of 'The Product Offer', 'Reputation' and 'Supplier Information', all of which are highlighted in Table 10.24. These changes are seen to have a negligible impact on the naming of the derived groups. The revised pattern of decision factor groups is exhibited in Figure 10.6 . The revised 'map' also shows the names of the groups (in upper case).

Figure 10.6 Spatial 'Map' of Decision Factors Adjusted by Cluster Analysis



It is noted that as one moves up the cluster chain towards the formation of one group, specific groups merge or amalgamate. To this end, STRATEGIC LINK merges with THE DAILY CHANNEL, suggesting a 'supplier - retailer' link. This subsequently amalgamates with BRAND seen perhaps to involve or imply a link to the final customer. These tie-ups occur before any connections occur with either EXTERNAL FORCES or PERSONAL sub-groups. A further observation is that with the exception of 'Life-Value' (and the exclusion of 'The Product Offer'), the decision factors making up these groups are all higher elements of central importance. It is suggested that this further strengthens their overall importance in acceptance decisions.

10.10 Number of Decision Factors

In examining the interconnections between decision factors by means of MDS and Cluster Analysis, it seems obvious that twelve (12) decision factors are less than optimal, suggesting that within the existing decision set there are a number of resident intercorrelations. The two techniques search out common or intercorrelated items and group these accordingly. To this end, a lesser number of decision factors **could be** used in subsequent research to achieve the same or similar end. This realisation raises a number of important questions which have to be addressed. For example:

- what is optimal?;
- what is an optimum (or near optimum) salient set of decision attributes?;
- what constraints does a research process or research tool impose upon this optimum attribute number?;
- does this optimum number of attributes diminish the 'richness' of the original decision set?; and,
- would an optimum number of decision factors retain the same or similar depth of meaning as the original set?

Optimal is defined as "best or more favourable". If one uses this as a basis for description, then some form of balance is suggested. In the case at hand, the balance is represented as some point of balance between a list of decision factors which is neither too long, nor too

short. If a list is too long, it may be difficult for respondents to comprehend, whilst in the reverse direction, a short list, whilst convenient and manageable, could cloud or negate crucial points which otherwise would need to be explored. To this end, a careful, considered judgement is needed. Thus, the actual and final number of decision factors presented to respondents needs to be judgementally managed.

The second and third questions above can be combined in that by answering the third question, the second is addressed. For shorthand purposes here, the research tool for consideration, namely conjoint analysis, does employ certain restrictions as to the number of attributes considered as being optimal. According to Malhotra (1993),

"the attributes selected should be **salient** in influencing ... preference and choice." (p.685)

According to extant literature, anywhere from six (6) to eight (8) attributes is deemed appropriate for conjoint analysis study use (Malhotra 1993, Churchill 1991, Green and Srinivasan 1990). This number then assists the representation of salience referred to above. Greater numbers of attributes than these have been used, though such use is accompanied by specific modification to the research instrument and process. In the case of conjoint analysis, this implies the application of hybrid models.

For the remaining questions, certainly some effect to 'richness' and meaningfulness is likely, though the magnitude of disruption and its nature would be aligned with the degree of change imposed upon the original set. For example, if one is faced with selecting say seven (7) items without assistance, then certainly richness and meaningfulness can be drastically affected. On the other hand, considered selection using available techniques such as a forced 7-Factor solution on the original data set combined with information generated from MDS and Cluster Analysis, should retain most of the originality of the initial twelve (12) decision factors, whilst at the same time providing the necessary salient set of decision factors. As pointed out by Churchill (1991),

"In any single conjoint analysis study, only a handful of all the attributes that could be used will be used, so it is important that they be selected with care." (p.471)

Using 'care' as the operative word, caution is registered in fully utilising either MDS or Cluster Analysis solutions since their respective derived outcome not only diminish the richness of the original set, but also threatens to impose 'foreign' and unrecognisable solutions upon intended respondents in the form of derived groups or clusters. This is exemplified by Figure 10.6 which not only diminishes the original set, but also presents the prospect of confusing respondents with an entirely new array of stimuli. Needless to say, there is an inherent limitation given that only 54% of respondents initially identified specific connections between decision factors. Thus, any attempt to force a new solution, which is necessary, should be tempered not only by imposed conditions, but also by an awareness of likely respondent reaction. To this end, researcher judgement is demanded as an overriding consideration.

In view of the foregoing and as a result of examining a variety of forced factor solutions, respondent indications of decision factor interconnections and the likely result these would have on the 'spatial' map, eight (8) decision factors should aptly define the basis for measuring influence and preference in a conjoint analysis study. At the same time, the eight (8) new decision factors retain a good connection and resemblance to previous items. The revised decision factors are set out below and are shown in Table 10.25 together with the original set.

Noticeable in Table 10.25 is the fact that due to an upper-limit number restriction (i.e., 8 salient factors) some 'compression' occurs. In these instances, the meanings attached to the new unions are amplified by their contributing factors and supporting criteria. However, the majority of decision factor meanings remain unchanged. Thus a strong parallel and connection to previous research is preserved.

Table 10.25 Revised and Original Decision Factors

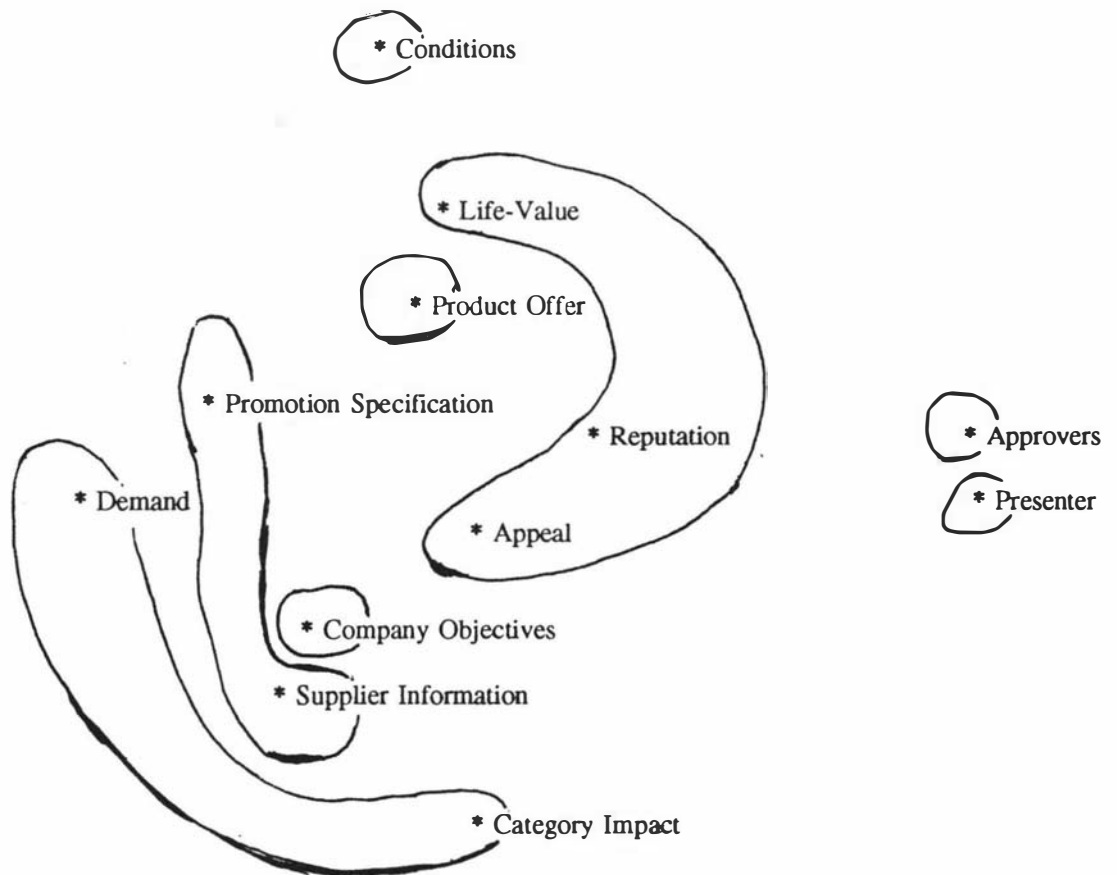
Revised	Original
Product Offer	Product Offer
Demand	Demand, Category Impact
Supplier Information	Supplier Information, Promotion Specification
Appeal	Appeal, Reputation, Life-Value
Approvers	Approvers
Presenter Enthusiasm	Presenter Enthusiasm
Company Objectives	Company Objectives
Conditions	Conditions

A brief exploration of changes to specific decision factors follows.

- Demand:** This factor remains relatively **unchanged**. Given the addition of the decision factor ‘category impact’, a slightly wider interpretation leaning towards total impact is suggested, but the use of the word ‘demand’ is still applicable and is retained, however, the description changes slightly.
- Supplier Information:** Like ‘Demand’, supplier information is enriched by a greater emphasis being placed on supplier **involvement**. The factor name could be extended to suggest wider meaning; such as, ‘**supplier input**’ given the inclusion of promotional specification. In the interest of continuity, however, ‘supplier information’ is maintained, but augmented slightly in description.
- Appeal:** Of all the decision factors to undergo change ‘Appeal’, whilst remaining central, takes on a far wider meaning. As seen in Table 10.25, the decision factors ‘Life-Value’ and ‘Reputation’ are added. In essence what is now seen is a richer and deeper application of the term ‘appeal’. It could be cast as an **overall** application, taken as it were in a more global sense.

Relative to the above descriptions, certain elements have shown obvious re-alignment which, in some cases, is heartening (i.e., enriched meanings for decision factors), whilst in other cases bothersome (i.e., the apparent ‘instability’ of some criteria). However, the eight (8) revised decision factors are sound in appearance and importantly, logic. These factors, with some redefinition for respondents should not prove distracting to them, or to the main thrust of the research. A listing of the ‘Revised Explanatory Notes for Factor Descriptions’ to be used in subsequent research is given in Appendix O following Table 6. Shown in Figure 10.7 are the eight (8) decision factors as a revised spatial interpretation.

Figure 10.7 Revised Spatial ‘Map’ of Eight Decision Factors



10.11 Summary

A comparison of the top 5 rank positions (full and part sets) of decision factors, measured at different points in time, shows visible similarity. There is a suggestion that Demand and

Category Impact are unquestionable in their respective dominant positions. However, whilst these two items may be interrelated, an important consideration is the displacement in the rank orders of other items created by the intrusion of Company Objectives, an influential aspect of decision activity.

On the basis of mean scores, distinct relative rank positions of decision factors are suggested. These occur as single entities and particular groupings regardless of the retention or removal of extreme values. Variability in ranks between relative importance and relative centrality are discernable with a greater likelihood of grouping occurring amongst relative centrality measures. In addition, differences in rank positions witness a decline in the relative position of Category Impact and Appeal, and an increased influence of Conditions and Promotion Specification. In all, importance measures on their own seemingly are an inflation of their respective worth.

Multiple Correspondence Analysis (MCA) provided a unique view of the data set. A significant pattern was found only for relative central importance measures. In addition, MCA pointed to lower order centrally important decision factors as likely influencers of acceptance decisions and this need to be respected despite their placement. Further, the pairing of 'Approvers-Presenter' (both lower order influencers), also points to a likely personal-based influence in decisions. Of course, this is balanced against any fact-based influence such as Supplier Information.

The nature of the Company dictates methods of operations and defines the roles buyers play in product acceptance decisions. The Company, as an aggregate, has a pervasive effect on decisions in that it determines the environment within which dyadic exchanges occur. Differences in relative central importance scores, patterns and rankings reflects this. As one moves downward from this aggregate position through business philosophy, decision role and experience, fragmentation occurs with the effect that subtle variability is seen in decision factor scores and rankings.

Multidimensional scaling (MDS), Cluster analysis and collective judgement facilitated the determination of a reduced set of decision factors. Initially, five decision elements were

identified. Whilst these usefully reduced the number of variables needed for conjoint analysis, they were viewed as too restrictive and foreign. They lost much of the previously inherent realism and understanding associated with earlier decision factors. Given researcher judgement, collegiate discussions, spatial distributions and importantly, previous indications of respondent provided interconnections, eight decision factors were identified for further study. These were Product Offer, Demand, Supplier Information, Appeal, Approvers, Presenter Enthusiasm, Company Objectives and Conditions.

CHAPTER ELEVEN

SALIENT DECISION FACTORS: A TWO-PRODUCT ASSESSMENT

11.1 Introduction

This stage of the research represents the final phase of data gathering in the examination of aspects of new product assessment by New Zealand supermarket retail grocery buyers. Field activities pursuing this end were ongoing and staged over the three (3) years. This staged approach allowed for a careful and methodical examination of the evaluative process that retail grocery buyers undertake in order to either accept or reject product offers from suppliers. Up to this point, the research and its analysis has identified:

- a wide range of criteria applied by buyers (or buying committee members) in their decision process;
- an initial set of twelve (12) decision factors;
- the importance attached to criteria loading on the first decision factor together with the importance associated with the top five (5) decision factors; and,
- the importance and centrality of these twelve decision factors and their amalgamation to form eight (8) salient decision factors.

One of the eight (8) salient decision factors related to Company Objectives. Given the nature of the last research phase, this factor was held constant; that is, it was deemed to be **present and met**. It is understood that this condition would have to exist in order for offer consideration to occur. Thus the current research embodied the application of seven (7) decision factors within the framework of a conjoint analysis study. The aim of the research was to determine utility values and thus the relative importance for the seven (7) decision factors and their respective assigned levels.

A full profile, balanced block design was constructed using a computer program called CONSURV. The design plan consisted of twenty-seven profiles for main effects assessment,

allowed for one, two-factor interaction and contained 11 degrees of freedom. Any respondent assessed eighteen of the twenty-seven profiles using a 10-point rating scale. Two product groups, a food (Health Bar) and a non-food (Laundry Detergent), were applied in the assessment. Each of the two products formed the basis of a distinct study separated by about two months duration. Output from the CONSURV program was of two types; that is, aggregate and individual. Both have been treated separately in order to fully assess the results of conjoint analysis.

After elaborating on propositions for the current research, analysis of aggregate output from the CONSURV program is provided. This is followed by a comparison of decision factor proportions derived from central importance and conjoint analysis, the latter in terms of both aggregate and individual respondent output. To maintain parity with earlier analysis, the individual respondent data (in summed form) constitutes the basis of content for the remaining parts of the chapter. A detailed analysis of overall utilities for the total sample and majority sample is provided. Using decision factors as sub-headings, the chosen decision level of each decision factor is examined in relation to background elements specifically with the intent of highlighting significant associations and mean differences. This is followed by a detailed assessment of each decision factor in terms of patterns, differences in background elements, total and majority samples and products. Given the depth and importance of material gathered for this stage of the research, it is necessary to explore the data from a number of perspectives. This section covers overall utilities for the total sample followed by a similar exploration for a majority sample. Decision factor levels and background elements are examined as are an assessment of individual decision factors.

11.2 Research Objectives and Propositions

Despite the separation in time between the last research activity (central importance) and the conjoint study, it is believed that the utility scores derived through conjoint analysis, when ranked, would place decision factors for the two (2) products in roughly the same 'importance' order as that obtained from previous research. However, the utility rank comparisons between the food and non-food products is expected to differ.

11.3 Analysis of Aggregate Output from CONSURV

The use of the CONSURV programme for the $2^2 \times 3^5$ balanced block design conjoint analysis study, required assigning 'zero base points' for each of the seven (7) decision factor levels. As noted by Appendix K, the values of 0, 1 or 2 were assigned to the various levels of each decision factor. For the two binary factors, the zero point was established as the negative condition; that is, **can not decide** for Approvers, and **unenthused** for Presenter. Zero points were also established for two positively graduated decision factors, Appeal and Product Offer. In each case, this point was set at the lowest condition (level) for each factor; that is, **ordinary appeal** and **meet needs 80%** respectively. For the three remaining decision factors, the assigned zero point was the respective middle level (**average demand, average supplier information and neutral conditions**), thus facilitating a positive-negative division for part-worth values. In all, twelve output values (coefficients) for attribute levels were produced. These were identified by the CONSURV program as B1 through B12. An Ordinary Least Squares (OLS) model is the resident algorithm used for regression. The basic model used to predict outcomes employing part-worths is represented as follows:

$$Y = B0 + B1*x1 + B2*x2 + B3*x3 + \dots + B12*x12,$$

where B0 is the constant (intercept), B1 through B12 the coefficients (part-worths) and the x1 through x12 the assigned dummy codes (0 or 1) which replace respective attribute levels.

11.3.1 CONSURV Output Details

There are a number of outputs from the CONSURV program when utilities are estimated. These include, for example, a design plan and four files: a model, individual utility, statistics and residuals. With the exception of residuals, each of these is reproduced in Appendix P for both products. Variability between block designs would make assessment of the residuals essentially meaningless. Notwithstanding this, the content of the three output files represents the respective assessment of each block of eighteen profiles. In addition to the three files, aggregate results for the three blocks are shown for both products. These were derived by

regressing the model on the full design. In each case, this is identified as 'model output' and contains the estimates of main effects both with and without interactions.

The design plan for both products, initially based on an orthogonal design of 27 full profiles with 11 residual degrees of freedom, indicates that the attributes used in the analysis were linearly independent. In view of the balanced block design, the model was executed on three sets of eighteen profiles. As seen by the accompanying material in Appendix P, the model proved to be a good summary of the raw data in all cases involving both products. This is demonstrated by the relatively strong R-Square values for Laundry Detergent (0.98, 0.98 and 0.97) and for Health Bar (0.98, 0.98 and 1.00). In addition to these values, the three block models provide coefficients and T-Statistics. Largely the constant coefficients (B0) determined for each of the three models (within products) are very comparable, though coefficients and T-Statistics for attributes show some variability across the three blocks for both products. This variability is expected given that each respondent assessed a sub-set of all possible profiles. The variability is also evident to varying degrees on close examination of individual statistics and utilities for each block.

11.3.2 Aggregate Regression Values Comparison

The prime focus of this section is a comparison of summary regression and Beta values developed from the regression of an aggregate score on the full design. Details of this are given in Appendix P as 'model output (product name)'.

Evident from this examination is the fact that in testing for an interaction no significance is noted **for either product**; that is, there are no interactions effect involving the attributes tested. It is noted for Laundry Detergent that the main effects are at least significant at a 90% level or better, and that the actual estimated main effects only indicate that all main effects are significant at a 99% level. The same is not the case for the Health Bar. Here, Favourable Conditions together with both levels of Product Offer exhibit no significance. However, the actual estimated main effect only indicates that all main effects are significant at a 90% level or better.

Despite these results, some very strong summary statistics were extracted. For comparison purposes these are shown in Table 11.1 for interactions and no interaction and both products.

Table 11.1 Aggregate Score Regressions

Statistics	Interactions		No Interactions	
	LD	HB	LD	HB
Multiple R	.9896	.9756	.9876	.9714
R-Square	.9794	.9519	.9754	.9437
Adjusted R-Square	.9464	.8749	.9543	.8954
Standard Error	.3556	.5806	.3282	.5309
F Value	29.6667	12.3671	46.2439	19.5497
Significance	.0000	.0002	.0000	.0000
Degrees of Freedom	16	16	12	12

LD refers to Laundry Detergent, whilst HB signifies Health Bar

From Table 11.1, it is evident, for the attributes measured, that a very good fit of the model to the population exists. In this context, between 94% and 98% of the variation can be accounted for in the aggregate score of any profile. Thus one would be fairly secure and accurate in making a prediction based on these values. Any deviation to these will itself vary between .3282 and .5806 units (i.e., Standard Error) on the 10-point scale initially used to assess product acceptance. This of course depends on whether or not one has main effects interactions.

Beta values form the basis of comparison primarily from the point of view that they offer a consideration of relative importance from a standardised perspective. Table 11.2 portrays such a comparison for both products with and without interaction effects.

Table 11.2 Beta Value Comparisons

Attribute Levels	Laundry Detergent		Health Bar	
	With	Without	With	Without
Negligible Demand	-.4138	-.4138	-.4295	-.4295
Appreciable Demand	.4008	.4008	.3202	.3202
Unfavourable Conditions	-.2210	-.2245	-.3745	-.2692
Favourable Conditions	.1711	.1949	.0829	.1424
Supplier Information Poor	-.2158	-.2158	-.1974	-.1974
Supplier Information Excellent	.1473	.1473	.2169	.2169
Attractive Appeal	.2603	.2603	.2559	.2559
Very Attractive Appeal	.3374	.3374	.3771	.3771
Product Offer 90%	.1911	.2085	.1219	.1814
Product Offer 100%	.2555	.2585	.1697	.2751
Enthusied Presenter	.2341	.2341	.2307	.2307
Approver Can Decide	.2013	.2013	.1902	.1902

As evidenced by Table 11.2, only those attribute levels specifically involved with interactions show a difference in Beta values; that is, those levels connected with Conditions and Product Offer. What is particularly noteworthy is the relative lack of variation between the Beta values for the two products, suggesting that there is indeed no measureable product effect. However, it may well be the situation that certain attributes and their respective levels are treated somewhat differently according to the type of product. Notable here is the greater influence of Appreciable Demand, Product Offer and Favourable Conditions for Laundry Detergent. By contrast, Excellent Supplier Information scores higher for Health Bar despite it rating less than Very Attractive Appeal. In addition, the role played by Conditions is likely to be minimal.

11.3.3 Aggregate Coefficients

Another set of numbers produced with regression are B values; that is, coefficients. These are similarly known as part-worths or utilities. A brief view of these is offered here since they subsequently form the basis of specific application in the conjoint analysis model as a 'what-if' set of conditions. Table 11.3 exhibits the aggregate utility values for each attribute level. These have been arranged in descending rank order according to importance associated with Laundry Detergent, this being the first product measured.

Table 11.3 Ranked Decision Factor Utility Values (Aggregate)

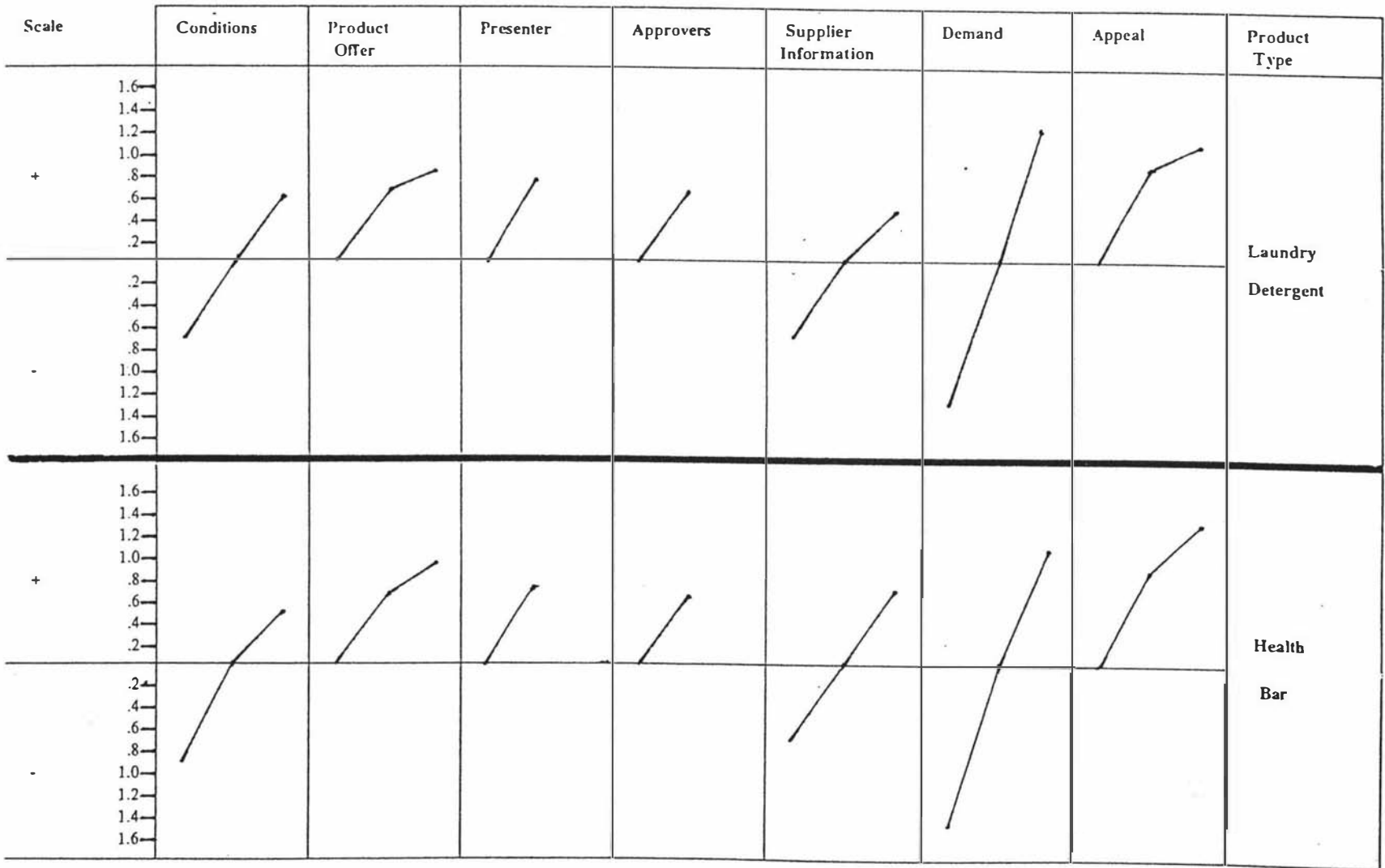
Decision Factor	Decision Level	Aggregate Utility Values		Utility Ranges		Proportion	
		LD *	HB **	LD	HB	LD %	HB %
Demand	Appreciable	1.2808	1.0944	2.6032	2.5622	31.0	28.3
	Average	0.0000	0.0000				
	Negligible	-1.3224	-1.4678				
Conditions	Favourable	0.6229	0.4867	1.3405	1.4067	16.0	15.5
	Neutral	0.0000	0.0000				
	Unfavourable	-0.7176	-0.9200				
Supplier Information	Excellent	0.4709	0.7411	1.1605	1.4155	13.8	15.6
	Average	0.0000	0.0000				
	Poor	-0.6896	-0.6744				
Appeal	Very Attractive	1.0783	1.2889	1.0783	1.2889	12.8	14.2
	Attractive	0.8320	0.8744				
	Ordinary	0.0000	0.0000				
Product Offer	Meets 100%	0.8261	0.9400	0.8261	0.9400	9.8	10.4
	Meets 90%	0.6662	0.6200				
	Meets 80%	0.0000	0.0000				
Presenter Enthusiasm	Enthused	0.7480	0.7883	0.7480	0.7883	8.9	8.7
	Unenthused	0.0000	0.0000				
Approvers	Can Decide	0.6433	0.6500	0.6433	0.6500	7.7	7.2
	Can't Decide	0.0000	0.0000				
				8.3999	9.0516		

Note: * and ** refer to Laundry Detergent and Health Bar respectively

Very little real difference appears evident in aggregate terms between the two products. However, Supplier Information and Appeal appear to be more important for the Health Bar product. This is reflected as well in the distribution of proportions, an increase noted for both of these attributes relative to the Laundry Detergent product. In terms of the Health Bar product, the changes are accompanied by a slightly reduced emphasis on Demand and Conditions respectively. An assessment of rank order correlation based on the proportions suggests that there is a significant correlation between the two rankings ($r'=0.964$), the critical value at 99% significance being 0.875.

Based on the above aggregate utility values, a slightly different perspective of the decision attributes is offered graphically. Figure 11.1 provides a visual portrayal of the utility values. The associated slopes of the decision factor levels provides an interesting depiction of the likely proportional influence of adding different amounts of each attribute.

Figure 11.1 Aggregate Utility Values



11.3.4 The Aggregate Conjoint Model

From a practical point of view, the aggregate conjoint analysis results provide the basis for projecting the likely acceptance of products based on the recorded dimensions associated with the existing decision factors and their respective levels. Returning momentarily to the content of Table 11.3, one could envisage a situation where a product presented to a buyer might occupy each of the lower levels of each attribute (e.g., ordinary appeal, poor supplier information, unfavourable conditions, etc.). Equally imaginable could be the opposite proposition; that is, all the higher levels of attributes are represented (e.g., appreciable demand, excellent supplier information, enthused presenter, etc.). These conditions can be manipulated by the assignment of dummy variables (0,1) to each attribute level to reflect particular conditions. For example, assigning a 1 to each of the lower levels of all attributes, implies that a 0 would be assigned to each remaining level. Conversely, if a 1 were assigned to each attribute's highest level, then a 0 would be assigned to each of the remaining levels. Alternatively, the assignment of a 1 to any attribute level can be mixed, but automatically the zero point(s) is/are defined.

The multiplication of selected attribute coefficients by the dummy variable 1, when summed and combined with the constant (B0) for either product, results in a projected estimate of product acceptance. Given the application of the earlier noted model; that is,

$$Y = B_0 + B_1*x_1 + B_2*x_2 + B_3*x_3 + \dots + B_{12}*x_{12},$$

the basis of developing a continuum for product acceptance is provided. The constant (B0) values for Laundry Detergent (3.4504) and Health Bar (3.3111) were determined by regression (see Appendix P). Applying the lowest Laundry Detergent values to the resident formula, one obtains the following:

$$Y = 3.4504 + (.6229*0) + (-.7176*1) + (.8261*0) + (.6662*0) + (.0000*0) + (0000*0) + (.4709*0) + (-.6896*1) + (1.2808*0) + (-1.3224*1) + (1.0783*0) + (.8320*0),$$

where Y equals 0.7208. By contrast, the assignment of higher levels to the same product results in a Y value of 9.1208. Thus, for Laundry Detergent, a product acceptance continuum ranges from a high of 9.1208 to a low of .7209. Applying the same logic to the Health Bar product, the range noted varies from a high of 9.301 to a low of .2489. These values are relative to the original 10-point acceptance scale used in the research.

In consequence, one might then ask a series of 'what-if' scenarios. For example, for the Health Bar if all attribute levels except Demand were at their highest, what would be the likelihood of acceptance if Demand were negligible? Under similar constraints, what would be the likelihood of acceptance if Demand were only average and Appeal was only attractive? To the first question, the resultant value would be 7.8327, whereas to the second question the likely acceptance value would be set at 7.7915. Any series of combinations could be used to assess the likelihood of acceptance. Four examples for both products are exhibited in Appendix P, two of which are at the extreme ends of the product acceptance continuum. It is evident from these workings, however, that the manipulation of attribute levels in this study results in considerable variation in likely product acceptance.

11.4 Central Importance and Conjoint Analysis Decision Factor Comparison

Although different treatments and methods have been used to extract decision factor information, it is useful to draw comparisons between the decision factors presented by these two treatments. The comparison offers continuity between research stages as well as providing a possible view of validity. However, there are limitations, the most obvious being research method; that is, a different approach was used in each stage of the research. A further limitation is that central importance was general and non-specific in terms of a product, whereas the conjoint study was specific in terms of both product and decision factor levels.

It should be recalled that central importance involved the measurement of twelve decision factors and that these, through the application of MDS and cluster analysis, were grouped into eight decision factors. Seven of these were measured in the conjoint study. The mean central importance scores for the seven decision factors were summed, averaged where necessary and

proportions derived. The proportions for central importance have been used as a base point for rank ordering the decision factors. These, along with the utility range proportions for aggregate and individual treatments (averages) for both products, are shown in Table 11.4.

Table 11.4 Central Importance and Total Utility Range Proportions Comparisons

Decision Factors	Central Importance	Utility Range Proportions			
		Aggregate		Individual	
		LD %	HB %	LD %	HB %
Demand	24.7	31.0	28.3	31.5	28.7
Product Offer	19.8	9.8	10.4	9.7	10.1
Supplier Information	16.6	13.8	15.6	13.0	15.4
Appeal	12.6	12.8	14.2	12.9	14.4
Conditions	10.9	16.0	15.5	16.4	14.5
Approvers	8.1	7.7	7.2	8.3	7.9
Presenter Enthusiasm	7.3	8.9	8.7	8.2	8.9

Note: LD and HB are abbreviations for Laundry Detergent and Health Bar.

Differences in rank orders and respective proportions are depicted in Table 11.4. The coefficients of rank correlation between the central importance ranks and the two products for both treatments are 0.643 and 0.714 (aggregate) and 0.679 and 0.714 (individual) for Laundry Detergent and Health Bar respectively. The critical value at 99% significance is 0.875. Hence, there is a significant difference in the comparison. However, there is no significant difference in the ranks between the two products in either treatment $r'=0.964$ (aggregate) and $r'=0.929$ (individual).

One important observation to note from Table 11.4 is that Demand is constant in its number one rank position thus confirming its overall importance as a decision factor. The only other decision factor to remain unchanged in respect of rank order is Appeal. It is constant in fourth rank throughout.

A further observation is that the rank positions for five decision factors under Laundry Detergent (individual) remain unchanged in the comparison, whereas only three decision factors in the aggregate treatment are likewise viewed. The change occurring between central importance and the two treatments centres on Product Offer and Conditions (Laundry

Detergent), and the swapping of each in second and fifth rank positions. With such a move under the auspices of a conjoint study, it appears obvious that a greater emphasis has been placed on Conditions with a lesser emphasis given to Product Offer. By contrast, Demand and Appeal are the only decision factor ranks that remain unchanged when the comparison involves the Health Bar product and central importance.

Given the changes in rank position, there is a possibility that a product-effect could be operating and that this contributes directly to the trade-off occurring between and amongst decision factors. Given the trade-off between Conditions and Product Offer, for example, it was initially felt that the decision factor levels devised for the study may have contributed to the situation. However, doubt is cast on this idea in that other decision factor levels were similarly constructed, yet remain unchanged.

Ignoring rank positions momentarily, a further noteworthy aspect of Table 11.4 concerns the comparison of proportions. The idea that a product-effect could be operating is reinforced given the changes to the respective decision factor proportions noted between the two treatments and central importance. Once a specific product is nominated, an increased or decreased emphasis occurs for most decision factors. Demand and Conditions assume more prominence with a non-food product such as Laundry Detergent. By contrast, while Demand and Conditions remain central, Supplier Information and Appeal exhibit more bearing with a food product. The effect on Approvers and Presenter Enthusiasm, however, is static and constantly low with either product type.

Having discussed the comparison between central importance and conjoint relative importance, attention is now drawn to detailed aspects of the conjoint analysis research. The basis for subsequent assessment are the summed, individual utility values derived from CONSURV output, however, these are viewed by sub-sets of background elements **in order to maintain parity** with previous research phases. Given the depth of inquiry and the coverage of two products, what follows has been divided into four sections. Each section treats the material differently thus providing coverage of total sample utilities, majority sample overall utilities, decision levels and decision factor assessment respectively.

11.5 Total Sample Utilities

As a result of the settings described earlier, a number of utility scores were derived, two for each of the two (2) two-level decision factors and three for each of the five (5) three-level decision factors. These include the zero points established for CONSURV program analysis. Full details of these decision levels for the two (2) products together with their respective utility range values and proportions is shown in Table 11.5. These individual summed values differ very little to those shown in Table 11.3. A **utility range value** is defined here as being the sum of the least preferred value subtracted from the most preferred value.

One observation to note is that in most cases the average utility values for the uppermost or chosen decision factor level increase in moving from the Laundry Detergent to the Health Bar. There are two important exceptions to this, Demand and Conditions both of which decline. Given that the utility range values for these two decision factors represent little change and that their respective proportions decline between the two products, it suggests that Demand and Conditions, whilst still prominent, are of lesser importance in decisions involving products like Health Bars.

By contrast, the changed values (average utility and ranges) for Supplier Information and Appeal particularly, and Product Offer to a lesser extent, suggests that these attributes may have increased amounts of relative influence in decisions involving similar products. This is seen to be reflected by the decision factor proportions and the changes in rank order between the two products. However, due to relativities in what may be offered, changes in one item witness changes in others.

The decision factors were arbitrarily ranked on the basis of Laundry Detergent utility ranges. Using these range values, it is apparent that Demand is regarded as the single most important and sensitive decision factor for both products. A reflection of its importance is the fact that Demand accounts for almost 32% and 29% respectively of the total utility range values. This is double that of Conditions for Laundry Detergent, the second ranked decision factor. It is slightly less than double that of Supplier Information, the second rank decision factor for Health Bar. It is noted that Conditions and Supplier Information switch rank positions

between the two products, whilst Appeal ranks fourth for both products. Taken together these first four (4) decision factors for both products account for almost three-quarters of the total utility range values, a further indication of their relative importance. However, Table 11.5 notes the near parity between the range values of Supplier Information and Appeal for Laundry Detergent, and Conditions and Appeal for the Health Bar.

Table 11.5 Ranked Decision Factor Utility Values (Total Sample)

Decision Factor	Decision Level	Average Utility Values		Utility Ranges		Proportion	
		LD *	HB **	LD	HB	LD %	HB %
Demand	Appreciable	1.2600	1.0810	2.5880	2.5650	31.5	28.7
	Average	0.0000	0.0000				
	Negligible	-1.3280	-1.4840				
Conditions	Favourable	0.6010	0.4540	1.3490	1.3010	16.4	14.5
	Neutral	-0.0000	0.0000				
	Unfavourable	-0.7480	-0.8470				
Supplier Information	Excellent	0.3500	0.7350	1.0720	1.3730	13.0	15.4
	Average	0.0000	0.0000				
	Poor	-0.7220	-0.6380				
Appeal	Very Attractive	1.0620	1.2870	1.0620	1.2870	12.9	14.4
	Attractive	0.9670	0.9390				
	Ordinary	0.0000	0.0000				
Product Offer	Meets 100%	0.7990	0.9060	0.7990	0.9060	9.7	10.1
	Meets 90%	0.6270	0.5620				
	Meets 80%	0.0000	0.0000				
Approvers	Can Decide	0.6860	0.7100	0.6860	0.7100	8.3	7.9
	Can't Decide	0.0000	0.0000				
Presenter Enthusiasm	Enthused	0.6720	0.8010	0.6720	0.8010	8.2	8.9
	Unenthused	0.0000	0.0000				
				8.2280	8.9430		

Note: * and ** refer to Laundry Detergent and Health Bar respectively

In examining the results, it was noted that some decision factors exhibited a small measure of possible influence from extreme values. To assess the likely effect of these 'outsiders', a comparison between total and adjusted utility range values was made at an aggregate level for both products. Table 11.6 contrasts the total and adjusted utility range values for these and, as can be seen, no change in rank order occurs within each respective product. Importantly, the magnitude of change in values is minimal.

Table 11.6 Total and Adjusted Utility Range Values

Decision Factor	Laundry Detergent		Health Bar	
	Total Utility	Adjusted Utility	Total Utility	Adjusted Utility
Demand	2.5880	2.6940	2.5650	2.5560
Conditions	1.3490	1.3440	1.3010	1.3820
Supplier Information	1.0720	1.0720	1.3730	1.4500
Appeal	1.0620	.9670	1.2870	1.1460
Product Offer	.7990	.7990	.9060	.9060
Approvers	.6860	.7370	.7100	.7100
Presenter Enthusiasm	.6720	.6720	.8010	.8050
	<u>8.2280</u>	<u>8.2850</u>	<u>8.9430</u>	<u>8.9555</u>

Given a minimal effect attributed to a few extreme values, future sections dealing with the total sample will make use of total utility values. Prior to this, however, an examination of a majority sample for overall (total) utilities is necessary. Assessing the data in this way provides a concentrated view of utility values with a likely result being the removal or minimization of effect from extreme values. It also provides utility values which more closely represent the real majority views.

11.6 Majority Sample Overall Utilities

Close examination of the data revealed that respondents divided their 'vote' within each of the decision factor levels. For example, some respondents favoured 'very attractive appeal' over 'attractive appeal', or 'excellent information' over 'average information'. The utility value data on each respondent and for each decision factor was scanned to identify those respondents scoring the hypothetical profiles in a chosen or positive direction. It is to this choice that the terms majority and minority apply. Thus the decision levels 'very attractive appeal' and 'meets 100%' reflect the majority views, whilst 'attractive appeal' and 'meets 90%' reflect the views of a substantial minority.

The nature of the assessment produced variability in respondent numbers for each decision factor and provided a concentrated view of utility values. Table 11.7 shows the two sub-sample divisions for Appeal and Product Offer vary markedly from others as noted by the

sample base proportions. Despite the lower proportions, a majority and substantial minority view exists presenting a slightly different perspective about the importance of not only Appeal and Product Offer, but also the other decision factors.

It is noted, for example, that 'very attractive appeal' has a dominant influence in the change for the majority sample, whilst 'product offer 90%' has influence for the minority. In all subsequent assessment of the data set, only the main majority and substantial minority views are examined.

Prior to examining the 'majority' groups in their own right, a brief examination of the new decision level values seems pertinent. Table 11.7 provides the basis of this comparison for both products.

Table 11.7 Majority and Minority Utility Values

Decision Factor	Decision Levels	Majority/ Minority Utility Values				% of Total Sample	
		LD		HB		LD	HB
Demand	Appreciable	1.6913		1.4733			
	Average	0.0000		0.0000	79		81
	Negligible	-1.4753		-1.5933			
Conditions	Favourable	0.9167		0.7167			
	Neutral	0.0000		0.0000	71		81
	Unfavourable	-0.8333		-0.7567			
Supplier Information	Excellent	0.7199		0.8143			
	Average	0.0000		0.0000	74		87
	Poor	-0.7200		-0.5556			
Appeal	Very Attractive	1.5056	0.4791	1.4259	0.9091	59/47	77/35
	Attractive	0.8111	1.1458	0.7963	1.3030		
	Ordinary	0.0000	0.0000	0.0000	0.0000		
Product Offer	Meets 100%	1.0263	0.6556	1.3292	0.2986	56/44	64/39
	Meets 90%	0.4430	1.0611	0.5542	0.6875		
	Meets 80%	0.0000	0.0000	0.0000	0.0000		
Approvers	Can Decide	0.8278		1.0449		88	84
	Can't Decide	0.0000		0.0000			
Presenter Enthusiasm	Enthused	0.9167		0.9615		82	84
	Unenthused	0.0000		0.0000			

Note: The proportions shown for Appeal add to more than 100% since some respondents gave equal weight to both 'Very Attractive Appeal' and 'Attractive Appeal'.

The changed sample base shown in Table 11.7 accounts for 35% to 88% of the total sample

depending on whether one refers to the majority or minority sample base. Whilst this may indicate some variability across decision factors, a solid base for opinion still exists. This view witnesses increases in utility values for most decision factor levels (over respective total utility values), resulting in some changes in rankings.

The majority/minority utility value concentrations yields four (4) possible combinations of utility range values. These are depicted in Table 11.8 for Laundry Detergent and Table 11.9 for Health Bar.

Table 11.8 Total and Majority Sample Utility Range Values -Laundry Detergent

Decision Factor	Total		Majority		Maj/Min		Minority		Min/Maj	
	Utility	%	Utility	%	Utility	%	Utility	%	Utility	%
Demand	2.5880	31.5	3.1666	29.8	3.1666	29.7	3.1666	30.7	3.1666	30.8
Conditions	1.3490	16.4	1.7500	16.5	1.7500	16.4	1.7500	17.0	1.7500	17.0
Supplier Information	1.0720	13.0	1.4399	13.5	1.4399	13.5	1.4399	14.0	1.4399	14.0
Appeal	1.0620	12.9	1.5056	14.2	1.5056	14.1	1.1458	11.1	1.1458	11.2
Product Offer	.7990	9.7	1.0263	9.7	1.0611	9.9	1.0611	10.3	1.0263	10.0
Approvers	.6860	8.3	.8278	7.8	.8278	7.8	.8278	8.0	.8278	8.1
Presenter Enthusiasm	.6720	8.2	.9167	8.6	.9167	8.6	.9167	8.9	.9167	8.9
	<u>8.2280</u>		<u>10.6329</u>		<u>10.6677</u>		<u>10.3079</u>		<u>10.2731</u>	

For Laundry Detergent and as expressed in Table 11.8, Demand and Conditions remain dominant in terms of values, proportions and ranks. However, the influence of Supplier Information, Appeal and Product Offer relative to other decision factors exhibits mixed movements depending on utility values and proportions. Depending on the combination selected, certain ‘clustering’ of decision factors seems to occur. As an observation, it appears that the minority grouping tends to reflect the ‘status quo’ on offer by the total.

Table 11.9 Total and Majority Sample Utility Range Values - Health Bar

Decision Factor	Total		Majority		Maj/Min		Minority		Min/Maj	
	Utility	%	Utility	%	Utility	%	Utility	%	Utility	%
Demand	2.5650	28.7	3.0666	28.7	3.0666	30.5	3.0666	30.9	3.0666	29.0
Supplier Information	1.3730	15.4	1.3969	13.1	1.3969	13.9	1.3969	14.1	1.3969	13.2
Conditions	1.3010	14.5	1.4734	13.8	1.4734	14.7	1.4734	14.8	1.4734	13.9
Appeal	1.2870	14.4	1.4259	13.3	1.4259	13.3	1.3030	13.1	1.3030	12.3
Product Offer	.9060	10.1	1.3292	12.4	.6875	6.8	.6875	6.9	1.3292	12.6
Presenter Enthusiasm	.8010	8.9	1.0449	9.8	1.0449	10.4	1.0449	10.5	1.0449	9.9
Approvers	.7100	7.9	.9615	8.9	.9615	9.6	.9615	9.7	.9615	9.1
	<u>8.9430</u>		<u>10.6984</u>		<u>10.0567</u>		<u>9.9338</u>		<u>10.5755</u>	

As shown by Table 11.9, the case for Health Bar is somewhat different. The increases in utility values results in changed rank positions and proportions. The changes witness some increased emphasis on Conditions, Appeal and Product Offer (utility values only).

Depending on which of the above combinations is chosen for examination and comparison to the total, a different perspective on the importance of decision factors is offered. For example in Table 11.9, if only the majority is viewed, then despite the changed ranks offered by the utility values, near parity between Supplier Information, Conditions, Appeal and Product Offer is suggested by percentage values. This observation is not evident under the minority view, in fact only Supplier Information and Conditions maintain parity with total utility, whilst Product Offer slips dramatically.

11.7 Decision Levels and Background Elements

As an interim step in assessing decision factors, thought was given to determining what impact various background elements had on the seven (7) chosen levels of decision factors. These chosen or 'positive' levels were crosstabulated with selected background elements to determine if any significant associations existed. The underlying assumption is that if there are any associations between levels and background elements, then this would impact on the importance and influence of decision factors. Additionally, mean utility scores were examined for each background element category to assess significant differences and whether these might contribute to identified distinctions in total utility range values and indirectly their

respective proportions. Given that a small finite population is being dealt with, differences in values whilst not significant may indeed mask certain influences. Thus, near significant associations and near significant differences are included in the assessment.

The core intent of this section is to maintain a focus on decision factors. Using the decision factors as sub-headings, their respective chosen decision levels are addressed. Within each heading, background elements connected with total and majority samples for both products are explored by highlighting significant values. Specific detail about significant and near significant associations plus significant and near significant mean differences for both products and sample bases are listed in Appendix Q, Tables 1 to 8.

Demand

Of all the chosen, positive decision factor levels examined, 'appreciable demand' is the least likely decision level to exhibit any form of significant or near significant variation with background elements. In general terms, there is an equal count of significant or near significant values (n=12), seven (7) of which are linked with Laundry Detergent. Of the remainder associated with Health Bar, all reflect a majority sample bias. The vast majority (n=9) of the twelve (12) values are connected with mean differences suggesting that any variations are 'within' background elements; that is, between response categories, rather than 'between' background elements and the decision factor or level. These variations tend to appear more in the consideration of Laundry Detergent than in the consideration of Health Bar.

In terms of the mean scores, the utility values for respondent age (p=0.05) and number in ranging committee (p=0.10) feature as significant with Laundry Detergent, whilst for Health Bar the utility values for years as a buyer categories shows a significant difference (p=0.05). The only background element common between both products is use of a ranging committee, though showing only a near significant difference between the two categories. By contrast, the only significant associations between decision levels and background elements involve the role played in buying (p=0.05 for Laundry Detergent) and whether one is solely a buyer or doubles as a committee member as well (p=0.10 for Health Bar).

In all, Demand appears stable and shows very little variation across and within a limited array of background elements. What variations exist tend to reflect the way a business operates; that is, its basic business philosophy, and the experience of those involved in decisions.

Conditions

'Favourable conditions' is the decision level represented here and appears to be one of the more active elements. The basis for this judgement is the count of the number of significant or near significant values ($n=21$), the minority of which ($n=4$) are linked with Laundry Detergent. Of this minority, three (3) values involve mean scores and only one, that involving Company, is significant ($p=0.05$). Whilst the presence of both total and majority samples is noted, there is no repetition of background elements between the two. In addition to the involvement of Company as a background element, respondent age, use of ranging committee and number in the committee exhibit varying degree of near association or significance.

The four (4) background elements identified in the previous paragraph are also implicated with Health Bar, however, their involvement shows significance which varies between the two samples and the source of the significance. Company exhibits a significant association ($p=0.04$) for the total sample, whilst use of ranging committee and number in ranging committee both show significant associations with the majority sample ($p=0.02$ and $p=0.08$ respectively). Company and use of ranging committee feature with significant mean scores for the total sample ($p=0.05$ and $p=0.07$), and again with the majority sample ($p=0.05$ and $p=0.00$) respectively.

Whilst both total and majority samples feature, most ($n=10$) of the seventeen (17) values are linked with the majority view. Of the ten (10) values seven (7) show varying degrees of significance. The additional background elements connected with the Health Bar product involve the majority sample only. In this regards, proportion of goods centrally warehoused not only exhibits a significant association with 'favourable conditions' ($p=0.03$), but also shows a significant mean score amongst its categories ($p=0.05$). The only other background element to show a significant mean score is whether one is solely a buyer or doubles as a

committee member ($p=0.05$).

Given the repetition of background element involvement in total and majority samples and an emphasis being obtained from the majority sample, an aspect to consider here is that the importance attached to Conditions for product presentations like a Health Bar appear to be strongly company sensitive. This view is arrived at given the involvement of Company as a background element and the business operation or philosophy emphasis amongst other background elements involved. Conditions is likely to be a very volatile and sensitive decision factor.

Supplier Information

The chosen decision level for this factor is 'supplier input is excellent' as opposed to being 'average' or 'poor'. In all fifteen (15) significant or near significant values are noted. These values are reasonably equal in distribution between the two products and the two samples. The majority of the values ($n=9$), however, are only near significant. Of the remaining values that are significant, all are mean scores distributed evenly between the two products.

Whether or not one involves the total or majority sample, or either product, four (4) of the significant means scores are linked to differences between Companies ($p=0.05$ in all cases). The remaining significant mean scores involve respondent age ($p=0.05$) for Laundry Detergent, and number in ranging committee ($p=0.07$) for Health Bar.

In the context of grouping the background elements, with the involvement of Company business operations or philosophy phenomenon dominate. Experience seemingly plays a secondary role. However, as an observation in this area, two background elements are heavily involved; that is, Company and respondent age. Of the fifteen (15) values, five (5) are linked with Company and four (4) with respondent age.

Like Demand, the lower count in significant or near significant variations across and within background elements for Supplier Information suggests reasonable stability. However, its importance in decisions operates not only from a narrow base (regardless of product), but also

on a company and individual (age) basis.

Appeal

This decision factor is represented by two (2) constituent elements, 'very attractive appeal' and 'attractive appeal'. The former reflects the majority opinion, whilst the latter represents the substantial minority view.

'**very attractive appeal**' is noted as having nineteen (19) significant or near significant values distributed about evenly not only between significant and near significant values (9 and 10 respectively), but also between the two products (9 Laundry Detergent and 10 Health Bar). The distribution of the nine values for the Laundry Detergent is also approximately even between total and majority samples (4 and 5 respectively), whilst for the Health Bar a greater emphasis is given to the majority view (7 and 3 respectively).

Company and proportion of centrally warehoused goods feature as significant associations for the Laundry Detergent total sample ($p=0.02$ and $p=0.09$ respectively), whilst role in buying and the product being part of the respondents product responsibility feature as being significant for the Health Bar total sample ($p=0.04$ and $p=0.09$ respectively). Whilst no significant associations exist for either product under majority sample considerations, a significant mean score involving Company is featured for Laundry Detergent in both samples.

Turning attention to Health Bar and the total sample, the role played in buying shows a significant association ($p=0.04$), whilst the product being part of the respondent's responsibility shows a significant mean score ($p=0.09$) between categories. Respondent age, proportion of centrally warehoused goods and the product being part of a respondent's responsibility all showed significant mean scores for the majority sample ($p=0.05$, $p=0.05$ and $p=0.03$ respectively).

Unlike other decision factors up to this point, the background elements involved with 'very attractive appeal' tend to feature variables reflecting decision involvement over business operation elements, experience or company. Involvement then for 'very attractive appeal' is

seen as a condition effecting product assessment.

For 'attractive appeal', the first representative of a minority view, a more volatile atmosphere is presented given that twenty four (24) significant or near significant values are portrayed. Of these values, eleven (11) show significance, seven (7) of which are linked with the Health Bar product. Nine (9) of the twenty four values are connected with Laundry Detergent and of these most (6) are linked with the majority sample. Thus, the balance (15) are connected with Health Bar and of these, nine (9) are attached to the total sample.

In the case of Laundry Detergent and the total sample, Company and proportion of centrally warehoused goods feature showing significant associations ($p=0.10$ and $p=0.04$ respectively). Respondent age is the only background element portrayed as a significant association for the majority sample ($p=0.04$), whilst Company continues its presence and exhibits a significant mean score for utility values ($p=0.05$). By contrast, Company and the use of category management exhibit significant associations for the Health Bar total sample ($p=0.02$ and $p=0.04$ respectively), whilst the proportion of centrally warehoused goods is significant for the majority sample ($p=0.03$). Significant mean scores (total sample only) are shown for four (4) background elements; these are, years as a buyer, respondent age, company ($p=0.05$ respectively) and role played in buying ($p=0.07$). No significant mean scores are shown for the majority sample.

Regardless of total or majority sample bases, background elements showing significance reflect an even distribution of influence from business operations and experience over the specific influence of company or decision involvement. In total, the importance attached to Appeal as a decision factor is subject to shared influence from business operations and decision involvement.

Product Offer

Product Offer is the second decision factor represented by two (2) component elements, 'meets 100%' and 'meets 90%'. The former represents the majority view, whilst the latter represents the substantial minority opinion.

The majority aspect of Product Offer, 'meets 100%', is another decision factor level that shows a low total count of significant or near significant values (n=14). Of these values nine (9) are significant, three (3) are in relation to Laundry Detergent and all concern mean scores and involve both sample bases. The remaining significant values for Health Bar involve not only both sample bases, but also present significant associations and significant mean scores.

For the Laundry Detergent, a significant mean score is shown for Company and years with a company, the latter with both total and majority samples ($p=0.05$ for each). By contrast, significant associations for Health Bar feature whether or not a person is solely a buyer or doubles as a committee member which occurs in both total and majority samples ($p=0.08$ and $p=0.02$), together with years as a buyer in the majority sample base ($p=0.05$). Additionally, significant mean scores are exhibited for number in ranging committee, Company and being either a buyer or doubling as a committee member ($p=0.10$, $p=0.05$ and $p=0.00$ respectively).

On the basis of the foregoing, it is suggested that business operation elements are slightly more likely than other parameters to effect the importance attached to Product Offer ('meets 100%'). This influence is followed by experiential forces and decision involvement. The specific influence between Companies assumes a lesser influential role.

The second element of Product Offer, 'meets 90%', reflects the minority view and by contrast is far more active or volatile in its count of significant or near significant values (n=20). There is an even distribution of these values between significance or near significance, however, the majority of them (n=14) are linked with the Health Bar product.

In terms of the Health Bar product, Company and respondent age feature as showing significant associations for the total sample ($p=0.05$ and $p=0.03$ respectively), whilst years as a buyer features as having a significant mean score ($p=0.05$). From the minority point of view, use of category management, use of ranging committee and being a buyer or doubling as a committee member all show significant associations ($p=0.09$, $p=0.01$ and $p=0.00$ respectively). It is noted that these three (3) background elements feature again showing significant mean scores and are accompanied by Company ($p=0.04$, $p=0.00$, $p=0.00$ and $p=0.05$ respectively). By contrast, Laundry Detergent exhibits significant mean scores for

years as a buyer and role played in buying ($p=0.05$ respectively) that involve the total and majority samples respectively.

In all, Product Offer demonstrates an experiential bias followed by business operations. Both decision involvement and company play an equal but subdued level influence. Given the level of activity associated with Health Bar, the minority view has considerable input.

Approvers

The chosen level for Approvers, a two-level decision factor, was established 'can decide'. This decision level does not appear to be very active in terms of either significant or near significant associations or mean scores. This relative inactivity is expressed with fifteen (15) values, thus operating to about the same degree as Supplier Information. Despite this low count, eight (8) values are significant and six (6) of these are linked with Health Bar.

In terms of the Health Bar product, all of the significant associations and mean scores are situated with the majority sample suggesting that all the influence would appear to be coupled with this sample base. Here, years with a company and years as a buyer (an experiential base) offer significant associations ($p=0.04$ for both), whilst number in ranging committee, years as a buyer, company and whether one operates solely as a buyer or double as a committee member show significant mean scores ($p=0.03$, $p=0.05$, $p=0.05$ and $p=0.08$ respectively). By contrast, a significant mean score exists for Laundry Detergent and total sample (use of ranging committee, $p=0.04$), whilst a significant association was shown to exist in the majority sample involving whether one is solely a buyer or shares committee responsibilities ($p=0.10$).

In total, what influence is present is likely to arrive from the direction of business operations prior to engaging experiential elements, decision involvement or Company. In view of the low value count and the relatively narrow base of background element involvement, very little variation of opinion seems to exist. Where significant impact occurs, it is likely to be product-related.

Presenter Enthusiasm

The final decision factor, another two-level item, is represented as 'enthused presenter' in its chosen form. In assessing its likely impact, regard for its low status has to be acknowledged. With a significant or near significant association or mean score value count of eighteen (18), this volatility is less than that of Conditions, but more than that of either Supplier Information or Approvers.

Of the count of eighteen (18) significant or near significant values, half (n=9) are significant and evenly distributed between the two products. However, the distribution of the total count between total and majority samples sees a leaning in the direction of the majority (n=11).

For Laundry Detergent and total sample, it is noted that no significant associations occur. However, significant mean scores are noted for Company (p=0.05) and number in ranging committee (p=0.01). For the majority sample, again only significant mean scores are shown and these involve years with a company, years as a buyer and whether the product is part of a person's responsibility (p=0.05, p=0.05 and p=0.09 respectively). By contrast the Heath Bar product, significant associations for both total and majority samples exist for use of category management (p=0.05 and p=0.01 respectively). Significant mean scores are recorded in the total sample for Company (p=0.05), and years with a company (p=0.05) in the majority sample.

As an overview of Presenter Enthusiasm, business operation elements outweigh other phenomenon such as experience, Company or decision involvement. Although this decision factor ranks low in overall relative importance, there is enough variation of opinion to suggest that its importance and influence might be underrated.

11.8 Decision Factor Assessment

The chosen levels of decision factors were the subject of discussion in the previous section. These chosen levels primarily were represented in the form of utility values. The focus is now directed to the **utility range values** of the decision factors themselves, previously defined

as the least preferred value subtracted from the most preferred value. In this regards, Demand, Conditions and Supplier Information unlike other decision factors, are represented by high positive and negative utility values. With summing, previously identified areas of significance for these decision factors are masked or dissolve. However, new significant and near significant mean scores were uncovered.

Background elements are again used as a basis for examining effects, though on this occasion their respective categories are reviewed by exploring the patterns in total utility range values and their proportions. Full details (utility range values and proportions) for all decision factors, expressed in the context of grouped background elements for total and majority samples, and both products, are shown in Appendix Q, Tables 9 through 28. These tables exhibit symbols indicating significant associations and means scores for both the previous section (decision factor levels) and the current examination.

Prior to examining specific decision factors, it is felt it would be useful to discuss the 'new' significant and near significant mean scores associated with Demand, Conditions and Supplier Information. The use of the term 'new' applies in most instances in that ten (10) of the eleven (11) values are indeed new. The one item repeated in this analysis and present in the previous section concerns the majority sample for the Health Bar product and Demand. In this regard, the background element 'years as a buyer' exhibits a significant mean score difference amongst its three (3) categories; that is, the second category is significantly different to its first and third category counterparts. The respective utility range values demonstrating this are 1.8334, 4.3125 and 2.7500. The inverted 'v' shape (\wedge) suggests that the influence of Demand amongst buyers whilst important, is quite variable.

Table 11.10 provides an overview of the additional significant and near significant mean score values.

Table 11.10 Additional Mean Score Values and Background Elements

Product/ Sample	Decision Factor	Background Elements	Significance	Near Significance
LD*/Total	Demand	Product part of responsibility		p=0.1810
	Conditions	Respondent age (1 with 2 & 3)#	p=0.0500	
	Supplier Information	Respondent age (1 with 3)	p=0.0500	
LD /Majority	Demand	Product part of responsibility		p=0.1750
	Conditions	Respondent age (1 with 2 & 3)	p=0.0500	
		Proportion central warehousing (2 with 4)	p=0.0500	
HB/Total	Demand	Product part of responsibility		p=0.1195
HB/Majority	Demand	Years as a buyer (2 with 1 & 3)	p=0.0500	
		Use of category management		p=0.1020
		Product part of responsibility		p=0.1920
	Conditions	Years with a company (2 with 3)	p=0.0500	

Note: * LD refers to Laundry Detergent and HB to Health Bar
bracketed items should be read for example as, 'the mean score of category 1 is significantly different from that of category 2 and 3.'

One observation of Table 11.10 is the limited presence, and thus suspected narrow involvement, of Supplier Information. The decision factor is present only with one product (Laundry Detergent) and involves only Total sample. A further observation is that four of the eleven values are linked with the product being part of ones responsibility. Although all of the values are near significant, they all have some relation with Demand. Thus, it could be argued that the importance of Demand is a function of familiarity with a product. Respondent age in another background element to exhibit a number of connections, three (3) in total. All respondent age mean score values are noted as being significant, two of which are in relation to Conditions and the third with Supplier Information. In short, the importance attached to Conditions diminishes with increased respondent age and essentially ones experience. By contrast and for the total sample only, the value of information, or more precisely supplier input, is seen to increase with time; that is time with company, buying experience or age.

In terms of the two products and grouped background elements, it would appear that for Laundry Detergent, experience elements more so than decision involvement have a

contributing effect. By contrast, the Health Bar product tends to show equal contribution from experience and decision involvement elements.

Demand

Up to this point, Demand has been shown to be the single most important decision factor, assuming this status regardless of sample base, product or background element generally. As an overview, Table 11.11 displays summary values extracted from Tables 9 to 28 in Appendix Q. As can be seen from Table 11.11, the utility range values for Demand vary from a low of 1.5556 to a high of 4.5556 and represent proportion values ranging from 18% to 41% of totals. With high and low values removed, an average utility range value of 2.9256 is derived which represents approximately 31% of total utility range values. Very little difference exists in utility values and proportions between the two products and their respective sample bases though proportion values for the Health Bar product are slightly less than those for Laundry Detergent. Thus, the contributors to Demand (e.g., likely consumer demand, overall impact of the product within the category, potential growth in the product category) represent a sizeable influence (about one third) on buying decisions.

Table 11.11 Summary Values - Demand

Background Element Groups		Proportions (%) ***		Utility Range Values	
		Low	High	Low	High
Experience	T*	27/19**	38/35	2.3000/1.5556	4.0666/4.5556
	M	27/18	35/41	2.6444/1.8334	4.0666/4.5556
Business Philosophy	T	26/18	36/36	1.9833/1.7500	2.9583/3.0208
	M	25/23	37/38	2.5555/2.3834	3.4062/3.5222
Decision Involvement	T	21/25	37/36	1.6666/2.2063	3.1333/3.3166
	M	26/25	37/36	2.3333/2.7292	3.7084/3.6667
Means	T	31/28		2.6847/2.7342	
	M	32/30		3.1191/3.1151	

Notes: * 'T' and 'M' refer to total and majority samples respectively
 ** '27/19' all slashed values depict Laundry Detergent and Health Bar respectively
 *** % of Total Utility Range

The importance of Demand, relative to other decision factors, largely does not change across the various categories of all background elements. However, one particular exception to this involves the combination of the total sample, the Health Bar product and the first category of 'years as a buyer'; that is, less than 5 years. The utility value and proportion involved (1.5556 and 19% respectively) are the lowest values recorded for Demand and result in this decision factor being ranked second in importance behind Supplier Information (1.7963 and 22%).

In another instance involving the same background element category, the same product and this time the majority sample, further low values (1.8334 and 18%) are shown. On this occasion, however, Demand technically is not displaced from its primary position, though arguably it is one of degree since it is seen to share almost equal prominence with both Product Offer (1.8125 and 17%) and Supplier Information (1.7963 and 17%). These movements suggest that with products like a Health Bar, limited experience sees greater importance attached to decision factors other than Demand.

Low recorded values for the first category of 'years as a buyer' is followed by a substantial increase (more than double) for the second category, 5 to 10 years. Attention is drawn to the fact that a significant difference in mean values exists between the first and second levels ($p=0.05$). This could be a reflection of an internal 'culture', that of becoming job smart and more tuned to the requirements of the company and purchasing generally. With the passage of time, Demand no longer is discounted against other decision factors such as Product Offer and Supplier Information.

This latter argument is somewhat tenuous, however, given that 'respondent age' (another experience dimension) moves in an opposite direction for its first category, 30 years of age or less. Regardless of product or sample base, a seemingly extreme level of importance is attached to Demand with utility range values of 4.0666 and 4.5556 being registered for Laundry Detergent and Health Bar respectively. As a point of comparison, a significant mean score exists amongst age groups for both samples in connection with Laundry Detergent ($p=0.05$), but is absent from the Health Bar product.

The high utility range values that are depicted, depending on product and sample base, yield proportions ranging from 31% to 38%. It may be the case that younger respondents make more conservative, narrow and less risk-oriented judgements until some point in time when broader, more relaxed decisions are taken. Some support for this is offered by examining the utility range values for subsequent age levels. Depending upon the sample base and product, the remaining two levels of age (31 to 40 years and 41 years or more) show a reduction in utility range values of between 36% and 49% over their respective first levels. For example, the Health Bar utility range values for the second and third levels (total sample) were 2.3704 and 2.3166 respectively, whilst for the Laundry Detergent total sample the values were 2.3431 and 2.3195. In one case only, the reduction was 10%; that is, 41 years or more showed a value of 3.6428. This involved the majority sample and Laundry Detergent. This case apart, the utility range values for respondent age are predisposed to decline as age increases. It would tend to suggest that the influence and relative importance of Demand is tempered by consideration for other decision factors such as Conditions, Supplier Information and Appeal.

By contrast to either respondent age or years as a buyer, 'years with a company' seems to play a rather innocuous, though stable, role in that there is little real difference in utility range values across the three (3) categories of the background element. Having said this, however, it is one of the only experience elements to show a specific pattern, albeit a declining one. This pattern is limited to the majority sample, the Health Bar product and utility range values only. The decrease in these values, however, never compromises the premier position of Demand as an influential decision factor.

Background elements that contribute to business operations or philosophy and those linked with decision involvement both have a low level impact on Demand. In the case of the former and for the Laundry Detergent only, the influence on Demand is greatest amongst those not using a ranging committee. However, it is also seen to be greater amongst those using ranging committees holding five or less participants. This observation is supported by an underlying significant mean score ($p=0.09$). The noted observations are consistent for both sample bases, though the majority sample exhibits no significant mean score.

In terms of decision involvement, Demand is seen consistently as being more important where

the product is part of a person's responsibility. This holds for both products and sample bases. Whilst the expressed importance is in the expected direction, it should be noted that on average this aspect accounts for 36% of the total utility range values. Moreover, it should be noted that on average, a 10 percentage point difference in proportion values exist between the first (part of responsibility) and second (not part of responsibility) categories. This gap signifies the importance of this decision factor, despite the absence of significance. Those who have sole responsibility in buying decision place Demand (in terms of utility range values) lower than those having some input in the decision process. For Laundry Detergent only and where decisions are made by committee, the influence of Demand is diluted substantially. In this circumstance, influence spreads primarily to include Appeal and Conditions. It should be noted that a significant association ($p=0.05$) underlies the relationship between Demand and role in buying for the total sample only.

In summary, and in terms of general influence, Demand seems mostly to be effected by elements of experience followed by business operations and decision involvement. Utility range values and proportions between the two sample bases and products are comparable.

Conditions

As a decision factor, the relative importance of Conditions, as measured by proportion values shown in Table 11.12, represents about 16% of the total influence on accept or reject decisions. This is accompanied by an average utility range value of 1.5731. In terms of the overall proportion, whilst some disparity between the two samples and products exists, it is not so great as to create major differences. As with Demand, the proportion values for Laundry Detergent tend to be greater than those for the Health Bar. With respect to utility range values, where Demand showed a general tendency to increase when compared to Health Bar, the reverse is the case for Conditions.

Table 11.12 Summary Values - Conditions

Background Element Groups		Proportions (%) ***		Utility Range Values	
		Low	High	Low	High
Experience	T*	12/11**	26/18	0.9394/0.8717	2.7833/2.0000
	M	13/10	26/20	1.4048/0.9259	3.2708/2.2871
Business Philosophy	T	9/12	22/16	0.7833/1.1000	1.8386/1.5833
	M	7/12	23/18	0.7709/1.3473	2.4621/1.9375
Decision Involvement	T	11/14	17/15	0.8611/1.2579	1.4299/1.3917
	M	14/14	19/15	1.2917/1.3889	2.1364/1.6905
Means	T	16/14		1.4393/1.3674	
	M	17/15		1.8895/1.5962	

Notes: * 'T' and 'M' refer to total and majority samples respectively
 ** '12/11' all slashed values depict Laundry Detergent and Health Bar respectively
 *** % of Total Utility Range

In Table 11.12, a number of the values show a sizeable gap between the two products. It should be remembered here that the difference in values could be attributable to the fact that Conditions, based on derived utility values, was ranked differently for the two products. For Laundry Detergent and regardless of sample, Conditions was ranked second, whereas for the Health Bar, the decision factor was ranked third in the total sample and second in the majority sample. By default a unique situation is presented. Where Health Bar values are greater than those of Laundry Detergent (the low end of the spectrum), it could be assumed that background element groups involved impose a greater emphasis and thus operate more influentially. Extending on this idea, it would appear that Business Philosophy and Decision Involvement should be designated as areas for particular attention for the total sample.

The difference in rank position of Conditions for the two products places an obvious limitation on comparing the total sample values shown in Table 11.12. With this limitation in mind, however, a few observations involving the majority sample are scrutinised. In this sample base, a low proportion value of 7% and a high of 26% is seen. The utility range values for these proportions are 0.7709 and 3.2708 respectively. These values are linked to Laundry Detergent, thus showing a wide variation in opinion for this product. With the removal of the low and high values, an average utility range value of 1.6872 results,

representing an average proportion of 16%. Even with the two extreme values removed, the mean utility range value and proportion for Laundry Detergent marginally exceed that of Health Bar; that is, 1.8238 and 17%, and 1.5962 and 15% respectively. It remains, however, that Conditions is slightly more important for Laundry Detergent than for Health Bar.

Whilst Demand, relatively speaking, remained high and constant across all background element categories, the same cannot be said of Conditions. With an already witnessed change in rank position involving the total sample for this decision factor, its relative placement as second rank in importance is diluted and borders on being shared with Supplier Information or Appeal (Majority) depending primarily on the product in question, or alternatively on the background elements themselves. Whilst a number of aspects could contribute to this weakened stance, the involvement of experience elements in this situation is noted. All of the identified low values for both products and samples are linked with the third category of 'years with company'; that is, 15 years or more. In relation to this, a definite pattern exists for both samples and Laundry Detergent. The importance attached to Conditions decreases continuously as time with the company increases. This is seen in both utility range values and proportions. However, no significant mean score difference exists. For example, the total sample for Laundry Detergent exhibits utility range values of 1.7333, 1.3974 and 0.9394 for the three categories with accompanying proportions of 22%, 16% and 12% respectively. Depending on the sample base and the category level of Conditions, the recorded decline witnesses increases to Supplier Information, Appeal, Product Offer or Demand values.

With the foregoing, it is noteworthy in terms of the Health Bar product and the majority sample, that an inverted 'v' shape (\wedge) pattern exists for the values which, under further analysis, yielded significant mean scores ($p=0.05$). With extended time in a company, the influence of Conditions is supplanted by all other decision factors. The most noticeable ones involved are Appeal, Approvers and Presenter Enthusiasm.

Whilst the low values are attached to years with a company, the high values of Conditions from an experience perspective are linked to respondent age. Like Demand, younger respondents (less than 30 years old) place higher importance on Conditions, though with time this importance diminishes in most instances with each of the age categories. This tends to

apply to both products and samples. However, only in respect of Laundry Detergent (both sample bases) are significant mean scores ($p=0.05$) noted. In this area, the reduction in influence appears to be taken up by increased importance given to either Supplier Information or Appeal.

Use of category management and use of ranging committee, two business operation elements, have little in the way to contribute to assessing their impact on Conditions given that their respective **non use** categories show higher levels of importance for Laundry Detergent regardless of sample base. A slightly different picture is presented for Health Bar. Despite the overall third rank position of Conditions in the total sample, use of category management sees a greater level of importance attached to Conditions (1.3968 and 16% versus 1.1000 and 12%). The strength of these values is best shown in a related context. On the basis of the higher utility values, Conditions would rank second amongst all first classification levels of category management across all decision factors. Indeed, its strength places Conditions in second rank within the majority sample. It is within this framework that a high value is recorded for the non use of ranging committee, thus signifying its influence in relative terms.

Although Conditions shows some importance with smaller sized ranging committees, in most cases involving both products and samples, an absorbing observation involves business operation and the varying degrees to which companies operate central warehousing. For Laundry Detergent and both samples, the importance attached to Conditions is seen to increase as the degree of central warehousing likewise increases, whilst for Health Bar, total sample only, the opposite is the case. For the purpose of demonstration, this is shown in Table 11.13.

Table 11.13 Degree of Central Warehousing and Conditions

Sample Base	Category	Laundry Detergent	%	Health Bar	%
Total	1% - 40%	0.7833	9	1.5833	16
	41% - 70%	0.9616	12	1.2848	14
	71% or more	1.8386	22	1.1859	14
Majority	1% - 40%	0.7709	7	1.9375	16
	41% - 70%	1.3148	13	1.3713	12
	71% or more	2.4261	23	1.4000	14

It is important to note in Table 11.13 that the increasing pattern shown for Laundry Detergent (majority sample) exhibits a significant mean score ($p=0.05$ for first and third values), whilst previously a significant mean score ($p=0.05$) was identified for the Health Bar product in relation to the majority sample.

Whilst varying importance is seen to exist between the two products and samples, an obvious product related effect is demonstrated. The higher proportion value attributed to the Laundry Detergent, majority sample when combined with Demand account for 50% of the influence in accept or reject decisions.

Of all the background element groupings, decision involvement is the grouping which shows the lowest level of likely impact. For the Health Bar product and regardless of sample base, Conditions is seen as being slightly more important where the product is not part of the respondent's responsibility and where the respondent has a large input in decisions (though not absolute control). In the case of Laundry Detergent, the importance attached to Conditions diminishes with ones role in buying; that is, importance is highest where one has absolute control and decreases to its low point where decision are made by committee. Depending on the sample base, Supplier Information, Appeal or Product Offer increase in importance.

In summary, experience elements have considerable impact on the importance attached to Conditions, particularly evident where significant mean scores have been highlighted. This is followed by business operations and in particular, the influence rendered by the degree of

central warehousing operated by supermarket entities. Lastly, Conditions is important in those cases where absolute control of decisions is vested in one person. These comments, however, must have regard for the type of product under scrutiny.

Supplier Information

Depending on the product and the sample base, Supplier Information appears to be seen and rated differently. The basis for this statement rests on the fact that the decision factor occupies different rank positions for each product. For Laundry Detergent, it is ranked third within the total sample and fourth in the majority sample. By contrast, Health Bar is ranked second in the total sample, yet ranked fourth with the majority sample. A rather volatile decision factor presents itself. However, this condition does not distract from this decision factor's relative importance.

Although recognition of the disparity is given, the overall proportion and contribution that Supplier Information gives equates to about 13%, representing an average utility range value of 1.3064. The disparity referred to is largely evident in the values presented in Table 11.14.

Table 11.14 Summary Values - Supplier Information

Background Element Groups		Proportions (%) ***		Utility Range Values	
		Low	High	Low	High
Experience	T*	5/ 8**	17/22	0.5334/0.9798	1.3703/1.7963
	M	10/ 2	16/17	1.1250/0.3334	1.7902/1.7963
Business Philosophy	T	10/14	19/17	0.7962/1.1389	1.7111/1.5432
	M	11/11	17/15	1.2099/1.1389	1.9722/1.6667
Decision Involvement	T	12/14	16/15	1.0176/1.2579	1.1852/1.3917
	M	12/11	15/14	1.1852/1.3580	1.6111/1.4445
Means	T	13/15		1.1023/1.3513	
	M	14/11		1.4822/1.2896	

Notes: * 'T' and 'M' refer to total and majority samples respectively
 ** '5/ 8' all slashed values depict Laundry Detergent and Health Bar respectively
 *** % of Total Utility Range

In Table 11.14, erratic values are exhibited for Experience which distinguish this element from the others. The removal of these erratic values (three low and one high) sees some smoothing occur. Such a manoeuvre establishes the total sample mean proportion value for the two products equal at 15% and the majority sample values both equal at 14%. The average utility range values undergo change and are represented as 1.2161 and 1.4822 for Laundry Detergent total and majority samples respectively. For the Health Bar product the values are 1.3329 and 1.4809 respectively. Based on this manipulation, it can be seen that majority sample utility range values are greater than the total sample, and that the Health Bar product values are somewhat greater than those of the Laundry Detergent. The direction of these utility range values then are seemingly in keeping with the earlier statement about rank positions of the two products.

Respondent age has been a background experience element previously identified with both Demand and Conditions. Its influence on Supplier Information, unlike previous decision factors, is less and limited in nature. Whilst the younger age group has developed as the concerned entity for previous decision factors, it would appear that the value or worth of Supplier Information increases with the age of respondents; that is, as age increases, so to does the value placed on Supplier Information regardless of sample base. With particular regard to Laundry Detergent, the increase is noted as showing a significant mean score ($p=0.05$) both for the decision factor itself and previously for its chosen level.

Of the experience elements, 'years with a company' seems more likely to have a bearing on Supplier Information with either sample base or product. For example, the relative importance associated with 'years with a company', as measured by proportions for Health Bar and total or majority samples, decreases with time. By contrast for the Laundry Detergent majority sample, there is a slight tendency for proportion values to increase with time. As a further observation, 'years with a company' also features, though this is limited to the Health Bar product. For both sample bases, the relative importance of the decision factor decreases with time; that is, as time with a company increases, the importance attached to Supplier Information (utility range values) decreases. However, no significant mean scores are noted. For this type of product, it suggests that, for example, other forms of information or even one's own experience, may take precedence.

Whilst the proportion of central warehousing was of issue with Conditions, it is absent from showing any patterned effect with Supplier Information. Other business operation elements are involved to varying degrees. For example, for the Laundry Detergent majority sample, greater utility range values and proportions are recorded for use of category management and non use of a ranging committee. However, for the Health Bar product and regardless of the sample base, larger values for non use of category management result along with larger values for smaller committee sizes. This aspect was previously noted to show a significant mean score ($p=0.07$). Notwithstanding this, it is likely that a different treatment is rendered for different products.

Part support for the notion of differential treatment of products emerges from examining those elements associated with decision involvement; that is, role in buying and whether or not a product is part of ones decision responsibility. Despite the absence of any significant means scores for Laundry Detergent and total sample, an increase in utility range values and proportions for role in buying is noted; that is, as a shift occurs from absolute control to decisions being made by a committee, the value of supplier Information or input increases. Thus, it could be argued that Supplier Information has greater meaning for those organisations employing ranging committees. However, this effect is confused by the fact that for the majority sample the reverse is the case; that is, Supplier Information has greater impact amongst those with absolute control in a decision. This latter condition prevails for both sample bases in the case of the Health Bar; that is, Supplier Information has its greatest impact or importance amongst those exercising absolute control in acceptance or rejection decisions.

The confused application of decision involvement is exacerbated when considering the influence of whether or not a product in question is part of ones decision responsibility. Once again a product-related effect is noted. For Laundry Detergent and regardless of the sample base, a higher level of importance is registered for Supplier Information where the product is not part of ones responsibility. On the other hand, for the Health Bar product, greater value is attached to Supplier Information where the product is seen to be part of ones responsibility. However, no significant means scores exist.

In summary, the effect of Supplier Information on decisions is at best varied though no doubt volatile as seen by the significant effects, albeit minimal and contained. In this regard, specific background elements have some effect, though this may be contradictory depending on the nature of the product.

Appeal

This particular decision factor, more so than others, is multifaceted and represents a broad cross section of input. Its composition reflects visual appeal, product life, financial aspects, supplier performance and store management acceptance, all of which are likely to have varying levels of attraction. With this in mind, it is noted that the overall strength or importance of this factor, based on rank position, is fourth for the total sample though third in rank for the majority. In some instances, depending on sample base, product and background element category, Appeal is found to rank second to Demand.

Overall, Appeal accounts for 14% of the relative input to decisions and presents an average utility range value of 1.3911. With only one or two extreme values (high end of the scale), very little alteration to the overall proportion and average utility range value occur with the removal of these extremes. The proportion remains at 14%, whilst the utility range value decreases slightly to 1.3078. Summary proportions and utility range values are shown in Table 11.15.

Table 11.15 Summary Values - Appeal

Background Element Groups		Proportions (%) ***		Utility Range Values	
		Low	High	Low	High
Experience	T*	10/11**	16/19	0.8333/0.9074	1.3000/2.0471
	M	8/9	20/24	1.0556/0.9074	2.1481/3.3333
Business Philosophy	T	9/13	18/16	0.7685/1.0256	1.5778/1.5093
	M	10/11	18/17	1.0952/1.0648	2.0471/1.8750
Decision Involvement	T	7/10	16/17	0.8518/0.9111	1.1754/1.4656
	M	10/9	21/16	1.0278/0.9167	1.6296/1.9111
Means	T	13/14		1.0845/1.3110	
	M	16/14		1.5006/1.6681	

Notes: * 'T' and 'M' refer to total and majority samples respectively
 ** '10/11' all slashed values depict Laundry Detergent and Health Bar respectively
 *** % of Total Utility Range

Whilst the figures contained in Table 11.15 represent the lows and highs and thus a likely range in variation, specific patterns within the various background element groupings exist and need to be explored given that for some of these a shift in rank position eventuates.

For Laundry Detergent and regardless of sample base, all three elements contributing to experience (years with company, years as a buyer and respondent age) exhibit 'v' shaped patterns in their utility range values for each of their respective response levels. However, respondent age operates somewhat differently for both samples. For the total sample, the associated proportion values increase successively with respondent age groups. Based on these relative values, Appeal is placed in third rank position, one percentage point behind Supplier Information. This is not replicated in the majority sample, where in fact an inverted 'v' shape (^) of utility values is presented. Thus, a fluctuating level of importance is seen to be attached to Appeal. Although a mixed pattern is evident, no significant mean scores were recorded for this product.

For the Health Bar product, a different pattern emerges. For the total sample, a 'v' shape pattern occurs for respondent age, whilst an inverted 'v' shape (^) is presented for years with a company. Years as a buyer is the only element to present a constant increase in utility

range values, a feature also reflected in its proportion values. Despite its inverted shape, the proportion values for years with a company likewise witness an increased pattern. Based on proportion values, these movements place Appeal in second rank to Demand, which together account for between 46% and 48% of influence. It should be noted that both years as a buyer and respondent age previously exhibited significant mean scores ($p=0.05$). This underlying significance could well account for the noted changes in rank position.

For the Health Bar majority sample, both years with a company and years as a buyer show inverted 'v' shape (\wedge) patterns with their utility range values, the former more so than the latter. However, their proportion values show successive increases with time. Whilst this maintains a second rank position for the third category of each element, the total proportions of the top two ranked decision factors is lower. Whilst the rank may have changed, the relative influence dissipates. Some of this reduction is taken up by Supplier Information (years as a buyer only), though for both elements, Approvers and Enthused Presenter show increased proportion values. One observation in the majority sample area concerns respondent age, where utility range values are seen to decrease with time. This downward movement or emphasis is seen to directly contribute to the shift in rank position of this decision factor. In fact, respondent age is the only experience element to have previously shown a significant mean score ($p=0.05$). For the younger respondents, the combination of Appeal and Demand accounts for 56% of decision influence. For successive levels of age groups this changes to 38% and 44% respectively. For the latter two levels of age group, Appeal moves parallel with Conditions and shared second rank.

By contrast to experience elements, the activity of Appeal within the guise of business operations for both products and samples is limited. For Laundry Detergent and regardless of the sample base, Appeal is more important to those using category management and equally important amongst those having small sized ranging committees. A further observation is that utility range values and proportions successively decrease for the Laundry Detergent product as one moves from low to higher levels of central warehousing. (For some supermarkets, lower levels of central warehousing is almost synonymous with store management involvement in decision making.) Under a majority sample consideration, proportion values fall from 18% to 10% over the three levels. At its lowest point, where

central warehousing is at its highest level (i.e., 71% or more), Appeal shares equal prominence with Enthused Presenter. It is noted that a significant association between Appeal's chosen levels (very attractive and attractive) and proportion central warehousing was determined previously for the total sample ($p=0.09$ and $p=0.04$ respectively).

For the Health Bar product, greater importance for Appeal is found amongst those not using category management and those using a ranging committee which are small in size. The utility range values for central warehousing exhibit an inverted 'v' shape (\wedge) for both samples, whilst in the majority sample a greater level of importance is given to Appeal by those using a ranging committee. On this occasion, however, those with larger sized committees place greater emphasis on Appeal. However, no significant associations or mean scores involving Appeal and business operations elements exist.

Role played in buying and whether a product is or is not part of ones responsibility are the two background elements used to describe decision involvement. For Laundry Detergent, and regardless of the sample base, a 'v' shaped pattern exists for role in buying. This may signify that there is very little difference in the importance attached to Appeal by persons having absolute control of a decision, or whether that decision is taken by a committee. However, for the majority sample a higher level of importance is attached to Appeal by those indicating decisions are made by committee. In this instance, Appeal accounts for 21% of relative influence placing it in second rank. Adding this proportion to that of Demand equates to a 50% share of influence on decisions. No underlying significant values involving Appeal and decision involvement exist.

In terms of whether the product is part of ones responsibility or not, it would appear that, regardless of product or sample base, a greater level of importance is attached to Appeal if the product is not part of ones responsibility. However, with regard to the Health Bar product, Appeal has more favour amongst those who do not have absolute control, yet have a large input in a decision. A significant association was recorded between 'very attractive appeal' and role in buying ($p=0.04$) for the total sample. Also, significant mean scores were recorded for 'attractive appeal' ($p=0.07$) involving role in buying, and 'very attractive appeal' and product part of responsibility ($p=0.09$), both of which were limited to the total sample.

In summary, and despite Appeals' third or fourth rank position, considerable importance is attached to the decision factor by selected groups and under specific conditions. It is both a volatile and submissive decision factor depending on the situations and the grouped background elements to which it aligns.

Product Offer

As a decision factor, Product Offer represents both flow dimensions such as leadtime or throughput at warehouse, and policy issues like credit for returns, package labelling, etc. In all, Product Offer accounts for about 11% of the relative influence on decisions, with an average utility range value of 1.0808. The proportion of influence ranges from a low 6% to a high of 16%, whilst utility range values vary from a low of 0.4896 to a high of 1.9167. Generally speaking, it would appear that somewhat larger values are recorded for the Health Bar product. Table 11.16 shows the summary values for Product Offer. As there appears to be few wayward values, no attempt to adjust the averages noted has been undertaken. On the basis of overall values, Product Offer is ranked fifth in terms of general importance.

Table 11.16 Summary Values - Product Offer

Background Element Groups		Proportions (%) ***		Utility Range Values	
		Low	High	Low	High
Experience	T*	7/ 7**	13/15	0.5333/0.6190	1.1667/1.5833
	M	6/ 9	12/14	0.6500/0.8572	1.3452/1.9167
Business Philosophy	T	8/ 6	11/14	0.6805/0.4896	0.9667/1.3472
	M	8/10	13/16	0.9000/1.0370	1.5000/1.9167
Decision Involvement	T	7/ 9	16/12	0.6056/0.7976	1.2222/1.1333
	M	7/11	10/14	0.7619/1.1603	1.1061/1.6429
Means	T	10/11		0.8625/0.9950	
	M	9/12		1.0439/1.4218	

Notes: * 'T' and 'M' refer to total and majority samples respectively
 ** '7/ 7' all slashed values depict Laundry Detergent and Health Bar respectively
 *** % of Total Utility Range

An assessment of experience elements and Product Offer reveals that for Laundry Detergent (regardless of sample) an inverted 'v' shape (^) pattern exist for years with a company and

years as a buyer. Both of these elements under previous decision level examination exhibited significant mean scores for both samples ($p=0.05$). Only with the latter element, however, do proportion values show a staged decrease; that is, over time buyers seemingly place a lesser value on the relative importance of Product Offer. Respondent age for both sample bases exhibits a 'v' shaped pattern with no particular pattern evident for proportion values.

The Health Bar product seems to be treated somewhat differently. Regardless of sample base, years with a company registers an inverted 'v' shape (\wedge) pattern. For both sample bases, it is noted that as years as a buyer and respondent age increase, associated utility values and proportions likewise decrease. Again, over time buyers place less emphasis on elements of the Product Offer. Underlying this activity is the fact that previously (chosen level analysis) a significant association was exhibited involving respondent age and 'product offer 90%' ($p=0.02$) for the total sample. In addition, years as a buyer and 'product offer 100%' ($p=0.05$) showed significance with the majority sample. Also, a significant mean score for years as a buyer and 'product offer 90%' was recorded ($p=0.05$).

In terms of business operation elements, Product Offer seems to have received more support from those operating a category management system, and alternatively those not using a ranging committee. However, greater importance is attached to the decision factor by those who operate larger sized ranging committees. These observations reflect the Laundry Detergent total sample only in which no significant values were previously identified. Common to both total and majority sample, however, is the observation of the inverse relationship between utility range values and central warehousing. As the degree of central warehousing increases, the utility given Product Offer decreases. This phenomenon occurs for both products and in both samples.

For the Health Bar product, Product Offer is only slightly more favoured by those using a ranging committee (total sample), though quite strongly supported by those operating small sized committees. The decision factor registered a 14% value for relative influence. For the majority sample, slightly higher utility values are registered by those operating a category management system, those using a ranging committee and those who operate smaller sized committees.

A close examination of the elements associated with decision involvement demonstrates, in most instances, a low impact situation. For Laundry Detergent and both sample bases, greater importance is placed on Product Offer where the product is not part of ones responsibility. In relative terms, this amounts to between 10% and 12% influence. By contrast for the Health Bar product and regardless of sample base, greater importance is attached to Product Offer if the product is part of ones responsibility. It is highly likely that, given a food item, some contributing aspect within Product Offer drives the importance in this direction. No significant values for decision involvement elements and either sample base were previously identified.

In examining role in the buying decision, it is noted that a 'v' shaped pattern exists for the total sample of Laundry Detergent, and that with this the third level (decision made by committee) registers a high utility value (1.2222) which equates to 16% relative importance. In all other cases involving both products and samples, missing data for the third level seemingly forces a greater degree of importance on to the second level; that is, no absolute control, but a large input.

In summary, Product Offer seems rather stable, operating as it were as a mid influencer. Its value as a decision factor largely is product related as seen by its relationship with central warehousing and its variability with regards to product responsibility. Further, its value diminishes with time and obviously experience.

Presenter Enthusiasm

As indicated in the research, this decision factor reflects the presenter's enthusiasm and commitment to the product and the transaction. Based on total utility values, it is placed in either sixth or seventh rank in terms of importance, yet under close scrutiny within a product setting, the decision factor can rank as high as fifth for some background element categories. Again overall, it accounts for about 9% of the influence on decisions and is noted as fluctuating from a low of less than 1% to a high of 14%. Its average utility range value is 0.8607, reflecting a range from 0.0278 to 1.4722. The fluctuations noted are product and sample base specific and to this end this decision factor often switches rank position with

Approvers. However, the difference in values between the two is small. In view of the difference, Presenter Enthusiasm will be examined first and followed by Approvers.

The summary high and low values for this decision factor are shown in Table 11.17. The removal of one or two extreme low proportion values only from calculations sees a slight upward shift of about 2 percentage points. Whilst this is not a great movement, it does help portray the likely volatility in relative importance that may exist at this level of overall influence.

Table 11.17 Summary Values - Presenter Enthusiasm

Background Element		Proportions (%) ***		Utility Range Values	
		Low	High	Low	High
Experience	T*	2/ 5**	11/14	0.2000/0.6429	0.8333/1.1389
	M	6/ 5	12/13	0.6191/0.6667	1.4722/1.4000
Business Philosophy	T	-/ 8	14/12	0.0278/0.6746	1.1167/1.0667
	M	5/ 8	13/14	0.5000/0.8982	1.1167/1.3750
Decision Involvement	T	6/ 8	13/ 9	0.4889/0.7937	1.0000/0.8167
	M	7/ 8	12/11	0.7083/0.8000	1.0729/1.2292
Means	T	8/ 9		0.6111/0.8556	
	M	9/10		0.9149/1.0615	

Notes: * 'T' and 'M' refer to total and majority samples respectively
 ** '2/ 5' all slashed values depict Laundry Detergent and Health Bar respectively
 *** % of Total Utility Range
 - proportion values was less than 1%

When utility range and proportions values are relatively large, as in the case of previous decision factors, specific trends are more easily identified. With lower values overall, shifts and patterns are likely lost in the small values themselves and thus more difficult to identify. To this end, any particular shift or identified movement requires some attention. In the data, these shifts or movements are product and sample related and take on 'v' or inverted 'v' shapes (^) across those background elements having three (3) categories or levels.

For the Laundry Detergent total sample and experience elements, all three (3) background elements show an inverted 'v' shape (^) as a pattern. However, two of these elements (years

with company and years as a buyer) show increases; that is, as the expressed levels increase from low to high, the respective proportion values likewise increase. The inverted 'v' shape (\wedge) pattern continues for years with the company and years as a buyer when the majority sample is scanned. It is noted that significant mean scores were previously identified for both elements ($p=0.05$). Here, however, the utility range value only for respondent age decreases as age categories increase without showing significance.

Depending on the sample base, 'v' shaped and inverted 'v' shapes (\wedge) emerge for the experience elements of the Health Bar product. Years with a company (total and majority sample) and years as a buyer (majority sample) demonstrate 'v' shaped patterns with utility range values, whilst age of respondent in both samples exhibits inverted 'v' shapes (\wedge). The utility range values and proportions for years as a buyer (total sample) decrease with time. No significant values underlie any of these observations.

As suggested, business philosophy or operations dictates how a firm could function in a marketplace. In the context of this discussion, the number of people in a ranging committee appears to have some impact. Attention is drawn to the fact that a significant difference in mean utility range values for the two levels of number in ranging committee exists ($p=0.01$). Companies utilising larger ranging committees place a higher emphasis on Presenter Enthusiasm than do those companies operating smaller sized committees. Further, that whilst an inverted 'v' shape (\wedge) is evident for proportion of centrally warehoused goods in connection with Laundry Detergent (Total sample), a majority sample witnesses increased utility range values and proportions as the degree of central warehousing increases, a phenomenon not repeated for the Health Bar product.

In reference to the Health Bar product, non use of category management and use of a ranging committee feature larger utility range values than their counterparts. Notably, a significant association ($p=0.01$) between category management and presenter enthusiasm was previously identified. However, for the majority sample only non-use of category management retains some form of dominance. Under the majority sample, the non-use of category management condition for Presenter Enthusiasm achieves a fifth rank overall with a utility range value of 1.3750 and a proportion of 13%.

An further observation concerning decision involvement elements and Presenter Enthusiasm for Laundry Detergent is that for both total and majority samples, the utility range values and proportions for role in buying increase as one shifts from absolute control in a decision to decision made by committee. For the majority sample, an underlying significant mean score ($p=0.09$) was identified. This observation is not replicated within the Health Bar product. In this general area, Presenter Enthusiasm seemingly is more important to those people who do not have direct responsibility for the product in question; that is, the product is outside of the area of responsibility.

In summary, a mixed amount of decision influence operates through Presenter Enthusiasm. The decision factor seems to be favoured most where a lack of direct involvement exists, for example, through committee activity. In this regard, the enthusiasm of a presenter may be carried forward as an 'extra' piece of information, thus operating in a delayed manner as an influence for particular products.

Approvers

This decision factor represents the ability of presenters to make decisions on the spot during negotiations, rather than waiting for a response or deferring to someone else. For some people this was an important consideration though overall it would appear to be the contrary. On average, the ability to decide on the spot carries a relative importance of 8% which represents an average utility range value of 0.7901. This level of activity sees this decision factor ranked sixth or seventh, depending on the sample base and product, and often switching ranks with, for example, Presenter Enthusiasm another 'low impact' decision factor. The term 'low impact' is used to reflect the low relative importance values that have been derived. It is not intended to negate the decision factor's relative importance.

Although overall proportion values can be gauged as low (relative to others seen so far), Table 11.18 does highlight some values that display relative worth; that is, values greater than the average of 8%. Since there are so few extreme values, as has been encountered with other decision factors, no attempt at removal has been undertaken. However, the removal of one or two values does little to change the overall stature of Approvers. It is noted that

proportion values range from a low of 3% to a high of 14%, that utility range values vary from a low of 0.2857 to a high of 1.2708 and that these variations are sample and product determined.

Table 11.18 Summary Values - Approvers

Background Element Groups		Proportions (%) ***		Utility Range Values	
		Low	High	Low	High
Experience	T*	6/ 3**	11/10	0.5000/0.2857	0.9167/1.1111
	M	6/ 5	9/14	0.6875/0.6212	0.9167/1.2708
Business Philosophy	T	5/ 6	14/11	0.4167/0.4872	1.1667/1.0555
	M	6/ 6	11/11	0.5833/0.6459	1.1667/1.0834
Decision Involvement	T	7/ 4	9/10	0.5556/0.3667	0.7719/0.9667
	M	7/ 6	8/10	0.7167/0.6458	0.9216/1.1019
Means	T	9/ 7		0.7213/0.7122	
	M	8/ 9		0.8321/0.8948	

Notes: * 'T' and 'M' refer to total and majority samples respectively
 ** '6/ 3' all slashed values depict Laundry Detergent and Health Bar respectively
 *** % of Total Utility Range

As previously indicated, lower rank decision factors present smaller values which may obscure patterns in the data. In view of this, a more vigilant assessment of the data is warranted. To this end, experience background elements are less likely to feature in any prominent way. For example, in the case of the majority sample for Laundry Detergent, all three background elements demonstrate an inverted 'Λ' shape for each of their respective three level categories. In the case of the total sample, utility values showed a slight tendency to decrease as respondent age increased.

Based on the number of notations, it would appear that experience elements have had more influence with the Health Bar product than they have with Laundry Detergent. In addition, this activity is more likely to involve the total sample. For example, a slightly higher value is recorded for younger respondents, though an increase in utility range values is noted for years as a buyer; that is, the value associated with Approvers increases with time. It is noted that previously a significant association ($p=0.04$) and significant mean score ($p=0.05$) existed

between years as a buyer and Approvers. Currently, although an inverted 'v' shape (\wedge) in values occurs for years with a company with the total sample, this develops a specific pattern within the majority sample. Here, the utility values associated with each level of years with a company demonstrate successive increases with time such that the third category of this background element achieves a relative importance of 14% with a utility range value of 1.2708.

A close examination of how business philosophy aspects interact with Approvers suggests that any influence from this area is at best slight or minimal. For the Laundry Detergent total sample, little difference exists in the category values for each contributor, though arguable Approvers is slightly more important for companies employing smaller sized committees and using lower levels of central warehousing. Previously, a significant mean score for number in ranging committee ($p=0.04$) was identified. For the Laundry Detergent majority sample these two aspects are repeated along with the fact that Approvers is slightly more important for those using category management. By contrast whilst these patterns are repeated with the Health Bar product, where a significant mean score is presented for number in ranging committee ($p=0.03$), an additional aspect unfolds; that is, the utility range values and proportions for Approvers decreases as the degree of central warehousing increases. For example, the proportion value for Health Bar (total sample) decreased by 5 percentage points as one moved from low to high levels of central warehousing. This observation, however, is not accompanied by any underlying significant values.

It would appear, though it is by no means substantial, that regardless of product and sample, the relative importance of approvers is greater if the product in question is not part of a person's responsibility. However, this is balanced against the fact that for Laundry Detergent at least, Approvers is more important if one is in absolute control, whilst for the Health Bar not being in absolute control achieves a higher utility value. In the case of the latter, a significant mean score exists ($p=0.08$).

In summary, Approvers is more important to specific sectors or audiences than it is to others. Experience elements, business operation and decision involvement each have a varying level of affiliation with this decision factor, though this is regarded as moderate to slight.

11.9 Summary

The CONSURV program has provided the basis for an in-depth assessment of the studied attributes and their respective levels at both an aggregate and summed individual basis. The statistics generated are very encouraging in that they provide confidence and surety in the general accuracy of the measurement, particularly at the aggregate level.

Very little difference in attribute level values exist between the two products assessed. Whilst individual products may stimulate greater interest in some attribute levels, the overall effect is negligible. This tends to suggest, on the basis of the attributes used in this study, that assessment is unlikely to vary across products, a useful indicator given the separation in time between the two studies.

Aggregate part-worths (coefficients) in combination with the conjoint model and dummy codes, provides a strong foundation for projecting the likely acceptance of products. The manipulation of these elements can provide a 'continuum of acceptance'. It is against this that one could assess the relative position of potential product offers.

It has been indicated that two measurement practices have produced obvious differences in rank patterns for seven (7) decision factors. It is plausible, given the express task of having to assess different levels of all decision factors (present in conjoint analysis and absent in central importance), that dissimilar ranks would eventuate. This result is not disconcerting, since the central importance ranks were 'constructed' and are considered indicative only. Whilst the measurement vehicles are seen to contribute to the differences, it is equally important to take note of the fact that similarities were also evident.

The conjoint analysis study required judgement about the likelihood of accepting a food and non-food product. The results indicate that differential weights of importance are attached to these product groups. A narrow or limited base of influence operates with the non-food product, whilst a wide and likely shared base of influence operates with the food product. In many respects the non-food item seemingly is treated in a commodity fashion, whereas the food item is seen more as an entity and thus open to more variation.

To further understand the decision factors, their relationship with the two products and what impacts on them, the chosen level of each decision factor was examined by gauging the amount and type of background element influence. To facilitate this, background elements were grouped under one of three (3) headings; that is, experience, business philosophy and decision involvement. Though not addressed by any of these groupings, different companies in the industry would seem to have considerable impact on decision factors like Conditions, Supplier Information, Appeal and Product Offer.

Company management and their resulting philosophy determine how companies operate in a marketplace. This outlook is captured by one grouping of background elements, namely, business philosophy. This grouping is more likely than any other to exhibit variations across all decision factors.

Finally, the decision factors themselves were examined, again using background elements, to establish whether any particular patterns existed in utility range values and proportions. This procedure tends to suggest the existence of inverse, proportional and asymmetrical patterns which describe the relationships between decision factors and background elements. Depending on the situation or condition and which product and sample base is referenced, decision factors vary in their influence. In one sense, a spectrum of influence is offered which ranges from 'passive' to 'active'.

CHAPTER TWELVE

CONCLUSIONS

12.1 Introduction

Over the course of four years, a multi-phased research activity was undertaken. This research actively involved seven out of eight of New Zealand's supermarket chains in a study which aimed to assess the underlying evaluative process for new grocery product acceptance. The respondent sample for this study was supermarket retail grocery buyers and buying committee participants. Given the various parameters of the research (e.g., sample, subject matter, methods employed), a number of conclusions can be drawn. These represent practical, methodological and industry related themes discussed in a narrow range of sections.

Content for this chapter is limited to specific aspects of the thesis. Conclusions are first presented on the study's objectives followed by propositions. Succeeding this are conclusions on methodology. Finally, a number of suggestions about further research are offered.

12.2 Conclusions on Research Objectives

The overall objective of the research was the examination of processes and evaluations that buyers and buying committee members of New Zealand supermarkets undertake in deciding to accept (or reject) 'copy cat' or 'me-too' products. These products are best described as continuous innovations and represent the vast majority of products assessed. 'Copy cat' products are distinct from discontinuous innovations, or those that are really new or never before seen. Both product types, however, compete for scarce shelf space.

New Product Definitions

Buyers define 'new' products on the basis of what they know, or what they have currently in their product categories; that is, any product currently not stocked is by default 'new'. In fact, the words buyers use to define new products are not unlike those used by buyers in other parts of the world. The newness of any product is not an issue, rather it becomes one of 'number of new products' and what to do with them relative to the availability of space at

a warehouse and importantly, limited shelf space in the supermarket. Whilst products are assessed by specific criteria, the process appears to be managed by considerations of available space. If space is not available, then new products cannot enter the retailer's profit equation.

Influence of Company Policy

Companies' policies determine the decision criteria used to assess new products, their importance and processes to follow. However, criteria importance varies depending on the presence or absence of buying committees. Within this setting, deliberations by deciders (individual or group) are multifaceted and involve dyadic exchanges between buyers and sales representatives. Supply organisations need to recognise these differences and tailor their presentations accordingly. 'Canned', unyielding presentations seem doomed to fail.

Role and influence of Buyers and Others

Buyers are an identifiable, front-line service unit acting as gatekeepers and deciders to the would-be flow of products. These roles can conflict in an adversarial-like manner in the dyadic encounters with suppliers, at best reflecting professional tolerance and personalities. These person-related aspects cast a further dimension for consideration in the flow of goods.

Whilst buyers are identifiable, the 'invisible minds' of committee members which include senior management (there is limited input from store managers), require active consideration by suppliers; suppliers need to be aware that all buyers are gatekeepers of new product submissions, however, not all buyers are deciders. Deciding on new products shifts to become a collective judgement where committees exist. Thus, presentations and personalities of the dyadic encounters assume greater importance in that the information imparted must be complete and leave lasting impressions for later transmission.

Buyers oversee a large number of product categories and are responsible for assessing existing and new products within these. To cope in their tasks, buyers economise their assessment of existing products by establishing review cycles for key products (e.g. those accounting for the greatest amount of turnover) at set intervals. The timing of these cycles can facilitate or retard an initial vetting process and contributes to symbolic adoption of would-be products. Suppliers need to understand and work these cycles in order to achieve exchange efficiencies.

Important Criteria and the Evaluative Trilogy

A large number of criteria form part of a buyer's new product assessment platform. Criteria were conceived as a trilogy (supplier-product-presenter), but naively underestimated the depth and richness of buyers' evaluations. An ideal grouping of decision criteria is suggested to exist in the range of between 8 and 12 items. Such a grouping maintains a basis for representing the realities that buyers face. The factors used suggest there is marginal differences in the decision weights buyers apply in assessing new products; that is, new products are assessed similarly.

Decision Factor Importance and Centrality

Simultaneous and dual measurement of importance and centrality was achieved by applying a new graphical measurement device. This device provided visible evidence of decision factor interrelationships and helped determine that centrality not importance alone was a concept worthy of pursuit. Future research should endeavour to make use of this concept in order to validate its contribution and value. Organisations supplying the grocery trade with new products should determine before hand not only the criteria that a deciding unit deems important, but also amongst these which ones are more or less central to an affirmative decision.

Suppliers of new products to grocery retail operators need to manage the new product exchange process in a more proactive manner. This involves not only achieving a greater understanding of buyers, but also working with them to realise a more harmonious relationship. Detailed knowledge and appreciation of buyers, their new product adoption process and their limitations would facilitate a more efficient use of resources. It is suggested that the 'model' presented by this research provides a valuable contribution in this regard.

12.3 Conclusion on Research Propositions

Variability of Criteria

Research propositions were formulated to assess the importance and influence of criteria and decision factors. Importance of criteria amongst companies and individuals exhibit variability. Buying, even within companies, displayed variable application within the boundaries of

operational structure and company objectives. Imposed restrictions do not alter the fact that buying is an individual phenomenon and needs to be recognised as such by supply organisations and their representatives.

Trilogy Criteria Groupings

Criteria can be grouped in any number of ways. It was thought that a trilogy involving supplier, product and presenter was possible. This thought challenged literature based perceptions that evaluative criteria had only product and supplier considerations. No support for the trilogy proposition was found, not because trilogy elements are not involved, rather because the trilogy was naively narrow and did not represent the multi-faceted buying environment. However, one aspect of these multiple considerations involve evaluations of the presenter. Supply organisations need to attend to the overall demeanour of their sales representatives.

Decision Factor Ordering

The twelve decision factors produced by principal components were thought to represent importance ranking. The proposition that this order would not be replicated by respondent assessment of importance was upheld. Respondents' assessments of decision factors in the light of reality of full choice and actual evaluation see matters differently. Mathematically determined lists of decision factors need to be scrutinised carefully.

Variability of Importance and Centrality

Importance and centrality of decision criteria were envisaged to vary, though to diminish similarly. Differences in the two measures were evident and importance was shown to diminish at a faster rate (mean scores comparisons) than centrality, which was consistently assessed higher than importance. Higher centrality ratings could signify respondent agreement about the 'correctness' of the decision factors. Bias may have been introduced by describing centrality as 'absolutely imperative', accentuating differences. However, its description mirrors salience and determinance. These concepts notoriously produce differences in comparison to importance measures. However, relative central importance, the product of the two measures, may prove a valuable arbitrator of buyer's decisions. In assessing buyers' deliberations, both measures serve a useful function and supplier knowledge of these may

contribute to more favourable outcomes with new products.

Centrality and Conjoint Analysis Ranks

Decision factor ranks (proportions based) from centrality and conjoint analysis methods were compared. It was believed that parallel outcomes would be exhibited. Manipulations show there is no parallel. Whilst buyers can rank decision criteria, such ranks on their own are unstable in that they need to be accompanied by the realities of particular product's assessment. Knowledge of the product and associated criteria are important considerations.

Decision Factor Product Ranks

It was thought that decision factors would be applied differently to the two products tested. This appears not to be the case. The value attached to some decision factors varies between products, but this is not sufficient to warrant separate consideration. There was very little difference between the two products assessed, suggesting that new grocery products are similarly rated by retail grocery buyers. This adds some support to the idea that all products compete for shelf space which may account for similar ratings. Given the separation in time between the two measurements, the similarity achieved could speak of a general level of reliability. Using the accompanying model, retail operations could assess the likely impact of its application in guiding decisions on new product evaluations.

12.4 Conclusions on Methodology

Throughout the research a strong consultative approach was achieved firstly through chief executives and top line management of participating organisations and secondly, through initial use of qualitative research. Personal contact with management and respondents was positive and facilitated understanding, cooperation, commitment and an enduring relationship.

The approach is unparalleled in most business-based research possibly due to costs and time pressures. The staged research personalised activities and clearly identified goals and objectives with which participants were able to identify. This, aided by a strict alert-contact-follow up procedure, contributed to a strong response rate.

The use of a tree as a basis for a graphic, three-in-one conceptual measurement device was successful. It was readily understood and added variety to question response format. Whilst every respondent did not comply with requirements, the procedure nevertheless obtained importance, centrality and interconnection measures. The bi-directional grid, the basis for determining relative central importance, was not revealed to respondents thus keeping measurement intent guarded. Relative central importance and interconnectedness of decision factors played a pivotal role in assisting the reduction of decision factor numbers.

Conjoint analysis has been demonstrated in a profusion of research applications to be a versatile, robust measurement device for assessing the likely relative importance respondents attach to attribute levels of salient variables. Its application in this research involving supermarket grocery acceptance decisions adds to this versatility.

12.5 Further Areas for Research

One obvious study would involve applying the same conjoint analysis materials across a greater number of products using the same respondent base. The aim of the study would be to establish whether or not a product-effect exists, and importantly to establish the reliability of decision factors. Also, research needs to be undertaken to assess whether brand-new-never-before-seen products are evaluated differently from me-too products.

Suppliers and their representatives could be studied using the same conjoint materials in order to assess whether any parallels in perceptions of importance exist between these two elements. Perceptions of importance could vary according to ones position in the business chain.

Dyadic interactions and negotiations play a central role in acceptance or rejection decisions. It would be beneficial to determine the process and extent to which currently identified decision factors are traded off against each other in real-time, buyer-seller encounters. Over time, a number of transactions could be assessed. The research could address differences in decision outcomes amongst product types and fully assess the impact of company objectives. It is taken for granted that buyers' decisions are the last word. Stocking additional items may be viewed differently by others (e.g., store managers, warehouse managers). Differences in

opinion can act as a basis of frustration, friction and conflict. The extent to which the decisions about various new products are approved or disapproved and their subsequent impact has particular relevance in terms of support and cooperation needed to assist the success of a product in a retailer's environment. In short, should the opinion of others have a bearing on a buyer's deliberations?

Decisions have costs which may vary on 'rightness' or 'wrongness'. In terms of product acceptances, what factors contribute to determining a right or wrong decision?

Determining and linking costs with an accept or reject decision and identifying differences that may exist between types and newness of products has some appeal. Variations between companies could be assessed, together with any processes that occur to recover losses. Moreover, identifying consequences, if any, that fall on those responsible for decisions may have a bearing on future relationships. A study in this area would amplify an awareness and appreciation for the overall buying climate.

A new graphic device has been proposed, together with a 10-point bi-directional grid. Further study of these devices is needed to establish their worth. Whilst the application in the current study was unique in its own right, other studies requiring simultaneous measurement procedures might consider using the concept particularly where external constraints impinge on time.

12.6 Summary

The primary pursuit of examining the process and evaluations associated with accepting (or rejecting) products located at the me-too end of the new product spectrum has been accomplished. This was achieved through a series of stages and research procedures aimed at reducing a large set of New Zealand-based evaluative criteria to a manageable number. This activity ensured that salient attributes were measured using a full profile, conjoint analysis study. Aggregate results suggest that the importance attached to attributes does not vary across the two products examined and that the vast majority of influence rests with four attributes. However, within this, buyers and buying committee members resoundingly support the dominance and value of one attribute ahead of all others; that is, the impact of Demand.

The process of examining new products whilst initiated by suppliers, engage a buyer's vetting actions which embody the symbolic acceptance or rejection of suppliers' initial propositions. Vetting is a pre-evaluative condition charged by company requirements, a buyer's experience and their knowledge of any product base for which he or she is responsible. Management of this product base signals a constant form of evaluation (product category reviews) as a continuous, cyclical activity. All product acceptances are conditional (upon performance). The conditional nature of product acceptance could equate to an extended form of symbolic adoption. In supermarket retailing, products earn their retention.

Undertaking practical research in the business community generally is difficult largely because respondents have demands on their time in terms of job-related responsibilities. A research task in this context needs to provide respondents with a perceptible 'pay-off' for their efforts. In the research undertaken upper management were involved and applied certain constraints on respondent participation. With conditions such as this, it is little wonder that there is so little in the way of business research. However, the conditions faced also spurred the need to be inventive in approaching measurement problems, as well as cautious in what was applied.

From a methodological perspective, gaining management support was critical to the success of the overall study, as was the identification of named respondents and the development of a relationship with them. Employing alert letters, facsimile and telephone calls facilitated the personalisation of the research activity. The staged nature of the research ensured that respondents were not bombarded with constant requests for data and also served to identify likely problem areas concerning procedural issues in addressing questionnaires. Working with management and buyers as the research unfolded not only identified a number of constraints from their perspective, but also it assisted fine-tuning the research by identifying achievable goals. Too frequently research is conceived without regard for its consequences on those involved.

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APPENDICES

Chronological Listing of Select OBB Models

Chronological Ordering of Select OBB Models

Year	Author(s)	Title
1940	Dunkin	What motivates business buyers
1950	Nash Platten	The bargaining problem How industry buys
1956	Cyert Simon & Trow	Observation of a business decision
1963	Cyert & March Evans	A Behavioural theory of the firm Selling as a dyadic relationship - a new approach
1965	Webster Levitt	Modelling the industrial buying process Industrial purchasing behaviour
1966	Kernan & Sommers	The behavioural matrix: a closer look at the industrial buyer
1967	Robinson, Faris & Wind	Industrial buying behaviour & creative marketing
1969	Howard & Sheth Moore	The theory of buyer behaviour A descriptive model of the industrial purchasing process: the supplier selection routine
1971	Ozanne	Five dimensions of the industrial adoption process
1972	Webster & Wind Brand Hulbert, Garley & Howard	Organisational buying behaviour Industrial buying decisions Info processing & decision making in marketing organisations
1973	Sheth	A model of industrial buying behaviour
1974	Crow	An information processing approach to industrial buying: the search & choice process (dissert'n)
1975	Hillier Capon & Hubert Robicheaux & El-Ansary Wilson	Decision making in the Corporate Industrial buying process Decision systems analysis in industrial marketing A general model for understanding channel member behaviour Dyadic interaction: an exchange process
1977	Gronhaug Bonoma, Zaltman & Johnston Choffray	Exploring a complex organisational buying decision Industrial buying behaviour A methodology for investigating the nature of the industrial adoption process ... (dissert'n)
1978	Moriarty & Galper Speckman	Organisational buying behaviour - a state of the art review An alternative framework for examining the industrial buying process

	Bagozzi	Exchange & decision processes in the buying centre
	Bonoma, Bagozzi & Zaltman	The dyadic paradigm with specific application toward industrial marketing
	Choffray & Lilien	Assessing response to industrial marketing strategy
1979	Doyle & Woodside	Organisational buying in new task & modified rebuy situations
	Doreen, Emergy & Switzer	Selling as a dyadic relationship revisited
1980	Crow, Olshavsky & Summers	Industrial buyer's choice strategies: A Protocol analysis
1981	Johnston & Bonoma	The buying centre: structure & interaction process
1982	Hakansson Krapfel	Int'l marketing & purchasing ind'l goods An external interpersonal influence model of OOB
1983	Anderson & Weitz Moriarty	Determinants of continuity in conventional industrial channel dyads Industrial buying behaviour: concepts, issues & applications
1984	Leigh & Rethans Vyas & Woodside	A Script-Theoretic analysis of industrial purchasing behaviour An inductive model of industrial supplier choice processes
1985	Campbell Wilson Krapfel Anderson & Chambers	An interaction approach to organisational BB Developing organisational buying theory An advocacy behaviour model of organisational buyer's vendor choice A reward/measurement model of OBB
1986	Berkowitz More	New product adoption by the buying organisation: who are the real influencers Developer/Adopter relationships in new industrial product situations
1987	Dwyer, Schurr & Oh Anderson, Chu & Weitz	Developing buyer seller relationships Industrial Purchasing: An empirical exploration of the buyclass framework
1988	Frazier, Specknan & O'Neal Wilson & Moller Wilson, Lilien & Wilson Barclay	JIT exchange relationships in industrial mrkts Buyer-seller relationships: alternative conceptualisations Formal models of group choice Decision process outcomes in OB: A conceptualisation
1989	Kohli	Determinants of influence in organisational buying: A contingency approach
1992	Barclay	Organisational buying outcomes and their effects on subsequent decisions

Initiating Letter to Chief Executive Officers

50-5608

4rd December 1990

Mr. Dennis Phillips
Buying Department,
Woolworths (NZ) Ltd.,
Private Bag,
Auckland

Dear Dennis

Mary Earle recently telephoned you and raised the subject of my proposed Ph.D. involving a specific aspect of food retailing. I am writing on this occasion to introduce myself, to let you know about my study and to arrange a convenient day and time for us to talk about various aspect of the study.

I am a Senior Lecturer in Marketing and have been at Massey since 1981. I'm responsible for teaching Buyer Behaviour and supervise a number of 3rd year Group Projects. Prior to living in New Zealand, I was in Melbourne for about 18 months at Chisholm Institute of Technology (Caulfield) as a Lecturer, a position I accepted after 10 years with OTC in Sydney, latterly as Manager (Market Analysis). While in Sydney, I completed a Masters of Commerce (Marketing) degree part-time at the University of New South Wales. I moved to Sydney from Vancouver, Canada in 1970. I am married, have one school aged child and, at the time of this letter, fast approaching my first half century!

My study aims to look at the initial acceptance and rejection of a select range of new food and non-food product categories (including continuances and discontinuances) by major grocery retailers in New Zealand. To maintain tight control, the study will include only private labelled national brands in eight (8) product categories. The attached table highlights what I feel are the useful categories for studying. Of particular interest in this study are the evaluations that buyers make of products, suppliers and presenters, how buyers reach the decisions they make, the involvement of company policy and requirements in the process and the role of any buying committee in the decision process. As far as I know no research of this nature has been done in New Zealand.

Presently, I am in the preliminary stages of my study and therefore I am exploring the ground. I do want to get an understanding of what goes on and to this end I thought our initial talk could centre on such topics as your buying operations (e.g. activities and procedures), how your buying section is set up and its position within the firm, the composition of the firm's buying committee, what criteria you use to evaluate new products and how well current offerings measure up to your requirements. As this study is ongoing, there no doubt will be other occasions where additional talks will be both necessary and beneficial. At a later date, I plan to develop and administer a detailed

questionnaire so it is essential for me to develop and maintain a solid and trusting relationship with you. At the outset, I'd like to assure you that there will be no breach of confidence and that our discussions will be kept confidential.

I will telephone you in a couple of days to arrange a convenient day and time for our first meeting.

Yours faithfully,

W.A.(Art) Thomas
Senior Lecturer, Marketing

Research Refusal and Acceptances

FOODSTUFFS

(SOUTH ISLAND) LTD

GENERAL MERCHANTS & IMPORTERS

167 Main North Road, Christchurch
Four Square Stores & New World Supermarkets
Telegraphic Address: "Foodstuff"
Phone 3526-039, Private Box 11
Fax 3527-41

11th January, 1991

Mr. W. A. Thomas,
Senior Lecturer, Marketing,
Faculty of Business Studies,
Massey University,
PALMERSTON NORTH.

Dear Mr. Thomas,

Thank you for your letter of the 8th January in regard to your proposed research.

Unfortunately I regret to advise that we are unable to assist you in this matter as our Company policy does not allow this.

Yours faithfully,



for

G. A. WALKER

Managing Director

MASSE
UNIVERSI

Private Bag 1122
Palmerston North
New Zealand
Telephone 0-6-34
Facsimile 0-6-34

FACULTY OF
BUSINESS STUDIES

DEPARTMENT OF
MARKETING

5 June 1992

Mr G A Walker
Managing Director
Foodstuffs (South Island) Ltd
167 Main North Road
CHRISTCHURCH

Dear Mr Walker

I initially wrote you on 8 January 1991 concerning my proposed research for my PhD which concerns "New Product Acceptance" by supermarket retail buyers.

You indicated in your letter to me of 11 January 1991 that it was Company policy that prevented your assisting via interviews and the like.

I thought I'd take this opportunity to determine whether or not your position in the interim time period had changed. During this time, I have interviewed 15 representatives from all other New Zealand based companies and have undertaken some initial quantitative questionnaire work, results of which have been passed to participating companies.

As I am about to enter Phase II of my study (further quantitative work), my wish would be to have a truly representative sample of all New Zealand supermarkets. Thus my letter to you is one of a further invitation to participate. This phase of my study would involve your buyers answering a questionnaire which would take about 20 minutes of their time. It is strictly confidential! A further questionnaire is planned for by about August together with a sampling count of new products assessed during some test period. Results of the study will be made available to all who participate.

I look forward to your reply.

Yours faithfully



W A (Art) Thomas
Senior Lecturer. Marketing



G.U.S. WHOLESALERS LTD.

Christchurch, Blenheim, Nelson, Greymouth, Ashburton, Timaru


16 January 1991

Mr W A (Art) Thomas
Senior Lecturer Marketing
Massey University
PALMERSTON NORTH

Dear Mr Thomas

Thank you for your letter of 8th January 1991 regarding our study to look at the initial acceptance and rejection of a select range of new food and non food product categories by major grocery retailers in New Zealand. We will be happy to co-operate with you and extending any information and await your further advice as to meeting times and personnel requirements.

Yours faithfully
G.U.S. WHOLESALERS LIMITED



K G Daldorf
Chief Executive

KGD:HMCI



TELEGRAPHIC ADDRESS FOOSTUFFS

P O BOX 38-896
WELLINGTON MAIL CENTRE

NEW ZEALAND

PHONE 280-349 FAX 278-012

KILN STREET • SILVERSTREAM

SUPPLIERS TO PRIVATELY OWNED AND OPERATED GROCERY STORES AND SUPERMARKETS

FOOSTUFFS (WELLINGTON) CO-OPERATIVE SOCIETY LIMITED

17 January 1991

Mr W A Thomas
Senior Lecturer, Marketing
Massey University
PALMERSTON NORTH

Dear Mr Thomas

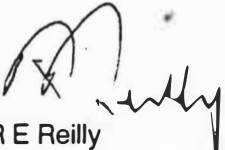
I am in receipt of your letter of 8 January seeking our cooperation in regard to the research you propose to conduct in connection with your Ph.D.

Please ensure that any contact you wish to have with our organisation is established with or through the writer's office.

To see at 3:00pm Thurs. 31 Jan.

Many thanks

Yours faithfully


R E Reilly
MANAGING DIRECTOR

RER:jms

*Seen 31/1/91
Contact prior to
further action*

Act.

11.45. 18.01.91

Hugh Perrett, Foodstuffs Auckland
rang to say they are quite happy to
Co-operate with your requirements
in your letter to them on Jan 8th.

Mr. Viv WRIGHT

Foodstuffs

(09) 689-949 General Manager Retailing
Operation, is the person to contact
re any further details etc.

Countdown

food markets limited



HEAD OFFICE: 29 BYRON STREET, PO BOX 4148, CHRISTCHURCH. PHONE (03) 797-748. FAX (03) 662-737

23 January 1991

Mr W.A. Thomas
Faculty of Business Studies
Massey University
PALMERSTON NORTH

Dear Art

YOUR Ph.D

Mike Prendergast has asked me to introduce myself in response to your letter of January 8th.

As Merchandise Manager my responsibilities include the assessment of 'new' products for Countdown Foodmarkets.

The subject of your Ph.D is indeed an interesting one. For our part Countdown Foodmarkets would be more than happy to assist you in your research. Please feel free to make contact with me as required.

Yours faithfully

A handwritten signature in dark ink, appearing to read 'H.M. Biggelaar'. The signature is stylized and somewhat cursive, with a large loop at the end.

H.M. Biggelaar
Merchandise Manager

c.c. M. Prendergast

hbjm010

Samples of All Respondent Contact Methods.

50-5608

8 February 1991

Mr. G.A. Walker
Managing Director
Foods+uffs (South Island) Ltd.,
167 Main North Road
Christchurch

Dear Mr Walker

Thank you for your letter of 11 January. I am sorry that your company policy will not allow your participation, but thank you for giving it your time.

Yours faithfully

W.A.(Art) Thomas
Senior Lecturer, Marketing

50-5608

8 February 1991

Mr. M.J. (Mike) Prendergast
Managing Director
Countdown Foodmarkets Ltd.,
P.O.Box 4148
Christchurch

Dear Mr Prendergast

Thank you for your agreement to participate in my Ph.D. study as set forth in my letter of 8 January. I will contact Mr. Biggelaar as indicated by his introductory letter in the very near future.

Yours faithfully

W.A.(Art) Thomas
Senior Lecturer, Marketing

50-5608

7 January 1991

Mr Bill Osborne
Grocery Department,
Foodtown Supermarkets Ltd.,
Private Bag,
Otahuhu, Auckland

Dear Bill

Recently I had an interview with Mary Taylor concerning my proposed Ph.D. which involves a specific aspect of food retailing. A synopsis of this is attached. I left other material with Mary and she indicated she would pass this on to you. The intent of this letter is to establish contact with you, give some background on myself and try to arrange a suitable time for us to talk about my research and your operations.

I am a Senior Lecturer in Marketing and have been at Massey since 1981. I'm responsible for teaching Buyer Behaviour and supervise a number of 3rd year Group Projects. Prior to living in New Zealand, I was in Melbourne for about 18 months at Chisholm Institute of Technology (Caulfield) as a Lecturer, a position I accepted after 10 years with OTC in Sydney, latterly as Manager (Market Analysis). While in Sydney, I completed a Masters of Commerce (Marketing) degree part-time at the University of New South Wales. I moved to Sydney from Vancouver, Canada in 1970. I am married, have one school aged child and have hit my first half century!

I learned from Mary that there are four buyers in Foodtown. Having seen Mary, my aim would be to see yourself, Graham Walker and Dave Fogarty in one day on an individual basis. No doubt this will take some arranging to find an "open" day in your respective schedules. If it is of any help, my interview with Mary took about one and a half hours and I would not expect to take any more than this with each of you. An interview in the morning and two in the afternoon is feasible given airline connections. I am seeking this accommodation since I honestly can not afford multiple return travel arrangements.

Presently, I am in the preliminary stages of my study and therefore I am exploring the ground. I do want to get an understanding of what goes on and to this end I thought our initial talk could centre on such topics as your buying operations (e.g. activities and procedures), how your section operates relative to others, what criteria you use to evaluate new products and how well current offerings measure up to your requirements. As this study is ongoing, there no doubt will be other occasions where additional talks will be both necessary and beneficial. At a later date, I plan to develop and

505-608

4 April 1991

Mr Richard Reilly
Managing Director
Foodstuffs (Wellington) Ltd
P.O.Box 796
WELLINGTON

Dear Mr Reilly

Our meeting of 31 January established initial contact between us and set the ground for further discussions concerning various aspects of my Ph.D. At our meeting I outlined the broad areas that I wished to pursue with your buyers (a copy is attached for your reference) and you indicated your willingness for me to interview Mssrs Goldfinch, Stratford and Lee.

I would like to commence my individual interviews with your people as soon as practical. This month I have the 12th, 18th, 19th and 26th open as possible dates. As previously indicated, each interview should take no longer than one hour, hence an afternoon of one of the above dates would see the interviews completed.

I would appreciate early confirmation of one of the above dates as I am endeavouring to establish some Auckland interviews as well. I can be contacted at Massey University on extension 8469 or at home 552-345 after hours.

Yours faithfully

Art Thomas
Senior Lecturer, Marketing

administer a detailed questionnaire so it is essential for me to develop and maintain a solid and trusting relationship with you. At the outset, I'd like to assure you that there will be no breach of confidence and that our discussions will be kept confidential.

A similar letter has been sent to Graham Walker and Dave Fogarty. I will telephone in a couple of days to establish a day later in the month or early February for the interviews, but leave it to you three to determine a suitable date.

I look forward to talking with you.

Yours faithfully,

W.A.(Art) Thomas
Senior Lecturer, Marketing

FACSIMILE MESSAGE



MASSE UNIVERSITY

Palmerston North
New Zealand
Telephone (063)
Marketing

To Mr Herman Biggelaar
Merchandise Manager
At Countdown Foodmarkets

From Art Thomas
At Massey University

Fax No. (063) 505-608

Fax No. (03) 662-737

No. of Pages 2
including this page

Date 13/5/91



Herman,

The following represents my initial format for discussions re product acceptance and rejection. As you will see the coverage is rather broad at this stage. Later in my Ph.D. I want to develop a questionnaire for completion by all those responsible for buying decisions

I look forward to meeting you on Thursday 23rd May at 10:00 am.

Sincerely
Art Thomas
Senior Lecturer

FACSIMILE MESSAGE



MASSE
UNIVERSITY

Palmerston North
New Zealand
Telephone (063)

Marketing



To

From

At

At

Fax No. (063) 505-608

Fax No.

No. of Pages
including this page

Date

Dear

I have reached a point with my Ph.D. study where some feedback to a range of evaluative criteria is necessary. The criteria have been gathered as a result of my extensive in-depth interviews with various executives and buyers over the past several months. The criteria are those used to assess the acceptance of new products.

The feedback I need is a questionnaire response to the criteria, one page plus some background information. The respondents needed are all those who have contact with manufacturers, suppliers or their representatives. For some this will involve management, but largely it will be your buyers and their assistants. It is important that I gain individual responses, not group or company!

I would like to personally address letters and the questionnaire (background information and a sheet listing the criteria) to each individual respondent. To this end, I need the names of all buyers (and assistants) together with the names of others in your organisation who have any contact with manufacturers, suppliers or their representatives when assessing new products. I do not see the proposed activity as either laborious or time consuming. However, I do see it as necessary so as to streamline subsequent Ph.D. stages.

I will telephone you on Wednesday to finalise arrangements.

Yours sincerely

Art Thomas
Senior Lecturer, Marketing

(06)350-5608

12 August 1991

Mr M A Goldfinch
Merchandise Manager
Foodstuffs (Wellington) Ltd
P.O.Box 38-896
WELLINGTON

Dear Mr Goldfinch Re: New Product Acceptance Study

I recently requested from management the names of all those who had any dealings with manufacturers, suppliers or their representatives in regard to determining the acceptance of new products. Your name was provided and your management is aware of my project.

In the next few days you will receive a brief questionnaire for completion. It consists of background information and one sheet of paper containing evaluative criteria. A prepaid envelope will be enclosed for returning your completed questionnaire. I would appreciate receiving your reply as soon as practicable, but I recognise you have work commitments. However, your considered responses to the evaluative criteria are important.

Please be assured that your replies will be treated with the strictest of confidence and that all responses will be aggregated for analysis purposes only.

Yours sincerely

Art Thomas
Senior Lecturer, Marketing



PRIVATE BAG, PAPATOETOE. 234 PUHINUI ROAD, PAPATOETOE. TELEPHONE: (09) 278-3069 FAX: (09) 277-7551

22 January 1991

The Senior Lecturer - Marketing
Massey University
PALMERSTON NORTH

ATTENTION: Mr W.A. Thomas

Dear Mr Thomas

I am in receipt of your correspondence of 8 January 1991 requesting our co-operation with you in relation to assisting your studies.

I confirm our assistance in supplying information on the subject, however I must also advise that due to the volatile nature of the supermarket industry, any information given would be on a "strictly confidential" basis only.

Your contact within our organisation will be Mr Don Bishop who is our Merchandise/Purchasing Manager, telephone (09) 278-3069 and request that you make initial contact to arrange an appointment.

Wishing you every success with your project.

Yours faithfully
3 GUYS LIMITED

M. C. Daviess
MANAGING DIRECTOR

23 April 1992

Mr Herman Biggelaar
Merchandising Manager
Countdown Foodmarkets
29 Byron Street
CHRISTCHURCH

Dear Herman

Re: New Product Acceptance Study

In August last year I forwarded a brief questionnaire to your buyers and others in the industry. The questionnaire centred around criteria used to assess new product offerings from manufacturers or suppliers. This study and the subsequent results form the preliminary stages of my Ph.D. Please express my sincere thanks to those who participated for their time and effort.

Enclosed for your information are some basic results from this initial work. If you have any queries about the material, please do not hesitate contacting me at Massey on (06)356-9099, ext. 8469.

As a result of analysis, the initial research has highlighted the existence of 12 factors or dimensions that underlie the criteria assessed. These factors will form the basis of future research which at this stage will likely involve two stages. Both stages will involve your buyers answering structured and brief questionnaires. I trust I have your continued support for these phases.

One aspect of my Ph.D. study that needs to be addressed is tracking the number and type of new products that buyers review together with their respective acceptance and rejection levels. My thinking is to have buyers act as a 'panel', completing a daily diary for a fixed period of time. I don't want this to be onerous or to interfere with work commitments so my tentative thoughts are for buyers to complete a diary once every two months so that I get a sample across a full year. It is possible that this might coincide with peak buying phases which needs to be considered. I would appreciate your thoughts and input to this phase of the study as soon as possible. I am prepared to visit you to advance the topic further.

I look forward to your reply and continued cooperation.

Yours faithfully

Art Thomas
Senior Lecturer, Marketing



**Foodtown
Supermarket
Limited**

Head Office
80 Favona Road
Mangere
Telephone 275 1 11
Fax (09) 275 1 11

Postal Address
Private Bag 933
Otahuhu
Auckland
New Zealand

21 May, 1992

Mr Art Thomas
Senior Lecturer, Marketing
Massey University
Private Bag
Palmerston North

Dear Art

Thank you for your recent letter regarding the New Product Acceptance Study. The relevant Category Managers at Foodtown do not mind assisting you in the diary task providing the format used is simple and of a "yes/no", "tick/cross" type response. Time and pressure constraints would restrict an expanded reply for each supplier submission made.

Please contact me to further discuss your study.

Yours faithfully

A handwritten signature in black ink, appearing to read "David Wilson".

David Wilson

General Manager Merchandise and Marketing

June 4 1992

Mr David Wilson
General Manager Merchandise and Marketing
Foodtown Supermarkets Ltd
80 Favona Road
Mangere
AUCKLAND

Dear David

Further to our telephone conversation concerning my PhD study, please find enclosed a copy of the questionnaire to be used as my Phase II data gathering vehicle.

In all it should not take more than about 20 minutes of each respondent's time which, given its nature, can be accommodated outside of their busy work schedules.

Presently, I am waiting for replies from other supermarket executives regarding continued access to the same people as participated in the earlier phase of my study. Once this is achieved, I plan sending an "alert" letter to all participants followed by a bound copy of the attached.

Yours faithfully

Art Thomas
Senior Lecturer in Marketing

June 5 1992

Mr Don Bishop
Merchandising Manager
3 Guys Ltd
Private Bag
Papatoetoe
Auckland

Dear Don

In August last year you participated in the first phase of my Ph.D. study concerning new product acceptance. Your initial response was to a short questionnaire and this had management approval.

In the next few days you will receive another questionnaire which makes up the second phase of my study. Management is aware of it coming. This questionnaire, in a small booklet, is a bit longer and more demanding than my previous one. It will require more consideration as it is not the type of questionnaire you can respond to quickly. However, it should take only about 20 minutes of your time.

As I am working with a very small sample base, your response to the questionnaire is important to the continuation of my study. As before, your response is strictly confidential and the data obtained will be used for analysis purposes only.

I look forward to your continued cooperation.

Yours sincerely

Art Thomas
Senior Lecturer in Marketing

COUNTDOWN
food markets limited



HEAD OFFICE, 29 BYRON STREET, PO BOX 4148, CHRISTCHURCH PHONE (03) 797-746 FAX (03) 662-737

27 May 1992

Mr Art Thomas
Massey University
PALMERSTON NORTH

Fax: 06 350-5608

Dear Art

PHAZE II OF YOUR STUDY

There is no problem with your request to make contact with the 5 people named in your fax.

Prior to you doing so I would appreciate an outline of what you will be requesting of them.

Regards.

Yours sincerely

H.M. Biggelaar

hmb577

FACSIMILE MESSAGE



MASSE
UNIVERSITY

Palmerston North
New Zealand

To Mr Herman Biggelaar
At Countdown

From Art Thomas
At Marketing Department

Telephone No. (06) 356-9099

Fax No. (06) 350-5608

Fax No. (03) 662-737

No. of Pages 1
including this page

Date 29/5/92



Dear Herman

Thanks for your fax concerning Phase II of my study and access to your people.

Analysis to date has yielded several factors that underlie accept/reject decisions. The questionnaire in booklet form, will attempt:

1. to ascertain the importance rating of 5 factors;
2. to determine within one of these factors the rankings of 5 criteria that help make it up; and,
3. to determine the importance of each criterion when paired against each other. (Each criterion has different levels to it.)

Item 3 above will make use of conjoint analysis to determine "utility values". There is of course Background information and explanatory notes

Regards
Art Thomas

If you do not receive all of this fax, or if it is unclear please contact us at the above phone number

FACSIMILE MESSAGE



**MASSEY
UNIVERSITY**

Palmerston North
New Zealand

To Mr Richard Reilly
At Foodstuffs (Wellington)

From Art Thomas
At Marketing Department

Telephone No. (06) 356-9099

Fax No. (06) 350-5608

Fax No. (04) 5278 042

No. of Pages 1
Including this page

Date 27.5.92



Dear Mr Reilly

Further to previous arrangements, I am contacting you to further advance my Ph.D. study on new product assessment.

In August last year you provided me with the names of 6 of your people to participate in one phase of my study. The next phase is coming up and I'd like to contact the same people. They were: Goldfinch, Stratford, Leitch, McTague, Lovridge and Lee.

Please advise if this is possible.

Many thanks

Art Thomas
Sr. lecturer (Marketing)



MASSEY
UNIVERSITY

Department of Marketing
Private Bag 11222
Palmerston north
New Zealand
Tel 06 356 9099
Fax 06 350 5608

FACSIMILE MESSAGE

To: Mr Richard Reilly
At: General Manager
Foodstuffs (Wellington) Ltd

Fax No: (04) 527-8042

FROM: Art Thomas

No. of Pages: 1
Including this page

Date: 8/6/93



Dear Mr Reilly,

It's PhD study time again! Over the past several months I've had to postpone my PhD research due to an increased teaching load during the first half of the year. I'm readying myself once more for a further phase of my PhD research "New Product Acceptance and Rejection". It is a crucial phase, and you may be pleased to know that it is my second to last stage in what has proved to be a most challenging activity.

When last in the field, 6 buyers from your company participated. Their names were as follows: Goldfinch, Lee, Leitch, Loveridge, McTague and Stratford.

Ideally, I'd like to retain the same respondents should all of them still be present. However, if any have been replaced, then the new people would be a welcomed addition.

Would you please advise:

- a) whether the same people are still available for participating in my research;
- b) nominate any changes in personnel where applicable; and,
- c) confirm that permission to approach your buyers still exists.

The next phase of my research will be spirally bound and requires answering three (3) steps to only one question. The question involves ranking and rating twelve (12) decision factors determined from my earlier research. It should take no more than one half hour to complete.

Thank you in advance for your continued cooperation. I look forward to your early reply.

King regards

Art Thomas
Senior Lecturer in Marketing

If you do not receive all of this fax, or if it is unclear please contact us at the above phone number

June 29 1993

Mr Nelson Carter
Buyer
Foodstuffs (Auckland) Ltd
P O Box 27-480
MOUNT ROSKILL

Dear Nelson

I'm back again and writing to advise that a questionnaire is coming your way soon!

The questionnaire represents a further phase in my PhD study which has been examining retail grocery buyers' evaluations of new products with the aim of acceptance or rejection. The current phase of my study again has your management's support and prior approval.

Unlike my last questionnaire, the current one has but **one** question, though answering it will involve you in three (3) steps or requirements. It is rather unique in its lay out and should be relatively straight forward to answer. Including reading time, it should take you no more than about one half hour.

After receiving the questionnaire, I'd really appreciate your completing and returning it to me within one (1) week. I will, however, follow up late returns with a reminder.

I look forward to your cooperation in due course, and especially your time to complete the questionnaire.

Yours faithfully

Art Thomas
Senior Lecturer in Marketing

July 2 1993

Mr Robert Oorthuis
Category Manager
Countdown Food Markets Limited
P O Box 4248
CHRISTCHURCH

Dear Robert

About a week ago I wrote to advise you that a questionnaire covering a further phase of my PhD study would be coming your way. Well, here it is!

I enjoyed putting this questionnaire together because it is unique in its lay out and requirements. It still has as its focus your evaluations of new products with the aim of deciding to accept or reject them.

As previously notified, the current questionnaire has but one question, though answering it will involve you in three (3) distinct steps. Allowing for reading time and completing the Background information section at the end, the questionnaire could be completed by you in about one half hour.

You should note that this questionnaire builds on my previous research stages. Here, use is made of twelve (12) decision factors, themselves determined by analysis of earlier material sent to buyers in the industry. These decision factors underlie every acceptance or rejection decision undertaken by buyers or addressed by those on ranging committees. If you have a few moments now, you may care to read about these decision factors on pages 7 and 8 of the accompanying questionnaire. Familiarity with them is central to successfully answering the questionnaire.

When you have fully completed the questionnaire, please use the enclosed pre-paid envelope for returning it to me. I look forward to receiving your reply at your earliest convenience. As I am dealing with a very small sample, a full response is needed. Any respondent not completing and returning his or her questionnaire by July 23 will be contacted again as a reminder. I'd really appreciate receiving your completed return earlier if possible.

Thank you in advance for your cooperation, and especially your time.

Yours faithfully

Art Thomas
Senior Lecturer in Marketing



MASSEY
UNIVERSITY

Department of Marketing
Private Bag 11222
Palmerston north
New Zealand
Tel 06 356 9099
Fax 06 350 5608

FACSIMILE MESSAGE

To: Keith Sanders
At: G.M. Wholesale Operations
Foodstuffs (Auckland) Ltd

Fax No: (09) 620-9790

FROM: Art Thomas

No. of Pages.....1.....
Including this page

Date: 30.7.93



Dear Keith

This message concerns my PhD study questionnaire sent to 9 people in early July. At this stage I have received only 3 replies (Overseas Purchasing Officer and 2 buyers - Lucozade, Stainless Steel Reviver).

As I am dealing with a small sample to begin with, I need as complete a response as possible. Therefore could I call upon you to intercede on my behalf and urge the remaining 6 to reply. The surnames of all respondents are Watson, Kitching, Grant, Russell, Nelson, Pye, Tappling, Carter and Doak.

Please ensure respondents complete their questionnaires by adding 'L' conditions (left off p.6 in error) and showing decision factor interconnections.

Thanks for your time and cooperation
Kind regards

Art Thomas

Sr. Lecturer in Marketing

If you do not receive all of this fax, or if it is unclear please contact us at the above phone number



MASSEY UNIVERSITY

Department of Marketing
Private Bag 11222
Palmerston North
New Zealand
Tel 06 356 9099
Fax 06 350 5608

FACSIMILE MESSAGE

To: Mr Richard Reilly
At: General Manager
Foodstuffs (Wellington) Ltd.

Fax No: (04) 527-8042

FROM: Art Thomas

No. of Pages: 1
Including this page

Date: 8/4/94



Dear Mr Reilly,

It's time for the last round in my PhD research, "New Product Acceptance and Rejection". It is the crucial phase in what has proved to be a most challenging and interesting activity. I am therefore contacting you regarding important preliminary matters.

Ideally, I want to retain the same respondents as have participated in the past should they still be with you. However, if any have been replaced or added, then the new people would be a welcomed addition.

When last in the field, 5 people from your company took part. Their surnames were: Goldfinch, Stratford, Loveridge, Lee and McTague. In this last phase of my research I am looking to increase my sample size with all those that have any input to final decisions about new products, for example additional buyers and buying committee members.

I would appreciate your advise please:

- a) whether the same people are still available for participating in my research;
- b) whether additional personnel can participate;
- c) nominate any changes in personnel where applicable;and,
- d) confirm that permission to approach your people still exists.

The next phase of my research will be conducted in two flights, each flight addressing one product within a different product category. The flights will be separated by at least one month. Importantly, and apart from background information on respondents, only one question is involved. The question involves rating a number of brief product presentation descriptions built around seven (7) decision factors and their respective levels. While it may sound involved, it is not. It should take no more than 10 to 15 minutes to complete.

Thank you in advance for your continued cooperation. I look forward to your early reply.

King regards

Art Thomas
Senior Lecturer in Marketing

If you do not receive all of this fax, or if it is unclear please contact us at the above phone number

27 May 1994

Mr Kevin Kingen
Category Manager
Countdown Food Markets Limited
P O Box 4248
CHRISTCHURCH

Dear Kevin

I am writing to advise you that a questionnaire is coming your way soon and that the current phase of my PhD study has your management's support and prior approval.

The study represents the last stage of my PhD research which has been examining the acceptance and rejection decision process for new products undertaken by retail grocery buyers' and committee members'.

In this last stage, I am examining two products. Consequently, my field research requires two (2) questionnaires, one to be sent in about a weeks time, and the second in a month or so. Each questionnaire has only **one** question and background information which, together with reading time, should take no more than about 20 minutes to complete.

Given that only two (2) products are being examined, it is possible the categories involved may be unfamiliar to you. Please do not be put off by this and attempt to assess the products as you would any other.

After receiving the questionnaire, I'd appreciate your completing and returning it to me within two (2) week if possible.

I look forward to your continued cooperation in due course.

Yours faithfully

Art Thomas
Senior Lecturer in Marketing



MASSEY
UNIVERSITY

Department of Market.
Private Bag 11222
Palmerston North
New Zealand
Tel 06 356 9099
Fax 06 350 5608

FACSIMILE MESSAGE

To: Mr Don Bishop

At: General Manager

3 Guys Ltd

Auckland

Fax No: (09) 277-7551

FROM: Art Thomas

No. of Pages..... 1
Including this page

Date: 2.6.94



Dear Don

Even though late, congratulations on your appointment. Well done!

I've been scouring the industry for one more respondent to my last stage of PhD research. As a last resort I am approaching you for your involvement with my study to date.

If you could see your way clear to helping me out, it would be greatly appreciated. The test phase will involve 2 relatively short questionnaires (about 15 minutes each) dealing with 2 different products (one food item, one non-food item). Don and 2 others from 3Guys will be participating. The need for one more person stems from my research design.

Looking forward to hearing from you
Kind Regards

If you do not receive all of this fax, or if it is unclear please contact us at the above phone number
Art Thomas

9 June 1994

Mr Ian Rogers
Category Manager
Ratray's Limited
P O Box 4047
CHRISTCHURCH

Dear Ian

About a week ago I advised that a questionnaire concerning the last phase of my PhD study would be coming your way.

The questionnaire has as its focus your evaluation of a specific new product with the aim of determining how likely it would be that you would accept or reject it. This is managed through **one question only** that manipulates specific levels of seven (7) evaluative criteria.

The manipulations are called **SCENARIOS** and each scenario totally describes an assessment situation that you might face. Although the product is kept constant, each scenario should be assessed separately. As previously indicated, although you may not be familiar with the product category, **it is important you** try to assess the given product as you would any other.

The criteria, their respective levels and a brief description of the product appear on the first two (2) pages of the accompanying questionnaire. You may wish to take a moment now to familiarise yourself with these since they are central to completing the questionnaire.

When you have fully completed the questionnaire, please use the enclosed pre-paid envelope for returning it to me. I look forward to receiving your reply at your earliest convenience, hopefully within a two (2) week period. As I am dealing with a very small sample, your complete response is very important.

Thank you in advance for cooperation and especially your time.

Yours faithfully

Art Thomas
Senior Lecturer in Marketing

FACSIMILIE COVER SHEET OR MESSAGE

DATE: 18-07-94

TIME: 10.01AM

NUMBER OF PAGES: 1

OUR REFERENCE:

FAX NUMBER: (09) 275 3074

PLEASE DELIVER THE FOLLOWING MESSAGE TO:

NAME: ART THOMAS

FIRM: MASSY UNIVERSITY

FAX NUMBER: (06) 350 5608

MESSAGE:

ART, I RECEIVED YOUR FAX DATED 15-07-94 AND
 ADVISE THAT YOUR QUESTIONNAIRE WILL NOT BE COMPLETE
 DUE TO A NUMBER OF UNFORSEEN CIRCUMSTANCES THAT
 HAVE ARISEN OVER THE LAST 3 WEEKS. RESULTING FROM
 THIS WILL BE MY UNAVAILABILITY TILL AT LEAST THE
 2ND WEEK OF AUGUST.

RECAPS:

FROM: J. MUIR



Foodtown
 Supermark
 Limited

Head Office
 80 Favona Rd
 Mangere
 Telephone 275
 Fax (09) 275

Postal Address
 Private Bag
 Otahuhu 9130
 Auckland
 New Zealand

FACSIMILE MESSAGE



MASSEY UNIVERSITY

Department of Marketing
Private Bag 11222
Palmerston North
New Zealand
Tel 06 356 9099
Fax 06 350 5608



To:

At:

Fax No:

From:

No. of Pages Date:

Including this page

Dear

I have tried on two different occasions to contact you by phone. On these occasions I have left messages with your switchboard operator and these perhaps have got misdirected. Thus: the reason for this FAX.

My records indicate that I have not yet received your completed response. As I am dealing with a very small sample, my response rate to this, my last phase, is crucial. A low response rate places doubt on the validity of results obtained, something that I am trying to minimise.

In any event I need your completed response to my questionnaire so as to combine it with those of others within the industry.

I would greatly appreciate your time and continued cooperation in completing my questionnaire and returning it to me in the reply post envelope that was provided. If you have any particular difficulties with this, or should you want to discuss some aspect of my study with me, then please call me on (06) 356-9099, Ext 8469.

I look forward to your early reply.

Yours sincerely

Art Thomas
Senior Lecturer in Marketing

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If you do not receive all of this fax, or if it is unclear please contact us at the above phone number

WOOLWORTHS (NZ) LTD

Representing:



woolworths

THE Big Fresh FOOD COMPANY

PRICE / CHOPPER

Registered Office:
Kerrs Road Wiri
Private Bag 76 927
Manukau
Auckland New Zealand
Phone (09) 262 0772
Fax (09) 262 6670
DX 68202 Auckland

FACSIMILE COVER SHEET

DATE 18/07/94

COMPANY : MASSEY UNIVERSITY

ATTENTION: ART THOMAS

FAX NO : 06 350 5608

FROM: BRIAN GREEN NO OF PAGES: ONE

MESSAGE :

DEAR ART,
QUICK NOTE TO
SAY I HAVE MAILED MY RESPONSE
SHEET TO YOU ON SATURDAY.

PETER HAS MAILED HIS FAX
LAST WEEK -
Apologies for tardiness.

REGARDS
Brian Green

17 August 1994

Mr Raymond Lee
Chief Buyer
Foodstuffs (Wellington) Ltd
P O Box 38-896
WELLINGTON

Dear Raymond

As mentioned in my June letter, two questionnaires form the last phase of my Ph D research. Thank you for completing the first questionnaire, and enclosed is the second.

As with the first questionnaire, the focus continues with your evaluation of a specific new product, the aim being to determine how likely it would be for you to accept or reject the product. This is managed, through **one question only** that manipulates specific levels of seven (7) evaluative criteria.

Once again **SCENARIOS** are presented, each totally describing an assessment situation. As before, the product is kept constant and each scenario is to be assessed separately. Although you may not be familiar with the product category, **it is important you try to assess the given product as you would any other.**

Although you may be familiar by now with the criteria and their levels, you may wish to take a moment now to reacquaint yourself with them and to familiarise yourself with the product description. These appear on the first two (2) pages of the accompanying questionnaire.

When you have fully completed the questionnaire, please use the enclosed pre-paid envelope for returning it to me. I look forward to receiving your reply at your earliest convenience, hopefully within a two (2) week period. As I am dealing with a very small sample, your complete response is very important.

Thank you in advance for cooperation and especially your time in completing this questionnaire and all those before.

Yours faithfully

Art Thomas
Senior Lecturer in Marketing

FACSIMILE MESSAGE



MASSEY
UNIVERSITY

Department of Marketing
Private Bag 11222
Palmerston North
New Zealand
Tel 06 356 9099
Fax 06 350 5608



To: Anne de Liefde
At: Foodstuffs (Wgn) Ltd

Fax No: 04 527 8042

From: Art Thomas

No. of Pages 1 Date: 23/9/94
Including this page

Dear Anne

Further to my letter of 18 August and my last PhD questionnaire, my records seem to indicate that I have not yet received your completed response

As I am dealing with a small sample, every return I get (fully completed ones) increases the reliability of my data and results.

I'd appreciate receiving your completed return as soon as possible.

Many thanks

Art Thomas

Sr. lecturer in Marketing.

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If you do not receive all of this fax, or if it is unclear please contact us at the above phone number

Qualitative Interview Framework

TOPIC POINTS TO COVER

BUYING OPERATIONS .. (ACTIVITIES & PROCEDURES)

BUYING SECTION SETUP & POSITION IN THE FIRM

COMPOSITION OF BUYING COMMITTEE

DEFINITIONS OF NEW PRODUCT

CRITERIA USED TO EVALUATE NEW PRODUCTS

HOW WELL CURRENT OFFERINGS MEASURE UP

Initial Questionnaire - Stage I

CONFIDENTIAL

RESPONDENT INFORMATION

Company Name: _____ Job Title: _____

Years with this company: _____ years Years as a buyer: _____ years

Age: 1. less than 30 _____
2. 30 to 39 _____
3. 40 and over _____

Does your company operate central warehousing facilities? Yes ___ No ___

If 'YES', what proportion of total product is handled this way? ___ %

Does your company utilise product category management? Yes ___ No ___

If 'YES', what is your product category purchase responsibility?

(please specify)

If 'NO', how is product purchasing organised within your firm?

What products are you responsible for buying? (please specify)

Does your company currently use a buying or ranging committee? Yes ___ No ___

If 'YES',

a) how many members are there on the committee? _____

b) who are the members of the committee? (specify titles only)

ALL INFORMATION COLLECTED WILL BE AGGREGATED FOR ANALYSIS

THANK YOU FOR YOUR HELP

For each item listed below, rate its importance to you in determining your acceptance of N products offered to you by the grocery trade. Circle your responses below.

Evaluative Criteria	N/A	Very unim- portant	Un- imp- ortant	Nei- ther	Imp- ort- ant	Very imp- ortant
Company profit and sales objectives	0	1	2	3	4	5
Knowledgeable presenter	0	1	2	3	4	5
Initial visual appeal of package	0	1	2	3	4	5
Number of existing products in the category	0	1	2	3	4	5
Supplier track record/performance	0	1	2	3	4	5
Promotion/advertising commitment shown	0	1	2	3	4	5
Product sizes (e.g. carton, inner/outer)	0	1	2	3	4	5
Commitment/enthusiasm of presenter	0	1	2	3	4	5
Company image and product image matching	0	1	2	3	4	5
Potential growth in product category	0	1	2	3	4	5
Financial aspects (e.g. list cost, discounts, rebates, trade terms, suggested price)	0	1	2	3	4	5
Current size of product category (volume/\$s)	0	1	2	3	4	5
Unique product benefits/features	0	1	2	3	4	5
Consultations with supplier/manufacturer about the product prior to presentation	0	1	2	3	4	5
Availability of space in your warehouse	0	1	2	3	4	5
Previous relations with supplier/manufacturer	0	1	2	3	4	5
Promotional mix specification (dates/program/media)	0	1	2	3	4	5
Supplier information on likely performance of product	0	1	2	3	4	5
Ability of presenter to make decisions	0	1	2	3	4	5
Availability of product	0	1	2	3	4	5
Supplier information about the market (volume/\$s)	0	1	2	3	4	5
Matching product to desired customer base	0	1	2	3	4	5
Potential profitability of the product	0	1	2	3	4	5
Overall impact of product within product category re volume/\$s	0	1	2	3	4	5
Seasonality of the product	0	1	2	3	4	5
Life of the product (shelf/use by)	0	1	2	3	4	5
Lead time required with supplier	0	1	2	3	4	5
Similarity of product to what is available	0	1	2	3	4	5
Likely slow/fast throughput at your warehouse	0	1	2	3	4	5
Supplier credit policy for returned goods	0	1	2	3	4	5
Regulations/legislation re product content, labels	0	1	2	3	4	5
Likely consumer demand	0	1	2	3	4	5
Whether the product is carried by competition	0	1	2	3	4	5
In-office approvals (taste/packing/size)	0	1	2	3	4	5
Ability of product to maximise profitability	0	1	2	3	4	5
Economic conditions in relation to some products	0	1	2	3	4	5
Minimum purchase requirement/order size	0	1	2	3	4	5
Package labelling and what's on it	0	1	2	3	4	5
Landscape or portrait shelf packaging	0	1	2	3	4	5
Affects on the sales mix of product category	0	1	2	3	4	5
Likely acceptance by store management	0	1	2	3	4	5
Other (specify)		1	2	3	4	5

Initial 12 Factor Descriptions

Initial Factor Descriptions

The Product Offer:	Several product related criteria suggested a flow dimension (eg leadtime, throughput at warehouse) and policy issues (eg credit policy for returns, package labelling) which combine to suggest a basic threshold or constant.
Supplier Information:	This factor pertains to both the likely performance of the product and the market itself in terms of volume and dollars.
Demand:	Identified here is the 'likely consumer demand' for the product and the 'overall impact of the product within the product category (volume and dollars)'.
Appeal:	This represents a rather broad application in that it reflects both the likely acceptance by store management' and 'the initial visual appeal of the package' to the buyer.
Category Impact:	Two criteria ('potential growth in product category' and 'current size of product category') combine to suggest a positive impact.
Conditions:	Separate to any financial aspects involving any transaction, this factor highlights 'economic conditions' that may relate to some products at particular points in time. Also present are consultations with a supplier which might condition a buyer's response.
Presenter Enthusiasm:	Dominant here is the presenter's enthusiasm and commitment to the product and transaction. Such enthusiasm can assist selling the product.
Reputation:	The factor name here aptly represents the single criterion 'supplier track record/performance'. A strong or good reputation acts as a positive to facilitate exchange.
Life-Value:	'Shelf life of the product' and 'financial aspects' combine to form this factor. A short shelf life and a mediocre financial deal could spell disaster for a supplier.
Promotion Specification:	A single criterion 'promotional mix specification (dates, program, media)' proposed by the supplier is identified here. This is seen to be distinct from 'promotional commitment' which is promissory in nature. Specification is seen as positive and forceful.

Approvers:

The prime force here is external in nature in that it reflects the ability of a presenter to make a decision on the spot. A buyer can play a role in this by quietly 'insisting' on it and respecting its presence.

Company
Objectives:

Of interest here is not so much the presence of this factor, rather its placement. It is another single criterion factor identified as 'company profit and sales objectives'. Undoubtedly these act as a conditioning force on the buyer, something to which they are forever cognisant and answerable. This is another constant.

Questionnaire - Stage II

**STRICTLY
CONFIDENTIAL**

**NEW PRODUCT
ACCEPTANCE AND REJECTION
IN NEW ZEALAND**

- a PhD Study

by

W. A. (ART) THOMAS

Senior Lecturer in Marketing

Massey University

INTRODUCTION

In August 1991, an initial survey involving new product acceptance and rejection was undertaken. Respondents to this survey were supermarket retail buyers together with those people within participating organisations who contributed to an accept or reject decision; that is, members of any buying or ranging committee.

The survey involved respondents in assessing the importance of a large number of criteria gathered through in-depth interviews. These criteria were noted as those used by buyers to assess new product propositions from suppliers and manufacturers and make acceptance or rejection decisions.

Subsequent analysis of responses (n = 38) yielded a considerable range of information and produced twelve (12) factors that underlie the acceptance of new products. One of those factors in particular, named as The Product Offer, contributes directly to the current stage of enquiry.

DEFINITION

The **PRODUCT OFFER** seems to represent both product flow dimensions and policy issues. For example, criteria such as leadtime, minimum purchases and credit policy are represented. This total product offering seems to operate as a basic threshold or constant that must be met, be present and satisfactorily addressed by any new product proposition submitted to buyers or committees for consideration.

INSTRUCTIONS

Over the next few pages specific instructions for completing this questionnaire are provided. Please ensure that you read these carefully before completing the questions involved. It is important that complete answers are gained, therefore, each option outlined for you needs to be addressed fully.

HOW IMPORTANT ARE CERTAIN FACTORS

Obviously purchase decisions are influenced by several phenomena, in this case established criteria and their relative importance. From the analysis to date, a number of factors underlie the decisions to accept or reject new product propositions.

Five of these factors are Supplier Information, Demand, The Product Offer, Appeal and Category Impact. A description of each of these is shown in the table below.

No doubt the influence of these five (5) factors varies between buyers and buying committee members, and even product categories.

Please complete the table below by allocating 100 points in total amongst the five (5) factors, indicating their relative importance to you by giving more points to the more important factor.

	POINTS
Supplier Information: Supplier information here pertains to both the likely performance of the product and the market itself in terms of volume and dollars.	_____
Demand: Identified here is the 'likely consumer demand' for the product and the 'overall impact of the product within the product category (volume and dollars)'.	_____
The Product Offer: Several product related criteria that suggest flow (e.g. leadtime, throughput at warehouse) and policy issues (e.g. credit policy for returns, package labelling, minimum purchase) which combine to suggest a basic threshold or constant.	_____
Appeal: This factor reflects both the 'likely acceptance by store management' and the 'initial visual appeal of the package'.	_____
Category Impact: Two criteria, 'potential growth in product category' and 'current size of product category (volume and dollars)' are combined here.	_____
TOTAL	100

WHICH CRITERIA ARE MORE IMPORTANT

Listed below are the evaluative criteria that are directly and strongly associated with the factor 'The Product Offer'.

Would you please indicate, in the column on the right side, which in your opinion, are the ranks of the five (5) items. The most important criterion should be indicated as '1' and so on, with the least important item being ranked number five (5).

You may show that two or more criteria are of equal importance by placing the same number next to each one.

Space is provided at the bottom of the table for you to add additional criteria, if you feel they are important in the context of The Product Offer.

	RANK
1. Package labelling and what's on it	___
2. Leadtime required with the supplier	___
3. Likely slow/fast throughput at your warehouse	___
4. Minimum purchase requirement/order size	___
5. Supplier credit policy for returned goods	___
6. ___ ___ ___ ___ ___ ___ ___ ___ ___ ___	___
7. ___ ___ ___ ___ ___ ___ ___ ___ ___ ___	___
8. ___ ___ ___ ___ ___ ___ ___ ___ ___ ___	___
9. ___ ___ ___ ___ ___ ___ ___ ___ ___ ___	___

HOW IMPORTANT IS EACH CRITERION

There are times when we have to give up one thing to get something else. Since different people have different desires and priorities, this study wants to know which things are most important to you.

The scale that follows makes it possible for you to tell about your preference for certain product propositions - for example, 'The Product Offer' vs 'Appeal'. Please read the scale below which explains how the scale works - and then tell me the order of your preference by writing in the numbers from 1 to 9 for each of the criteria pairs on the following pages. **Explanatory notes for the criteria are provided (three pages on) and should be read for clarification of meaning.**

Example: Product Offer vs. Appeal

Procedure: Simply write in the number 1 in the combination that represents your first choice. In one of the remaining blank squares, write the number 2 for your second choice. Then write number 3 for your third choice and so on, from 1 to 9.

	Product Offer		
Appeal	Above Aver	Aver	Poor
Excellent	1		
Average			
Poor			

Step 1: (Explanation)

You would have an above average product offer and an excellent appeal.

	Product Offer		
Appeal	Above Aver	Aver	Poor
Excellent	1	2	
Average			
Poor			

Step 2:

Your second choice is that you would rather have an average product offer and an excellent appeal than an above average product offer and an average appeal.

	Product Offer		
Appeal	Above Aver	Aver	Poor
Excellent	1	2	
Average	3		
Poor			

Step 3:

Your third choice is an above average product offer and an average appeal rather than a poor product offer and an excellent appeal.

	Product Offer		
Appeal	Above Aver	Aver	Poor
Excellent	1	2	4
Average	3	5	7
Poor	6	8	9

Sample:

This shows a sample order of preference for all possible combinations. Of course your preferences could be different.

For each of the ten (10) questions below, please write in the numbers from 1 to 9 to show your order of preference for the criteria associated with 'Product Offer'.

		Minimum Purchase (Outers)			Package labelling & what's on it		
		60	120	240	Good	Average	Poor
Weekly Throughput at Warehouse (Outers)	< 10						
	10-90						
	> 90						
Credit Policy for Returned Goods	100%						
	95%						
	90%						

		Package Labelling & what's on it			Credit Policy for Returned Goods		
		Good	Average	Poor	100%	95%	90%
Weekly Throughput at Warehouse (Outers)	< 10						
	10-90						
	> 90						
Leadtime (Days)	5						
	15						
	30						

		Weekly Throughput at Warehouse (Outers)			Credit Policy for Returned Goods		
		< 10	10-90	> 90	100%	95%	90%
Leadtime (Days)	5						
	15						
	30						
Minimum Purchase (Outers)	60						
	120						
	240						

		Leadtime (Days)		
		5	15	30
Minimum Purchase (Outers)	60			
	120			
	240			

		Weekly Throughput at Warehouse (Outers)		
		< 10	10-90	> 90
Credit Policy for Returned Goods	100%			
	95%			
	90%			

		Leadtime (Days)		
		5	15	30
Package labelling & what's on it	Good			
	Average			
	Poor			

		Minimum Purchase (Outers)		
		60	120	240
Package labelling & what's on it	Good			
	Average			
	Poor			

EXPLANATORY NOTES
for
PRODUCT OFFER ATTRIBUTES

1. Package labelling & what's on it:
The three (3) descriptors (good, average, poor) for this criterion, are intended to express both a subjective and factual assessment. The subjective aspect is in terms of looks and image (and what this does for the package and how it might look on the shelf), whereas the factual may contain a use by date and health or ingredient information. This is more detailed than any initial visual appeal of a package.
2. Leadtime required with the supplier:
The question to address in assessing a proposition is: how long do you have to wait to get the goods? Here the wait time is spelled out in days (5, 15, 30) which reflects a local perspective and assumes the product is up and ready to go. Obviously, leadtime will be greater for imported products.
3. Weekly throughput at warehouse:
An attempt has been made here to put numeric values on the flow of **outers** from your warehouse. The numbers (less than 10, 10-90 and greater than 90) may not reflect your reality, but they do symbolise a slow, medium and fast flow of product.
4. Minimum purchase requirement/order size:
There may be instances were a minimum purchase is necessary and the measure used in this case is **outers** (60, 120, 240). The volume of orders is represented here, not case sizes.
5. Supplier credit policy for returned goods:
It is believed that credits for returned goods will vary depending on the situation at hand and even from supplier to supplier. Three levels of credit are offered (100 %, 95% and 90%) to cover both situation and supplier variations in terms of dated stock, deletions and slow moving stock.

BACKGROUND

Company Name: _____ **Job Title:** _____

(Please circle your answers)

Which one of the following describes your role in the decision to accept or reject a new product offer or proposition?

1. have absolute control of the decision
2. don't have absolute control of the decision but have a large input
3. decision is made by committee

Years with this company:

1. less than 5 years
2. 5 to 14 years
3. 15 or more years

Years as a buyer:

1. less than 5 years
2. 5 to 10 years
3. 11 years or more
4. Not a buyer

Your Age: 1. less than 30 years

2. 30 to 39 years
3. 40 years or more

Which one of the following best describes your company's proportion of centrally warehoused goods?

1. 0%
2. 1% - 40 %
3. 41% - 70 %
4. 71% or more

Does your company use product category management?

1. Yes
2. No

Which one of the following best describes your main area of purchase responsibility?

1. Food
2. Non-food
3. Both Food & Non-food
4. Other (Specify) _____

Does your company currently use a buying or ranging committee?

1. Yes -----> Is that, a) 1 to 5 people?
2. No b) 6 or more people?

THANK YOU FOR YOUR TIME AND COOPERATION

Questionnaire - Stage III

Faculty of Business Studies

Department of Marketing

**NEW PRODUCT
ACCEPTANCE AND REJECTION**

A PhD Study - Stage 3

**STRICTLY
CONFIDENTIAL**

**NEW PRODUCT
ACCEPTANCE AND REJECTION
IN NEW ZEALAND**

- a PhD Study

by

W. A. (Art) Thomas

Senior Lecturer in Marketing

Massey University

HOW IMPORTANT AND CENTRAL ARE DECISION FACTORS

Purchase decisions are influenced by several phenomena, in this study by factors, their relative importance and centrality to the selection process. The influence of and interconnections between these factors no doubt vary across buying situations. The twelve (12) factors are described fully under EXPLANATORY NOTES (p.7). **Please read or reread the factor descriptions provided.**

What is being attempted here is to measure at the same time not only the relative **importance** of any one particular factor in an acceptance decision, but also **how central** that factor might be in the decision. For example, it could be argued that the presence of one particular factor is absolutely imperative to achieve a 'yes' decision. To this end, it is **central** and would act like the top of a root system at the trunk base of a large tree. However, if a factor was less important and less central, then visually it might remind one of being a leaf higher up in the tree and out on some limb! One could envisage the various factors scattered about the tree as if they were ornaments on a Christmas tree. Use is made here of a tree because of its visual impact and it forms the basis of the question that follows. A fictitious example appears on p.5.

Consider for the moment a solid looking tree (without leaves). The bottom centre of the tree reflects 100% relative importance and centrality. It is the foundation upon which other things are built. The higher up the tree one goes the less important something becomes, and movement out from the centre of the tree (onto the limbs and branches) signifies a lesser degree of centrality.

Now, consider the twelve (12) **decision** factors are 'ornaments' and that you want to decorate the tree by placing them at different points on the tree to represent your view of their influence in an acceptance decision. Examine the twelve (12) factors, and then select the letter of **the most important** factor to you. Using a pencil, mark a position at the bottom centre of the tree (shown on page 6) and write in the factor letter.

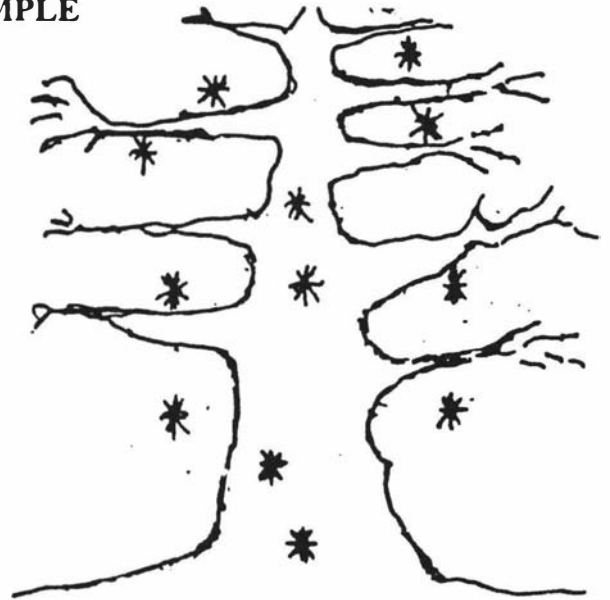
When you have completed that step with the most important and central factor, select the second most important factor and so on and similarly mark and note their positions on the tree so that the full set of twelve (12) factors exhibit your view of importance and centrality. If factors do share importance or centrality, then mark their positions equally on either side of the tree.

Finally, after all factors have been placed on your decision tree, show their interconnections with each other by drawing lines between the factor positions. The final product should look like an organisational chart or network. Please examine the three (3) steps of the fictitious example shown for you on p.5.

A WORKED EXAMPLE

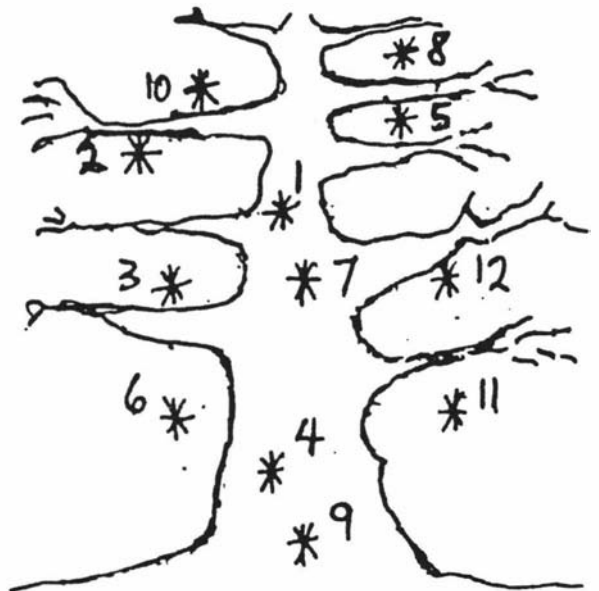
Step 1.

The first tree to the immediate right is marked with asterisks to show the relative positions of twelve (12) factors. Note that some of these markings share centrality and importance.



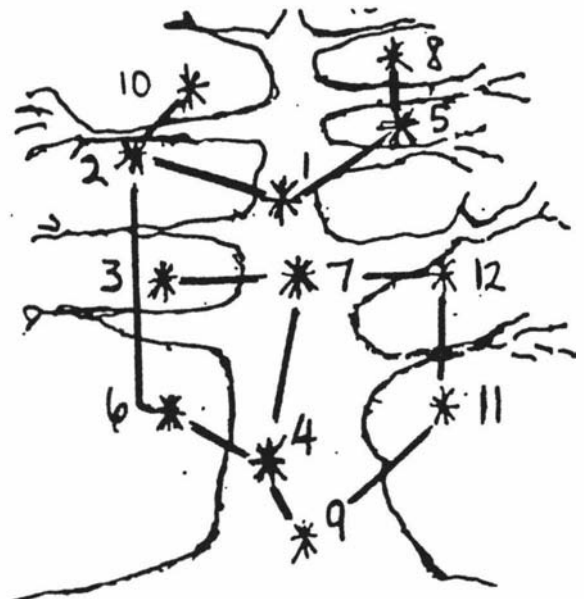
Step 2.

The second tree now shows the placement of Factor numbers close to each of the asterisked positions. Numbers are used here so as not to bias your selection.



Step 3.

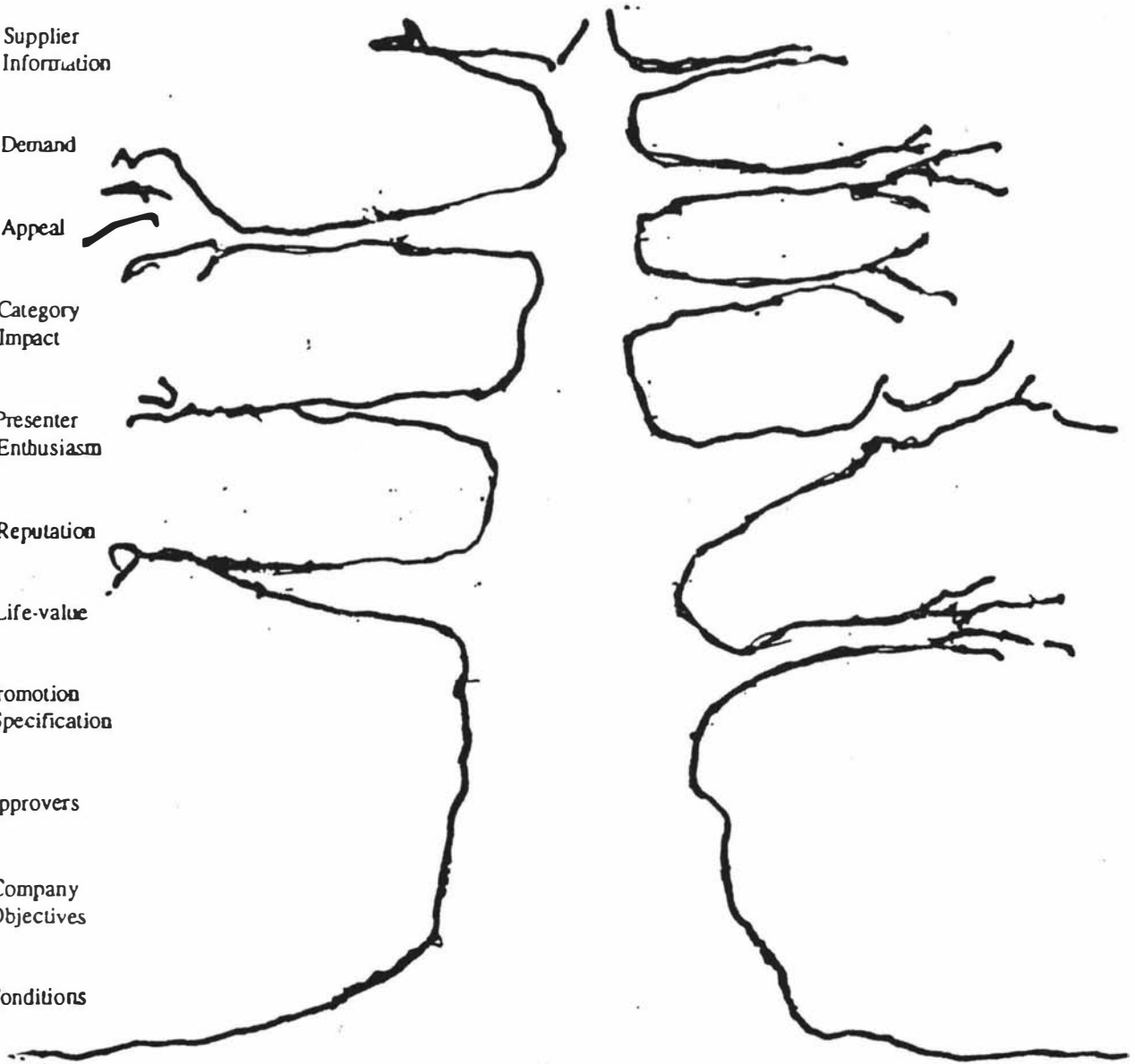
Finally, the third tree shows lines drawn between Factor numbers to exhibit their interconnections.



IMPORTANCE AND CENTRALITY

Carefully consider the twelve (12) decision factors noted for your convenience down the left margin. Select the letter of the most important and central factor and mark its position on the tree to reflect its importance and centrality. Repeat the process for each of the remaining factors, and finally, join the factors with lines to show which ones are connected to others. After you have done this, please complete the Background information sheet on page 9.

- A The Product Offer
- B Supplier Information
- C Demand
- D Appeal
- E Category Impact
- F Presenter Enthusiasm
- G Reputation
- H Life-value
- I Promotion Specification
- J Approvers
- K Company Objectives
- L Conditions



EXPLANATORY NOTES

for

Factor Descriptions

- The Product Offer:** Several product related criteria suggested a flow dimension (eg leadtime, throughput at warehouse) and policy issues (eg credit policy for returns, package labelling) which combine to suggest a basic threshold or constant.
- Supplier Information:** This factor pertains to both the likely performance of the product and the market itself in terms of volume and dollars.
- Demand:** Identified here is the 'likely consumer demand' for the product and the 'overall impact of the product within the product category (volume and dollars)'.
- Appeal:** This represents a rather broad application in that it reflects both the likely acceptance by store management' and 'the initial visual appeal of the package' to the buyer.
- Category Impact:** Two criteria ('potential growth in product category' and 'current size of product category') combine to suggest a positive impact.
- Conditions:** Separate to any financial aspects involving any transaction, this factor highlights 'economic conditions' that may relate to some products at particular points in time. Also present are consultations with a supplier which might condition a buyer's response.
- Presenter Enthusiasm:** Dominant here is the presenter's enthusiasm and commitment to the product and transaction. Such enthusiasm can assist selling the product.
- Reputation:** The factor name here aptly represents the single criterion 'supplier track record/performance'. A strong or good reputation acts as a positive to facilitate exchange.
- Life-Value:** 'Shelf life of the product' and 'financial aspects' combine to form this factor. A short shelf life and a mediocre financial deal could spell disaster for a supplier.

Promotion Specification: A single criterion 'promotional mix specification (dates, program, media)' proposed by the supplier is identified here. This is seen to be distinct from 'promotional commitment' which is promissory in nature. Specification is seen as positive and forceful.

Approvers: The prime force here is external in nature in that it reflects the ability of a presenter to make a decision on the spot. A buyer can play a role in this by quietly 'insisting' on it and respecting its presence.

Company Objectives: Of interest here is not so much the presence of this factor, rather its placement. It is another single criterion factor identified as 'company profit and sales objectives'. Undoubtedly these act as a conditioning force on the buyer, something to which they are forever cognisant and answerable. This is another constant.

BACKGROUND

Company Name: _____ Job Title: _____

(Please circle your answers)

Which one of the following describes your role in the decision to accept or reject a new product offer or proposition?

1. have absolute control of the decision
2. don't have absolute control of the decision but have a large input
3. decision is made by committee

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Which one of the following best describes your main area of purchase responsibility?

1. Food
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4. Other (Specify) _____

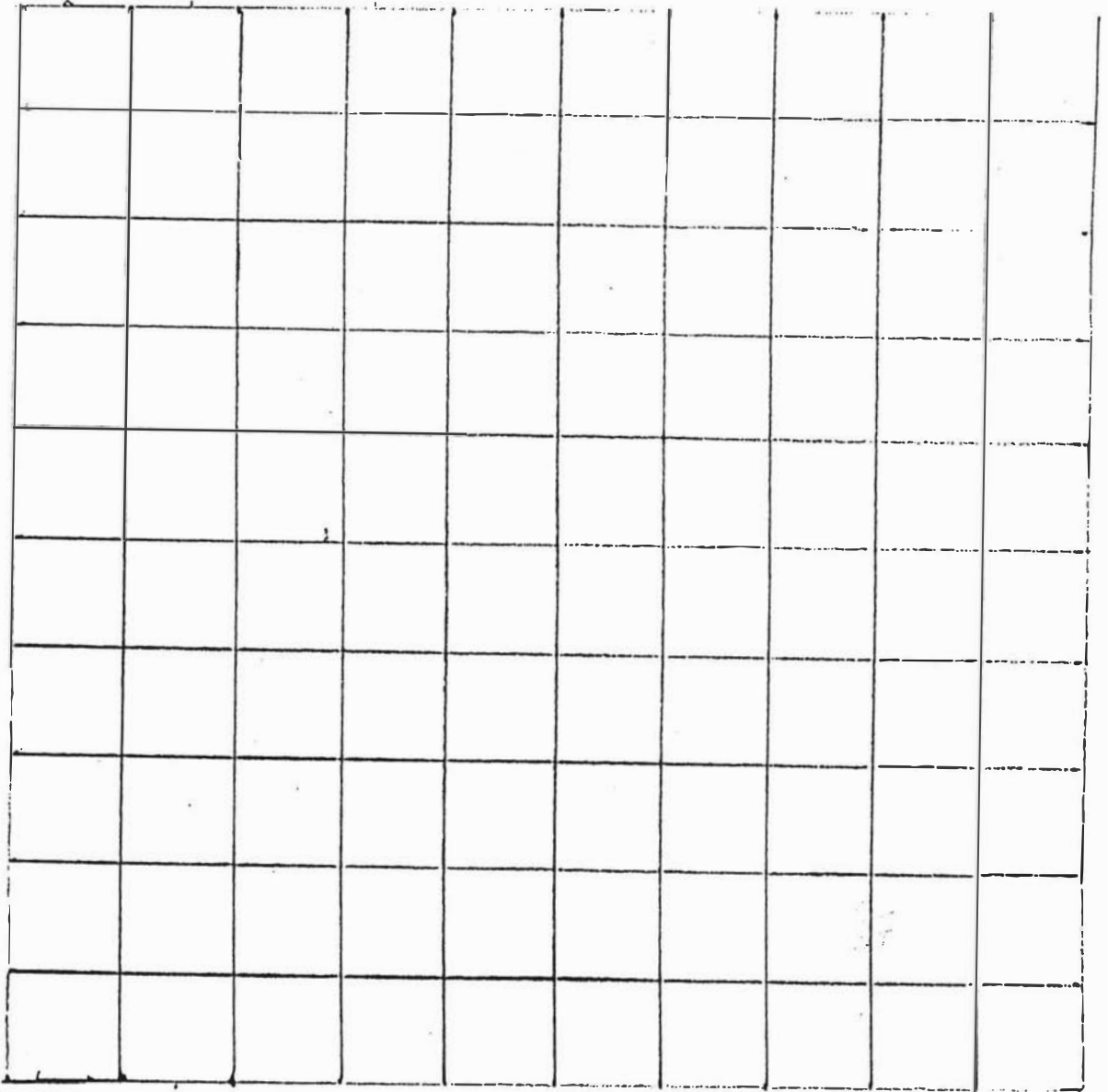
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2. No b) 6 or more people?

THANK YOU FOR YOUR TIME AND COOPERATION

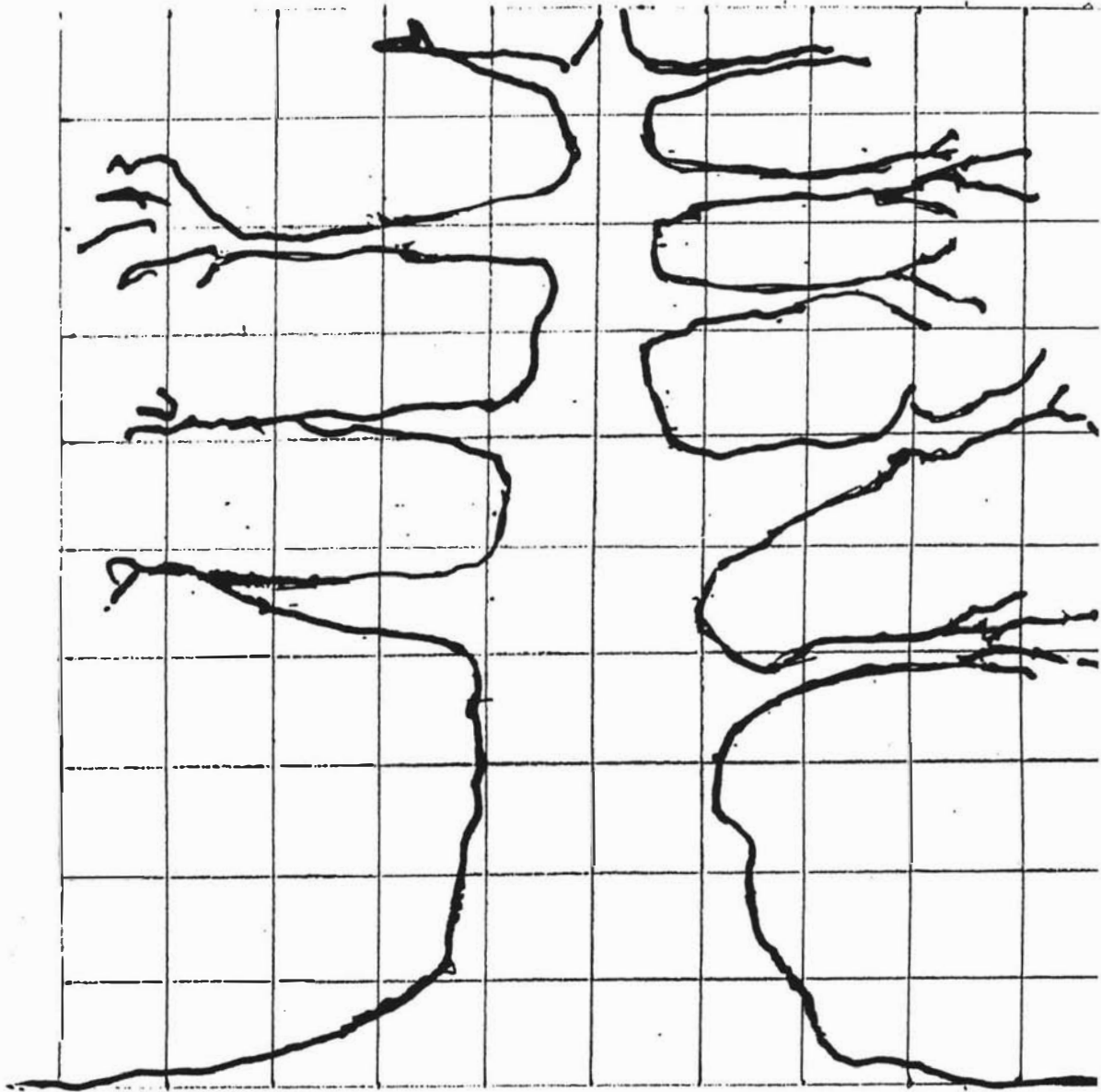
10-Point Bi-Directional Grid

Figure 1. 10 Point Bi-directional Grid



IMPORTANCE AND CENTRALITY

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Conjoint Analysis Block Design

Table 1. Conjoint Analysis Block Design

Scenario Number	Attributes*	Group
1.	0 0 0 0 0 0 0 0	
2.	2 2 1 0 1 0 2 0	
3.	2 0 1 0 2 1 1 0	
4.	2 1 1 1 0 2 0 0	
5.	1 1 0 1 2 0 1 0	A
6.	1 2 0 0 0 1 0 0	
7.	1 0 0 0 1 2 2 0	
8.	0 2 0 0 2 2 1 0	
9.	0 1 0 1 1 1 2 0	
10.	0 0 0 1 2 2 2 1	
11.	0 1 0 0 0 0 1 1	
12.	2 1 0 0 2 1 2 1	
13.	2 2 0 0 0 2 1 1	
14.	0 2 0 0 1 1 0 1	B
15.	2 0 0 1 1 0 0 1	
16.	1 2 1 0 2 0 2 1	
17.	1 1 1 0 1 2 0 1	
18.	1 0 1 1 0 1 1 1	
19.	1 0 0 0 2 0 0 2	
20.	1 1 0 0 0 1 2 2	
21.	1 2 0 1 1 2 1 2	
22.	2 0 0 0 0 2 2 2	
23.	2 1 0 0 1 0 1 2	C
24.	2 2 0 1 2 1 0 2	
25.	0 0 1 0 1 1 1 2	
26.	0 1 1 0 2 2 0 2	
27.	0 2 1 1 0 0 2 2	

Note: * the 0,1 and 2 refer to the design plan assignment of attribute levels

Block 1 = A + B

Block 2 = B + C

Block 3 = A + C

Table 2. Attributes, Levels and Design Plan Numerics

Attribute	Level	Numerics
Conditions	Favourable	0
	Neutral	1
	Unfavourable	2
Product Offer	Met 100%	0
	Met 90%	1
	Met 80%	2
Presenter	Enthused	0
	Unenthused	1
Approvers	Can Decide	0
	Can Not Decide	1
Supplier Information	Excellent	0
	Average	1
	Poor	2
Demand	Appreciable	0
	Average	1
	Negligible	2
Appeal	Very Attractive	0
	Attractive	1
	Ordinary	2

Questionnaire - Stage IV

**STRICTLY
CONFIDENTIAL**

Faculty of Business Studies

Department of Marketing

NEW PRODUCT ACCEPTANCE AND REJECTION

A PhD Study

by

W.A.(Art) Thomas

Senior Lecturer in Marketing

INTRODUCTION

Research over the past three (3) years has been undertaken in stages. This research has addressed a number of different aspects of new product acceptance and rejection within the retail grocery trade as carried on by both buyers and buying committee members. The research on new product acceptance decisions to date has focused for example on the assessment of decision criteria importance, rating and a trade-off analysis of a short list of decision factors, and an assessment of the relative importance and centrality of a full list of twelve (12) decision factors.

Analysis of previous research has highlighted that eight (8) decision factors could be safely used without jeopardising the study's integrity. The 'new' set of decision factors, arrived at as a result of combining related factors, forms the basis of the current and final phase of research which will be conducted in two (2) flights; one being the current questionnaire, the second in a month or so. Each deals with a different product. Set out below in **no particular order** are Decision Factor Explanations.

- Company Objectives:** This decision factor is represented by the single criterion 'company profit & sales objectives'. This is seen as a conditioning force on the buyer, something about which they are forever aware and answerable. To this end, it is treated as a **constant**.
- Presenter Enthusiasm:** Dominant here is the presenter's enthusiasm and commitment to the product and transaction.
- Demand:** Identified here is the 'likely consumer demand' for the product and the 'overall impact of the product within the category (volume & dollars)'. These are further supported by the 'ability of the product to maximise profitability', 'affects on the sales mix of product category' and 'potential growth in the product category'.
- Approvers:** The prime force here is external in nature in that it reflects the ability of a presenter to make a decision on the spot. A buyer can play a role in this by quietly 'insisting' on it and respecting its presence.
- Supplier Information:** This factor pertains to information about both the likely performance of the product and the market itself in terms of volume and dollars. Other information input includes the 'availability of the product' and the 'supplier's promotional mix specification (dates, programme, media)'.
- The Product Offer:** Several product related criteria suggest a flow dimension (eg leadtime, throughput at warehouse) and policy issues (eg credit policy for returns, package labelling) which combine to suggest a basic threshold which can vary.
- Appeal:** This represents a broad application of the term 'appeal' reflecting a blend of several items; namely, 'initial visual appeal of the package', 'life of the product', 'supplier track record/performance', 'acceptance by store management' and 'financial aspects'.
- Conditions:** Apart from any financial aspects, this item includes 'economic conditions' together with 'company image and product image matching', 'previous relations with supplier' and 'consultations with supplier'.

Decision Factor Levels

While eight (8) decision factors are described above, the research at hand uses seven (7) of these. It does so with the use of **levels** for each factor. These levels define the decision factors. The eighth decision factor, **Company Objectives**, is held **constant and met** for situations. The seven (7) decision factors and their levels are set out below. The **highlighted** words for each decision factor are used in the following question. Take a moment now to familiarise yourself with the descriptors.

Presenter Enthusiasm:

- a) Presenter is **enthused**
- b) Presenter is **unenthused**

Approvers:

- a) Presenter can **decide** on the spot
- b) Presenter **can't** decide on the spot

Demand:

- a) Overall impact is likely to be **appreciable**
- b) Overall impact is likely to be **average**
- c) Overall impact is likely to be negligible

Conditions:

- a) General conditions are **favourable**
- b) General conditions are **neutral**
- c) General conditions are **unfavourable**

Supplier Information:

- a) Supplier input is **excellent**
- b) Supplier input is **average**
- c) Supplier input is **poor**

The Product Offer:

- a) Product Offer meets our requirements **100%**
- b) Product Offer meets our requirements **90%**
- c) Product Offer meets our requirements **80%**

Appeal:

- a) Overall appeal is **very attractive**
- b) Overall appeal is **attractive**
- c) Overall appeal is **ordinary**

Product Description

The research question which follows concerns a **Health Food product**. For the purposes here, the product is to be considered as an a **generic, high energy, uncoated muesli snack bar**. The merits of the product are described for you as various combinations of decision factor levels.

Questionnaire Completion

The current research asks two (2) things of you. One is to provide an evaluation of a series of product presentation situations called scenarios for a given product that remains constant throughout. Secondly, as in the past, you are asked to complete a Background Information section following your evaluation of the scenarios.

EXAMPLE

Over the next two (2) pages you will be presented with summary descriptions (called scenarios) for presentations on a single product category. These descriptions are combinations of decision factor levels. In any given situation you may be faced with assessing a presenter able to make a decision, good supplier information, strong demand, and so on. **What you have to do** is evaluate this information in total for each scenario provided and then, based on your evaluation, indicate your likelihood of accepting the product as described. You do this by **CIRCLING ONE number only** on the 10-point scale provided to the right of each description. For this scale, a '1' equates to 'extremely unlikely to accept', while a '10' signifies 'extremely likely to accept'. The aim of the scale is to get degrees of acceptance, not absolutes.

In the fictitious example below, the levels for each of the five (5) attributes are described at one of four levels; that is, excellent, good, average or poor. For each scenario, the respondent has evaluated this information across the attributes and come to a decision by circling one number for each scenario.

Scenario	Attribute 1	Attribute 2	Attribute 3	Attribute 4	Attribute 5	Acceptance Scale									
						Extremely Unlikely					Extremely Likely				
# 1	Good	Average	Poor	Poor	Excellent	1	2	3	4	5	6	7	8	9	10
# 2	Poor	Poor	Average	Good	Poor	1	2	3	4	5	6	7	8	9	10
# 3	Average	Excellent	Good	Average	Good	1	2	3	4	5	6	7	8	9	10

As can be seen by the above example, the evaluation undertaken one line at a time has resulted in circling three (3) numbers; 6, 2, and 9 respectively. Whilst the first scenario shows some degree of acceptance, the second is virtually unacceptable. Of all three, the third scenario is most favoured and exhibits the highest degree of likely acceptance. NOTE that the final evaluation is one of degree!

Before you start your evaluations, take a further moment to familiarise yourself with both the Decision Factor Explanations and importantly, their respective abbreviated levels.

A number of different presentation situations (**Scenarios**) for a hypothetical new **Health Food product** are made to you and are outlined below in summary form as varying combinations of seven (7) decision factors. In all cases, Company Objectives are held constant and met. These situations are combinations of decision factors that you as a buyer or committee member might face. **Now, take each description one at a time** and separately evaluate it on its **described** merits and then, make an accept or reject decision about it. Use the scale to the right of each description to record your decision by **CIRCLING ONE** number that best describes **how likely** it is that you would accept the described product. A '1' equates to 'extremely unlikely to accept', while a '10' signifies 'extremely likely to accept'. **Remember**, there are no right or wrong answers, only a decision that you feel is best for your company. (K)

Scenario	Conditions	Product Offer	Presenter Enthusiasm	Approvers	Supplier Information	Demand	Appeal	Acceptance Scale									
								Extremely Unlikely	1	2	3	4	5	6	7	8	9
# 1	Neutral	90%	Enthused	Can't Decide	Poor	Appreciable	Attractive	1	2	3	4	5	6	7	8	9	10
# 2	Favourable	80%	Enthused	Can Decide	Poor	Negligible	Attractive	1	2	3	4	5	6	7	8	9	10
# 3	Unfavourable	80%	Unenthused	Can Decide	Average	Appreciable	Ordinary	1	2	3	4	5	6	7	8	9	10
# 4	Unfavourable	100%	Unenthused	Can Decide	Poor	Average	Attractive	1	2	3	4	5	6	7	8	9	10
# 5	Favourable	90%	Enthused	Can't Decide	Average	Average	Ordinary	1	2	3	4	5	6	7	8	9	10
# 6	Favourable	100%	Enthused	Can Decide	Excellent	Appreciable	Very Attractive	1	2	3	4	5	6	7	8	9	10
# 7	Neutral	80%	Enthused	Can Decide	Excellent	Average	Very Attractive	1	2	3	4	5	6	7	8	9	10
# 8	Unfavourable	90%	Unenthused	Can't Decide	Excellent	Negligible	Very Attractive	1	2	3	4	5	6	7	8	9	10
# 9	Neutral	100%	Enthused	Can Decide	Average	Negligible	Ordinary	1	2	3	4	5	6	7	8	9	10

... when you have finished this page, go to the next one ...

(K)

Scenario	Conditions	Product Offer	Presenter Enthusiasm	Approvers	Supplier Information	Demand	Appeal	Acceptance Scale									
								Extremely Unlikely	1	2	3	4	5	6	7	8	9
# 10	Favourable	100%	Enthused	Can't Decide	Poor	Negligible	Ordinary	1	2	3	4	5	6	7	8	9	10
# 11	Neutral	80%	Unenthused	Can Decide	Poor	Appreciable	Ordinary	1	2	3	4	5	6	7	8	9	10
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And now, on to the Background Information

Background Information

Company Name: _____

Your Job Title: _____

CIRCLE appropriate response.

Years with this Company:

1. less than 5 years
2. 5 - 14 years
3. 15 years or more

Are You:

1. buyer only
2. committee member only
3. both

Years as a Buyer:

1. less than 5 years
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Your Age:

1. less than 30 years
2. 30 -39 years
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Does your company use category management?

1. Yes
2. No

Which of the following best describes your role in new product offer decisions?

1. absolute control
2. don't have absolute control , but have large input
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Which of the following best describes your company's proportion of centrally warehoused goods?

1. 0%
2. 1 - 40%
3. 41 - 70%
4. 71% or more

Does your company currently use a buying or ranging committee ?

1. Yes -----> Is that: a) 1 - 5 people?
2. No b) 6 or more people?

You have just evaluated a Health Food product. Is this type of product:

1. part of your usual decision responsibility?
2. not part of your usual decision responsibility?

THANK YOU FOR YOUR TIME AND COOPERATION !!

**STRICTLY
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Faculty of Business Studies

Department of Marketing

NEW PRODUCT ACCEPTANCE AND REJECTION

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- b) Presenter **can't decide** on the spot

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- a) Overall impact is likely to be **appreciable**
- b) Overall impact is likely to be **average**
- c) Overall impact is likely to be negligible

Conditions:

- a) General conditions are **favourable**
- b) General conditions are **neutral**
- c) General conditions are **unfavourable**

Supplier Information:

- a) Supplier input is **excellent**
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EXAMPLE

Over the next two (2) pages you will be presented with summary descriptions (called scenarios) for presentations on a single product category. These descriptions are combinations of decision factor levels. In any given situation you may be faced with assessing a presenter able to make a decision, good supplier information, strong demand, and so on. **What you have to do** is evaluate this information in total for each scenario provided and then, based on your evaluation, indicate your likelihood of accepting the product as described. You do this by **CIRCLING ONE number only** on the 10-point scale provided to the right of each description. For this scale, a '1' equates to 'extremely unlikely to accept', while a '10' signifies 'extremely likely to accept'. The aim of the scale is to get degrees of acceptance, not absolutes.

In the fictitious example below, the levels for each of the five (5) attributes are described at one of four levels; that is, excellent, good, average or poor. For each scenario, the respondent has **evaluated** this information **across the attributes** and come to a decision by circling one number for each scenario.

Scenario	Attribute 1	Attribute 2	Attribute 3	Attribute 4	Attribute 5	Acceptance Scale									
						Extremely Unlikely					Extremely Likely				
# 1	Good	Average	Poor	Poor	Excellent	1	2	3	4	5	6	7	8	9	10
# 2	Poor	Poor	Average	Good	Poor	1	2	3	4	5	6	7	8	9	10
# 3	Average	Excellent	Good	Average	Good	1	2	3	4	5	6	7	8	9	10

As can be seen by the above example, the evaluation undertaken one line at a time has resulted in circling three (3) numbers; 6, 2, and 9 respectively. Whilst the first scenario shows some degree of acceptance, the second is virtually unacceptable. Of all three, the third scenario is most favoured and exhibits the highest degree of likely acceptance. **NOTE** that the final evaluation is one of degree!

Before you start your evaluations, take a further moment to familiarise yourself with both the Decision Factor Explanations and importantly, their respective abbreviated levels.

A number of different presentation situations (**Scenarios**) for a hypothetical new **Health Food product** are made to you and are outlined below in summary form as varying combinations of seven (7) decision factors. In all cases, Company Objectives are held constant and met. These situations are combinations of decision factors that you as a buyer or committee member might face. **Now**, take each description **one at a time** and separately evaluate it on its **described** merits and then, make an accept or reject decision about it. Use the scale to the right of each description to record your decision by **CIRCLING ONE** number that best describes **how likely** it is that you would accept the described product. A '1' equates to 'extremely unlikely to accept', while a '10' signifies 'extremely likely to accept'. **Remember**, there are no right or wrong answers, only a decision that you feel is best for your company. (Y)

Scenario	Approvers	Demand	Product Offer	Supplier Information	Appeal	Presenter Enthusiasm	Conditions	Acceptance Scale									
								Extremely Unlikely					Extremely Likely				
# 1	Can't Decide	Negligible	100%	Poor	Ordinary	Enthused	Favourable	1	2	3	4	5	6	7	8	9	10
# 2	Can Decide	Appreciable	80%	Poor	Ordinary	Unenthused	Neutral	1	2	3	4	5	6	7	8	9	10
# 3	Can't Decide	Average	100%	Excellent	Attractive	Unenthused	Neutral	1	2	3	4	5	6	7	8	9	10
# 4	Can Decide	Negligible	80%	Excellent	Attractive	Enthused	Unfavourable	1	2	3	4	5	6	7	8	9	10
# 5	Can Decide	Average	80%	Average	Very Attractive	Enthused	Favourable	1	2	3	4	5	6	7	8	9	10
# 6	Can Decide	Appreciable	90%	Excellent	Attractive	Enthused	Favourable	1	2	3	4	5	6	7	8	9	10
# 7	Can Decide	Negligible	90%	Average	Very Attractive	Unenthused	Neutral	1	2	3	4	5	6	7	8	9	10
# 8	Can't Decide	Appreciable	100%	Average	Very Attractive	Enthused	Unfavourable	1	2	3	4	5	6	7	8	9	10
# 9	Can Decide	Average	90%	Poor	Ordinary	Enthused	Unfavourable	1	2	3	4	5	6	7	8	9	10

... when you have finished this page, go to the next one ...

(Y)

Scenario	Approvers	Demand	Product Offer	Supplier Information	Appeal	Presenter Enthusiasm	Conditions	Acceptance Scale										
								Extremely Unlikely	1	2	3	4	5	6	7	8	9	10
# 10	Can Decide	Negligible	100%	Average	Ordinary	Enthusied	Neutral	1	2	3	4	5	6	7	8	9	10	
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# 14	Can't Decide	Average	90%	Average	Ordinary	Enthusied	Favourable	1	2	3	4	5	6	7	8	9	10	
# 15	Can Decide	Average	100%	Poor	Attractive	Unenthusied	Unfavourable	1	2	3	4	5	6	7	8	9	10	
# 16	Can Decide	Appreciable	80%	Average	Ordinary	Unenthusied	Unfavourable	1	2	3	4	5	6	7	8	9	10	
# 17	Can Decide	Negligible	80%	Poor	Attractive	Enthusied	Favourable	1	2	3	4	5	6	7	8	9	10	
# 18	Can't Decide	Appreciable	90%	Poor	Attractive	Enthusied	Neutral	1	2	3	4	5	6	7	8	9	10	

And now, on to the Background Information

Background Information

Company Name: _____

Your Job Title: _____

CIRCLE appropriate response.

Years with this Company:

1. less than 5 years
2. 5 - 14 years
3. 15 years or more

Are You:

1. buyer only
2. committee member only
3. both

Years as a Buyer:

1. less than 5 years
2. 5 - 10 years
3. 11 or more years

Your Age:

1. less than 30 years
2. 30 -39 years
3. 40 years or more

Does your company use category management?

1. Yes
2. No

Which of the following best describes your role in new product offer decisions?

1. absolute control
2. don't have absolute control , but have large input
3. decision is made by committee

Which of the following best describes your company's proportion of centrally warehoused goods?

1. 0%
2. 1 - 40%
3. 41 - 70%
4. 71% or more

Does your company currently use a buying or ranging committee ?

1. Yes -----> Is that: a) 1 - 5 people?
2. No b) 6 or more people?

You have just evaluated a Health Food product. Is this type of product:

1. part of your usual decision responsibility?
2. not part of your usual decision responsibility?

THANK YOU FOR YOUR TIME AND COOPERATION !!

**STRICTLY
CONFIDENTIAL**

Faculty of Business Studies

Department of Marketing

NEW PRODUCT ACCEPTANCE AND REJECTION

A PhD Study

by

W.A.(Art) Thomas

Senior Lecturer in Marketing

INTRODUCTION

Research over the past three (3) years has been undertaken in stages. This research has addressed a number of different aspects of new product acceptance and rejection within the retail grocery trade as carried on by both buyers and buying committee members. The research on new product acceptance decisions to date has focused for example on the assessment of decision criteria importance, rating and a trade-off analysis of a short list of decision factors, and an assessment of the relative importance and centrality of a full list of twelve (12) decision factors.

Analysis of previous research has highlighted that eight (8) decision factors could be safely used without jeopardising the study's integrity. The 'new' set of decision factors, arrived at as a result of combining related factors, forms the basis of the current and final phase of research which will be conducted in two (2) flights; one being the current questionnaire, the second in a month or so. Each deals with a different product. Set out below in **no particular order** are Decision Factor Explanations.

- Company Objectives:** This decision factor is represented by the single criterion 'company profit & sales objectives'. This is seen as a conditioning force on the buyer, something about which they are forever aware and answerable. To this end, it is treated as a **constant**.
- Presenter Enthusiasm:** Dominant here is the presenter's enthusiasm and commitment to the product and transaction.
- Demand:** Identified here is the 'likely consumer demand' for the product and the 'overall impact of the product within the category (volume & dollars)'. These are further supported by the 'ability of the product to maximise profitability', 'affects on the sales mix of product category' and 'potential growth in the product category'.
- Approvers:** The prime force here is external in nature in that it reflects the ability of a presenter to make a decision on the spot. A buyer can play a role in this by quietly 'insisting' on it and respecting its presence.
- Supplier Information:** This factor pertains to information about both the likely performance of the product and the market itself in terms of volume and dollars. Other information input includes the 'availability of the product' and the 'supplier's promotional mix specification (dates, programme, media)'.
- The Product Offer:** Several product related criteria suggest a flow dimension (eg leadtime, throughput at warehouse) and policy issues (eg credit policy for returns, package labelling) which combine to suggest a basic threshold which can vary.
- Appeal:** This represents a broad application of the term 'appeal' reflecting a blend of several items; namely, 'initial visual appeal of the package', 'life of the product', 'supplier track record/performance', 'acceptance by store management' and 'financial aspects'.
- Conditions:** Apart from any financial aspects, this item includes 'economic conditions' together with 'company image and product image matching', 'previous relations with supplier' and 'consultations with supplier'.

Decision Factor Levels

While eight (8) decision factors are described above, the research at hand uses seven (7) of these. It does so with the use of levels for each factor. These levels define the decision factors. The eighth decision factor, **Company Objectives**, is held **constant and met** for situations. The seven (7) decision factors and their levels are set out below. The **highlighted** words for each decision factor are used in the following question. Take a moment now to familiarise yourself with the descriptors.

Presenter Enthusiasm:

- a) Presenter is **enthused**
- b) Presenter is **unenthused**

Approvers:

- a) Presenter **can decide** on the spot
- b) Presenter **can't decide** on the spot

Demand:

- a) Overall impact is likely to be **appreciable**
- b) Overall impact is likely to be **average**
- c) Overall impact is likely to be negligible

Conditions:

- a) General conditions are **favourable**
- b) General conditions are **neutral**
- c) General conditions are **unfavourable**

Supplier Information:

- a) Supplier input is **excellent**
- b) Supplier input is **average**
- c) Supplier input is **poor**

The Product Offer:

- a) Product Offer meets our requirements **100%**
- b) Product Offer meets our requirements **90%**
- c) Product Offer meets our requirements **80%**

Appeal:

- a) Overall appeal is **very attractive**
- b) Overall appeal is **attractive**
- c) Overall appeal is **ordinary**

Product Description

The research question which follows concerns a **Health Food product**. For the purposes here, the product is to be considered as an a **generic, high energy, uncoated muesli snack bar**. The merits of the product are described for you as various combinations of decision factor levels.

Questionnaire Completion

The current research asks **two (2)** things of you. One is to provide an evaluation of a series of product presentation situations called scenarios for a given product that remains constant throughout. Secondly, as in the past, you are asked to complete a Background Information section following your evaluation of the scenarios.

EXAMPLE

Over the next two (2) pages you will be presented with summary descriptions (called scenarios) for presentations on a single product category. These descriptions are combinations of decision factor levels. In any given situation you may be faced with assessing a presenter able to make a decision, good supplier information, strong demand, and so on. **What you have to do** is evaluate this information in total for **each** scenario provided and then, based on your evaluation, indicate your likelihood of accepting the product as described. You do this by **CIRCLING ONE number only** on the 10-point scale provided to the right of each description. For this scale, a '1' equates to 'extremely unlikely to accept', while a '10' signifies 'extremely likely to accept'. The aim of the scale is to get degrees of acceptance, not absolutes.

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Scenario	Presenter Enthusiasm	Supplier Information	Conditions	Approvers	Appeal	Product Offer	Demand	Acceptance Scale									
								Extremely Unlikely					Extremely Likely				
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(II)

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You have just evaluated a Health Food product. Is this type of product:

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2. not part of your usual decision responsibility?

THANK YOU FOR YOUR TIME AND COOPERATION !!

Initial Criteria Rankings and Sundry Tables

Criteria from Interviews

1. Company profits and sales objectives
2. Knowledgeable presenter
3. Initial visual appeal of product
4. Number of existing products in the category
5. Supplier track record/performance
6. Promotion/advertising commitment shown
7. Product sizes (carton, inner/outer)
8. Commitment/enthusiasm of presenter
9. Company image and product image matching
10. Potential growth in product category
11. Financial aspects (list cost, discounts, rebates, trade terms, suggested price)
12. Current size of product category (volume/\$s)
13. Unique product benefits/features
14. Consultations with supplier/manufacture
15. Availability of space in your warehouse
16. Previous relations with supplier/manufacture
17. Promotional mix specification (dates/program/media)
18. Supplier information on likely performance of product
19. Ability of presenter to make decisions
20. Availability of product
21. Supplier information about the market (volume/\$s)
22. Matching product to desired customer base
23. Potential profitability of the product
24. Overall impact of product within product category re volume/\$s
25. Seasonality of the product
26. Life of the product (shelf/use by)
27. Lead time required with supplier
28. Similarity of product to what is available
29. Likely slow/fast throughput at your warehouse
30. Supplier credit policy for returned goods
31. Regulations/legislation re product content, labels
32. Likely consumer demand
33. Whether the product is carried by the competition
34. In-office approvals (taste/packaging/size)
35. Ability of product to maximise profitability
36. Economic conditions in relations to some products
37. Minimum purchase size/order requirement
38. Package labelling and what's on it
39. Landscape or portrait shelf packaging
40. Affects on the sales mix of product category
41. Likely acceptance by store management

Table 1 **Evaluative Criteria Rankings and Deviations**

Rank	Criteria	Mean	SD
1	Financial aspects	4.74	.446
2	Company profits & sales objectives	4.71	.460
3	Likely consumer demand	4.63	.541
4	Promotion & advertising commitment shown	4.58	.500
5=	Availability of product	4.55	.602
5=	Ability of product to maximise profit		.504
7	Potential profitability of product	4.45	.724
8	Overall impact of product wit' in product category (vol, \$)	4.42	.599
9	Potential growth in product category	4.37	.589
10=	Supplier track record/performance	4.29	.515
10=	Package labelling & what's on it		.956
10=	Ability of presenter to make decisions		.768
13=	Initial visual appeal of product	4.21	.528
13=	Unique product benefits/features	4.21	.577
15=	Knowledgeable presenter	4.16	.594
15=	Number of existing products in the category	4.16	.886
17=	Promotional mix specification (dates, program, media)	4.10	.764
17=	Minimum purchase requirement/order size	4.10	.981
17=	Life of product (shelf/use by)	4.10	1.008
20	Affects on the sales mix of product category	4.08	.587
21=	Likely slow/fast throughput at warehouse	4.03	.944
21=	Supplier information about market		.915
23	Current size of product category (vol, \$s)	4.00	.930
24=	Regulations/legislation re product content	3.97	1.050
24=	Product sizes (carton, inner/outer)		.854
26	Economic conditions in relation to some products	3.95	.733
27	Leadtime required with supplier	3.82	.982
28	Matching product to desired customer base	3.79	1.044
29=	Similarity of product to what's available	3.76	1.025

29=	Supplier credit policy for returned goods		1.051
31	Supplier information of likely performance of product	3.71	.867
32=	Seasonality of product	3.60	1.028
32=	Likely acceptance by store management		1.220
34	In-office approvals (taste, packaging, size)	3.58	1.004
35=	Commitment/enthusiasm of presenter	3.47	.862
35=	Consultations with supplier		.922
35=	Previous relations with supplier		.951
38	Landscape/portrait shelf packaging	3.32	1.118
39	Company image & product image marketing	3.24	.883
40=	Availability of space in warehouse	3.21	1.359
40=	Whether product carried by competition		1.189

Table 2. Evaluative Criteria and Mean Significant Scores

Criteria	Company	Category Mngmnt	Proportion	Age	Years as Buyer	Years with Company	Ranging Committee	Number in Ranging Committee
Profsale	.3438	.7963	.1479	.9687	.9552	.6732	.4487	.6832
Presentr	.3647	.1745	.7557	.7847	.4342	.4914	.5006	.7921
Visapeal	.0254	.7000	.6083	.5490	.5234	.0434	.0594	.3346
Exprod	.0445	.8634	.9386	.3169	.4740	.1782	.9376	.0036
Trakrec	.9147	.8179	.5886	.5321	.2780	.3412	.2079	.6207
Promcom	.9810	.8656	.7492	.0853	.4748	.2533	.5548	.8749
Prodsiz	.1642	.0890	.0565	.7568	.4970	.1138	.1883	.4558
E..thuse	.5134	.3631	.7176	.3730	.1205	.4548	.3109	.9299
Prodimag	.0085	.2375	.8178	.0802	.2526	.6247	.0038	.1894
Potgrow	.0125	.0047	.9945	.2533	.6846	.9052	.9296	.0223
Finaspec	.2471	.8793	.4406	.6519	.5641	.4934	.8156	.0320
Cursize	.4840	.7291	.7943	.1965	.0527	.4997	.2840	.2614
Unique	.4236	.4433	.4944	.0874	.1915	.5693	.9760	.2480
Consult	.9471	.8832	.2239	.6947	.7527	.5778	.8215	.5125
Space	.5969	.0641	.7407	.0841	.1854	.1621	.3225	.5337
Relatns	.1803	.4104	.2475	.5452	.4689	.7511	.4098	.7972
Promspec	.0678	.4763	.1566	.6464	.3713	.8827	.2820	.8797
Suppinfo	.0065	.2060	.8824	.4854	.5655	.8229	.0189	.4558
Decision	.1825	.0194	.5981	.6985	.5234	.4185	.2009	.5496
Avalable	.0181	.2439	.1683	.4727	.0350	.5194	.0063	.7323
Suppmark	.0446	.8822	.3546	.6477	.5251	.9592	.0469	.4407
Custbase	.6847	.9096	.6116	.9340	.8064	.8550	.5159	.8071
Potprof	.0271	.7079	.1099	.3488	.8523	.7401	.4273	.9048
Impact	.1406	.3475	.7221	.1011	.3908	.1343	.2934	.1861
Season	.4484	.9212	.2710	.8955	.5517	.5593	.6361	.3964
Life	.0147	.1623	.3365	.2640	.1440	.1480	.0287	.2933
Leadtime	.3278	.9862	.1619	.2885	.4684	.8336	.2469	.0544
Similar	.7696	.3785	.6224	.5750	.9741	.1079	.9191	.2207
Thruput	.7742	.2175	.6598	.4414	.2302	.2469	.8977	.0073
Credpol	.7391	.1363	.2448	.6987	.1385	.3534	.8301	.4845
Regleg	.4267	.1706	.1814	.7359	.2250	.2256	.9082	.5079
Cdemand	.2053	.0583	.0493	.1640	.8876	.3230	.0771	.0066
Carried	.8376	.2048	.1445	.2789	.0207	.3452	.9884	.6668
Inoffice	.9927	.2259	.4824	.6329	.7150	.2651	.9724	.4154
Maxprof	.6600	.2347	.1810	.5096	.6079	.8873	.6294	.4759
Economic	.2095	.4166	.9700	.6992	.6917	.7404	.0491	.8695
Minpurch	.9433	.6654	.1200	.5626	.8713	.9890	.8596	.5664
Paklab	.4799	.4231	.0885	.4390	.0458	.9620	.4778	.0264
Lorppack	.3136	.7616	.6296	.8743	.0820	.4721	.1035	.2211
Salesmix	.1772	.4873	.6305	.3360	.5585	.4921	.6151	.3057
Storeman	.1410	.7283	.6658	.2594	.1455	.7379	.2222	.1830
Significant (n=)	10	5	3	4	5	1	8	7

Table 3. Ranking Method Comparison of Evaluative Criteria

Mean Value Rank	Criteria	Proportion %	Relative Ranks
1	Financial aspects	100	1=
2	Company profits & sales objectives	100	1=
3	Likely consumer demand	97	5=
4	Promotion & advertising commitment shown	100	1=
5=	Availability of product	95	7=
5=	Ability of product to maximise profit	100	1=
7	Potential profitability of product	92	12
8	Overall impact of product within product category (vol, \$)	94	10=
9	Potential growth in product category	95	7=
10=	Supplier track record/performance	94	10=
10=	Package labelling & what's on it	89	13=
10=	Ability of presenter to make decisions	87	15=
13=	Initial visual appeal of product	95	7=
13=	Unique product benefits/features	97	5=
15=	Knowledgeable presenter	89	13=
15=	Number of existing products in the category	79	22
17=	Promotional mix specification (dates, program, media)	87	15=
17=	Minimum purchase requirement/order size	82	18=
17=	Life of product (shelf/use by)	78	23=
20	Affects on the sales mix of product category	87	15=
21=	Likely slow/fast throughput at warehouse	82	18=
21=	Supplier information about market	71	28
23	Current size of product category	78	23=
24=	Product sizes (carton, inner/outer)	81	21
24=	Regulations/legislation re product content	82	18=
26	Economic condition in relation to some products	76	25=
27	Leadtime required with supplier	70	29
28	Matching product to desired customer base	76	25=
29=	Similarity of product to what's available	76	25=

29=	Supplier credit policy for returned goods	66	30=
31	Supplier information of likely performance of product	66	30=
32=	Seasonality of product	60	33=
32=	Likely acceptance by store management	63	32
34	In-office approvals (taste, packaging, size)	60	33=
35=	Commitment/enthusiasm of presenter	55	36
35=	Consultations with supplier	39	40=
35=	Previous relations with supplier	57	35
38	Landscape/portrait shelf packaging	42	39
39	Company image & product image matching	39	40=
40	Availability of space in warehouse	52	37
41	Whether product carried by competition	44	38

Table 4. CHI-Square Significance Results

Criteria	Background Elements	Significance
Number of existing products in the category	nil	nil
Current size of product category (vol,\$)	years with company respondent age ranging committee	p=0.1221 p=0.1177 p=0.1517
Life of product (shelf/use by)	years as a buyer respondent age ranging committee	p=0.1395 p=0.0835 p=0.0840
Economic conditions in relation to some products	category management ranging committee	p=0.0266 p=0.0518
Matching products to desired customer base	nil	nil
Similarity of product to what's available	central warehousing	p=0.0900
Supplier information about market	ranging committee	p=0.1211
Lead time required with supplier	nil	nil
Supplier credit policy for returned goods	years as a buyer	p=0.1072
Supplier information of likely performance of product	company	p=0.0714
Likely acceptance by store management	central warehousing ranging committee	p=0.1499 p=0.0419
Seasonality of product	respondent age	p=0.0084
In-office approvals (taste, packaging, size)	years with company	p=0.1350
Previous relations with supplier	category management	p=0.1216
Commitment/enthusiasm of presenter	respondent age	p=0.1277
Availability of space at warehouse	years with company respondent age	p=0.0920 p=0.0345
Whether product carried by competition	respondent age	p=0.0749
Landscape/portrait shelf packaging	company central warehousing ranging committee	p=0.0673 p=0.0848 p=0.0671

Consultations with supplier

category management

p=0.0619

company image and product image matching

company
ranging committee

p=0.0039

p=0.0306

Table 5. Frequency Distribution of Criteria (%)

Criteria	Percentages					Sum
	VI	I	N	U	VU*	
Financial aspects	74	26				100
Company profits & sales objectives	73	27				100
Promotion & advertising commitment shown	59	41				100
Ability of product to maximise profit	56	44				100
Likely consumer demand	68	29	3			100
Supplier track record/performance	35	62	3			100
Unique product benefits/features	26	71		3		100
Potential growth in product category	42	53	5			100
Availability of product	61	34	5			100
Overall impact of product within product category (vol/\$s)	47	47	5			100
Potential profitability of product	55	37	5	3		100
Initial visual appeal of product	26	69	5			100
Package labelling & whats on it	47	42	8		3	100
Knowledgeable presenter	26	63	11			100
Ability of presenter to make decisions	45	42	10	3		100
Promotional mix specifications	29	58	8	5		100
Affects on sales mix of product category	21	66	13			100
Minimum purchase requirement/order size	37	45	16		2	100
Likely slow/fast throughput at warehouse	29	53	15		3	100
Regulations/legislation re product content	29	53	13		5	100
Product sizes (carton, inner/outer)	23	58	13	3	3	100
Number of existing products in the category	42	37	16	5		100
Current size of product category (vol, \$)	31	47	11	11		100
Life of product (shelf/use by)	39	39	19		3	100
Economic conditions in relation to some products	21	55	21	3		100
Similarity of product to what's available	16	60	16	3	5	100
Matching product to desired customer base	18	58	15	3	6	100
Supplier information about market	37	34	24	5		100
Lead time required with supplier	20	50	24	3	3	100
Supplier credit policy for returned goods	24	42	26	5	3	100
Supplier information of likely performance of product	16	50	24	10		100
Likely acceptance by store management	21	42	24	8	5	100
Seasonality of product	15	45	29	8	3	100
In-office approvals (taste, packaging, size)	13	47	29	8	3	100
Previous relations with supplier	5	52	34	3	6	100
Commitment/enthusiasm of presenter	8	47	29	16		100
Availability of space in warehouse	10	42	26	9	13	100
Whether product carried by competition	10	34	34	11	11	100
Landscape/portrait shelf packaging	13	29	45	5	8	100

Consultations with supplier	18	21	50	11		100
Company image and product image matching	5	13	42	16	3	100

* very unimportant (1) and unapplicable (0) responses have been combined. Both account for very few respondents.

Table 7. Factor Loadings**Total Sample**

Factor 1		Factor 2		Factor 3	
Packlab	.8878	Suppinfo	.8628	Impact	.8173
Leadtime	.8273	Suppmark	.6959	Cdemand	.7446
Thruput	.8240				
Minpurch	.8133				
Credpol	.7986				
Factor 4		Factor 5		Factor 6	
Storeman	.7752	Potgrow	.7796	Economic	.7994
Visapeal	.7214	Cursize	.6388	Consult	.6106
Factor 7		Factor 8		Factor 9	
Enthuse	.8119	Trakrec	.8808	Life	.7403
Space	-.6021			Finaspec	.6803
Factor 10		Factor 11		Factor 12	
Promspec	.8632	Decision	.8848	Profsale	.7180
		Promcom	.5470		

Majority Sample

Factor 1		Factor 2		Factor 3	
Paklab	.8963	Economic	.7909	Suppinfo	.8558
Leadtime	.8390			Suppmark	.6908
Thruput	.8172				
Minpurch	.7950				
Regleg	.7819				
Credpol	.7734				
Factor 4		Factor 5		Factor 6	
Potgrow	.7758	Enthuse	.9039	Life	.8566
Cursize	.6440	Presentr	.5574	Storeman	.6345
Factor 7		Factor 8		Factor 9	
Trakrec	-.9091	Cdemand	.9031	Profsale	.6887
		Impact	.5651	Maxprof	.6595
Factor 10		Factor 11		Factor 12	
Promspec	.8671	Decision	.9007	Promcom	.8265
				Prodimag	.5476

Reliability of Grouped Data

RELIABILITY ANALYSIS - SCALE (TEST)

- | | | |
|-----|-----------|--|
| 1. | PROFSALE | COMPANY PROFITS AND SALES OBJECTIVES |
| 2. | PRESENTR | KNOWLEDGEABLE PRESENTER |
| 3. | VISAPEAL | INITIAL VISUAL APPEAL OF PRODUCT |
| 4. | EXPROD | NO OF EXISTING PRODUCTS IN CATEGORY |
| 5. | TRAKREC | SUPPLIER TRACK RECORD-PERFORMANCE |
| 6. | PROMCOM | PROMO-ADVERTISING COMMITMENT SHOWN |
| 7. | PRODSIZE | PRODUCT SIZE |
| 8. | ENTHUSE | ENTHUSIASM OF PRESENTER |
| 9. | PRODIMAG | COMPANY-PRODUCT IMAGE MATCHING |
| 10. | POTGROW | POTENTIAL GROWTH IN CATEGORY |
| 11. | FINASPEC | FINANCIAL ASPECTS |
| 12. | CURSIZE | CURRENT SIZE OF CATEGORY VOL |
| 13. | UNIQUE | UNIQUE PRODUCT BENEFITS |
| 14. | CONSULT | CONSULTATIONS WITH SUPPLIER |
| 15. | SPACE | AVAILABILITY OF WAREHOUSE SPACE |
| 16. | RELATNS | PREVIOUS RELATIONS WITH SUPPLIER |
| 17. | PROMSPEC | PROMOTIONAL MIX SPECIFICATIONS |
| 18. | SUPPINFO | SUPPLIER INFORMATION-PRODUCT PERFORMANCE |
| 19. | DECISION | ABILITY OF PRESENTER TO DECIDE |
| 20. | AVALABLE | AVAILABILITY OF PRODUCT |
| 21. | SUPPMARK | SUPPLIER INFORMATION OF MARKET |
| 22. | CUSTBASE | MATCHING PRODUCT TO CUSTOMER BASE |
| 23. | POTPROF | POTENTIAL PROFITABILITY OF PRODUCT |
| 24. | IMPACT | IMPACT OF PRODUCT WITHIN CATEGORY |
| 25. | SEASON | SEASONALITY OF PRODUCT |
| 26. | LIFE | LIFE OF PRODUCT |
| 27. | LEADTIME | LEAD TIME REQUIRED WITH SUPPLIER |
| 28. | SIMILAR | SIMILARITY OF PRODUCT TO WHATS AVAILABLE |
| 29. | THRUPUT | LIKELY THROUGHPUT AT WAREHOUSE |
| 30. | CREDPOL | SUPPLIER CREDIT POLICY FOR RETURNED GOOD |
| 31. | REGLEG | REGULATIONS RE CONTENT-LABELS |
| 32. | CDEMAND | |
| 33. | CARRIED | PRODUCT CARRIED BY COMPETITION |
| 34. | INOFFICE | IN OFFICE APPROVALS-TASTE PACK SIZE |
| 35. | MAXPROF | ABILITY OF PRODUCT TO MAX PROFIT |
| 36. | ECONOMIC | ECONOMIC CONDITIONS FOR SOME PRODUCTS |
| 37. | MINPURCH | MINIMUM PURCHASE REQUIREMENT-ORDER SIZE |
| 38. | PAKLAB | PACKAGE LABELLING-WHATS ON IT |
| 39. | LORPPACK | LANDSCAPE-PORTRAIT SHELF PACKAGING |
| 40. | SALES MIX | AFFECTS ON THE SALES MIX OF CATEGORY |
| 41. | STOREMAN | ACCEPTANCE BY STORE MANAGEMENT |

		MEAN	STD DEV	CASES
1.	PROFSALE	4.7105	.4596	38.0
2.	PRESENTR	4.1579	.5939	38.0
3.	VISAPEAL	4.2105	.5280	38.0
4.	EXPROD	4.1579	.8861	38.0
5.	TRAKREC	4.2895	.5151	38.0
6.	PROMCOM	4.5789	.5004	38.0
7.	PRODSIZE	3.9737	.8538	38.0
8.	ENTHUSE	3.4737	.8617	38.0
9.	PRODIMAG	3.2368	.8833	38.0
10.	POTGROW	4.3684	.5891	38.0
11.	FINASPEC	4.7368	.4463	38.0
12.	CURSIZE	4.0000	.9300	38.0
13.	UNIQUE	4.2105	.5769	38.0
14.	CONSULT	3.4737	.9223	38.0
15.	SPACE	3.2105	1.3588	38.0
16.	RELATNS	3.4737	.9512	38.0
17.	PROMSPEC	4.1053	.7637	38.0
18.	SUPPINFO	3.7105	.8671	38.0
19.	DECISION	4.2895	.7679	38.0
20.	AVAILABLE	4.5526	.6017	38.0
21.	SUPPMARK	4.0263	.9149	38.0
22.	CUSTBASE	3.7895	1.0438	38.0
23.	POTPROF	4.4474	.7240	38.0
24.	IMPACT	4.4211	.5987	38.0
25.	SEASON	3.6053	1.0277	38.0
26.	LIFE	4.1053	1.0078	38.0
27.	LEADTIME	3.8158	.9824	38.0
28.	SIMILAR	3.7632	1.0249	38.0
29.	THRUPUT	4.0263	.9440	38.0
30.	CREDPOL	3.7632	1.0510	38.0
31.	REGLEG	3.9737	1.0523	38.0
32.	CDEMAND	4.6316	.5413	38.0
33.	CARRIED	3.2105	1.1891	38.0
34.	INOFFICE	3.5789	1.0035	38.0
35.	MAXPROF	4.5526	.5039	38.0
36.	ECONOMIC	3.9474	.7333	38.0
37.	MINPURCH	4.1053	.9806	38.0
38.	PAKLAB	4.2895	.9560	38.0
39.	LORPPACK	3.3158	1.1176	38.0
40.	SALESMIX	4.0789	.5873	38.0
41.	STOREMAN	3.6053	1.2201	38.0

RELIABILITY ANALYSIS - SCALE (TEST)

OF CASES = 38.0

STATISTICS FOR MEAN VARIANCE STD DEV VARIABLES
SCALE 163.9737 271.0533 16.4637 41

ITEM MEANS MEAN MINIMUM MAXIMUM RANGE MAX/MIN
VARIANCE
3.9994 3.2105 4.7368 1.5263 1.4754 .1808

ITEM VARIANCES MEAN MINIMUM MAXIMUM RANGE MAX/MIN
VARIANCE
.7437 .1991 1.8464 1.6472 9.2714 .1547

INTER-ITEM CORRELATIONS MEAN MINIMUM MAXIMUM RANGE MAX/MIN
VARIANCE
.1834 -.3944 .8065 1.2009 -2.0448 .0491

ITEM-TOTAL STATISTICS

	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM- TOTAL CORRELATION	SQUARED MULTIPLE CORRELATION	ALPHA IF ITEM DELETED
PROFSALE	159.2632	269.1181	.1143	.	.9102
PRESENTR	159.8158	261.7760	.4644	.	.9076
VISAPEAL	159.7632	270.8343	-.0034	.	.9112
EXPROD	159.8158	253.7760	.5842	.	.9056
TRAKREC	159.6842	270.5462	.0143	.	.9111
PROMCOM	159.3947	271.7589	-.0579	.	.9115
PRODSIZE	160.0000	262.0000	.3012	.	.9091
ENTHUSE	160.5000	267.5000	.0997	.	.9116
PRODIMAG	160.7368	262.9018	.2573	.	.9097
POTGROW	159.6053	264.5156	.3230	.	.9088
FINASPEC	159.2368	269.0505	.1232	.	.9102
CURSIZE	159.9737	251.3777	.6379	.	.9048
UNIQUE	159.7632	261.9154	.4715	.	.9075
CONSULT	160.5000	255.2297	.5081	.	.9065
SPACE	160.7632	256.0235	.3032	.	.9109
RELATNS	160.5000	256.6351	.4434	.	.9074
PROMSPEC	159.8684	265.1444	.2141	.	.9099
SUPPINFO	160.2632	262.8478	.2651	.	.9096
DECISION	159.6842	272.6543	-.0864	.	.9132
AVARIABLE	159.4211	259.9801	.5520	.	.9068

SUPPMARK	159.9474	256.7539	.4591	.	.9072
CUSTBASE	160.1842	247.6679	.6786	.	.9039
POTPROF	159.5263	257.5533	.5584	.	.9063
IMPACT	159.5526	262.8485	.4042	.	.9081
SEASON	160.3684	244.9417	.7789	.	.9024
LIFE	159.8684	256.0092	.4350	.	.9076
LEADTIME	160.1579	243.4879	.8676	.	.9013
SIMILAR	160.2105	256.5491	.4098	.	.9079
THRUPUT	159.9474	247.6728	.7569	.	.9031
CREDPOL	160.2105	243.8464	.7952	.	.9020
REGLEG	160.0000	244.9730	.7581	.	.9026
CDEMAND	159.3421	267.9068	.1610	.	.9100
CARRIED	160.7632	250.4018	.5112	.	.9065
INOFFICE	160.3947	256.0292	.4365	.	.9075
MAXPROF	159.4211	264.4666	.3864	.	.9084
ECONOMIC	160.0263	258.5128	.5090	.	.9068
MINPURCH	159.8684	251.9552	.5826	.	.9054
PAKLAB	159.6842	247.4651	.7539	.	.9031
LORPPACK	160.6579	248.0149	.6190	.	.9047
SALESMIX	159.8947	265.2859	.2834	.	.9091
STOREMAN	160.3684	263.6444	.1494	.	.9128

ANALYSIS OF VARIANCE

SOURCE OF VARIATION	SUM OF SQ.	DF	MEAN SQUARE	F	PROB.
BETWEEN PEOPLE	244.6091	37	6.6111		
WITHIN PEOPLE	1158.3902	1520	.7621		
BETWEEN MEASURES	274.8151	40	6.8704	11.508	.000
RESIDUAL	883.5751	1480	.5970		
NONADDITIVITY	24.3922	1	24.3922	41.989	.000
BALANCE	859.1829	1479	.5809		
TOTAL	1402.9994	1557	.9011		

GRAND MEAN = 3.9994

TUKEY ESTIMATE OF POWER TO WHICH OBSERVATIONS
MUST BE RAISED TO ACHIEVE ADDITIVITY = 4.0071

RELIABILITY COEFFICIENTS 41 ITEMS

ALPHA = .9097 STANDARDIZED ITEM ALPHA = .9020

RELIABILITY ANALYSIS - SCALE (DEAL)

1. PROFSALE COMPANY PROFITS AND SALES OBJECTIVES
2. SPACE AVAILABILITY OF WAREHOUSE SPACE
3. CUSTBASE MATCHING PRODUCT TO CUSTOMER BASE
4. PRODIMAG COMPANY-PRODUCT IMAGE MATCHING
5. CREDPOL SUPPLIER CREDIT POLICY FOR RETURNED GOOD
6. REGLEG REGULATIONS RE CONTENT-LABELS
7. INOFFICE IN OFFICE APPROVALS-TASTE PACK SIZE
8. ECONOMIC ECONOMIC CONDITIONS FOR SOME PRODUCTS
9. MINPURCH MINIMUM PURCHASE REQUIREMENT-ORDER SIZE
10. STOREMAN ACCEPTANCE BY STORE MANAGEMENT
11. STOREMAN ACCEPTANCE BY STORE MANAGEMENT

	MEAN	STD DEV	CASES
1. PROFSALE	4.7105	.4596	38.0
2. SPACE	3.2105	1.3588	38.0
3. CUSTBASE	3.7895	1.0438	38.0
4. PRODIMAG	3.2368	.8833	38.0
5. CREDPOL	3.7632	1.0510	38.0
6. REGLEG	3.9737	1.0523	38.0
7. INOFFICE	3.5789	1.0035	38.0
8. ECONOMIC	3.9474	.7333	38.0
9. MINPURCH	4.1053	.9806	38.0
10. STOREMAN	3.6053	1.2201	38.0
11. STOREMAN	3.6053	1.2201	38.0

OF CASES = 38.0

STATISTICS FOR	MEAN	VARIANCE	STD DEV	# OF VARIABLES
SCALE	41.5263	36.1479	6.0123	11

ITEM MEANS VARIANCE	MEAN	MINIMUM	MAXIMUM	RANGE	MAX/MIN	
	3.7751	3.2105	4.7105	1.5000	1.4672	.1758

ITEM VARIANCES VARIANCE	MEAN	MINIMUM	MAXIMUM	RANGE	MAX/MIN	
	1.0566	.2112	1.8464	1.6351	8.7407	.2075

INTER-ITEM CORRELATIONS VARIANCE	MEAN	MINIMUM	MAXIMUM	RANGE	MAX/MIN

.2085 -0.2714 1.0000 1.2714 -3.6847 .0592

ITEM-TOTAL STATISTICS

	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM- TOTAL CORRELATION	SQUARED MULTIPLE CORRELATION	ALPHA IF ITEM DELETED
PROFSALE	36.8158	35.6138	.0589	.	.7551
SPACE	38.3158	30.1679	.2769	.	.7510
CUSTBASE	37.7368	29.4424	.4958	.	.7136
PRODIMAG	38.2895	32.9680	.2366	.	.7457
CREDPOL	37.7632	28.0775	.6254	.	.6949
REGLEG	37.5526	27.6593	.6668	.	.6887
INOFFICE	37.9474	30.1053	.4573	.	.7193
ECONOMIC	37.5789	32.2504	.4034	.	.7292
MINPURCH	37.4211	30.1963	.4630	.	.7188
STOREMAN	37.9211	30.2368	.3296	.	.7387
STOREMAN	37.9211	30.2368	.3296	.	.7387

ANALYSIS OF VARIANCE

SOURCE OF VARIATION	SUM OF SQ.	DF	MEAN SQUARE	F	PROB.
BETWEEN PEOPLE	121.5885	37	3.2862		
WITHIN PEOPLE	375.2727	380	.9876		
BETWEEN MEASURES	66.8086	10	6.6809	8.014	.000
RESIDUAL	308.4641	370	.8337		
NONADDITIVITY	3.3479	1	3.3479	4.049	.045
BALANCE	305.1162	369	.8269		
TOTAL	496.8612	417	1.1915		

GRAND MEAN = 3.7751

TUKEY ESTIMATE OF POWER TO WHICH OBSERVATIONS
MUST BE RAISED TO ACHIEVE ADDITIVITY = 2.5669

RELIABILITY COEFFICIENTS 11 ITEMS

ALPHA = .7463 STANDARDIZED ITEM ALPHA = .7435

RELIABILITY ANALYSIS - SCALE (PRODUCT)

1.	VISAPEAL	INITIAL VISUAL APPEAL OF PRODUCT
2.	EXPROD	NO OF EXISTING PRODUCTS IN CATEGORY
3.	PRODSIZE	PRODUCT SIZE
4.	POTGROW	POTENTIAL GROWTH IN CATEGORY
5.	CURSIZE	CURRENT SIZE OF CATEGORY-\$ VOL
6.	UNIQUE	UNIQUE PRODUCT BENEFITS
7.	AVALABLE	AVAILABILITY OF PRODUCT
8.	POTPROF	POTENTIAL PROFITABILITY OF PRODUCT
9.	IMPACT	IMPACT OF PRODUCT WITHIN CATEGORY
10.	SEASON	SEASONALITY OF PRODUCT
11.	LIFE	LIFE OF PRODUCT
12.	SIMILAR	SIMILARITY OF PRODUCT TO WHATS AVAILABLE
13.	THRUPUT	LIKELY THROUGHPUT AT WAREHOUSE
14.	CDEMAND	
15.	CARRIED	PRODUCT CARRIED BY COMPETITION
16.	MAXPROF	ABILITY OF PRODUCT TO MAX PROFIT
17.	PAKLAB	PACKAGE LABELLING-WHATS ON IT
18.	LORPPACK	LANDSCAPE-PORTRAIT SHELF PACKAGING
19.	SALESMIX	AFFECTS ON THE SALES MIX OF CATEGORY

		MEAN	STD DEV	CASES
1.	VISAPEAL	4.2105	.5280	38.0
2.	EXPROD	4.1579	.8861	38.0
3.	PRODSIZE	3.9737	.8538	38.0
4.	POTGROW	4.3684	.5891	38.0
5.	CURSIZE	4.0000	.9300	38.0
6.	UNIQUE	4.2105	.5769	38.0
7.	AVALABLE	4.5526	.6017	38.0
8.	POTPROF	4.4474	.7240	38.0
9.	IMPACT	4.4211	.5987	38.0
10.	SEASON	3.6053	1.0277	38.0
11.	LIFE	4.1053	1.0078	38.0
12.	SIMILAR	3.7632	1.0249	38.0
13.	THRUPUT	4.0263	.9440	38.0
14.	CDEMAND	4.6316	.5413	38.0
15.	CARRIED	3.2105	1.1891	38.0
16.	MAXPROF	4.5526	.5039	38.0
17.	PAKLAB	4.2895	.9560	38.0
18.	LORPPACK	3.3158	1.1176	38.0
19.	SALESMIX	4.0789	.5873	38.0

OF CASES = 38.0

STATISTICS FOR MEAN VARIANCE STD DEV VARIABLES
 SCALE 77.9211 74.1828 8.6129 19

ITEM MEANS MEAN MINIMUM MAXIMUM RANGE MAX/MIN
 VARIANCE

4.1011 3.2105 4.6316 1.4211 1.4426 .1582

ITEM VARIANCES MEAN MINIMUM MAXIMUM RANGE MAX/MIN
 VARIANCE

.6876 .2539 1.4139 1.1600 5.5686 .1369

INTER-ITEM CORRELATIONS MEAN MINIMUM MAXIMUM RANGE MAX/MIN
 VARIANCE

.2476 -.3944 .7101 1.1045 -1.8003 .0446

ITEM-TOTAL STATISTICS

	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM- TOTAL CORRELATION	SQUARED MULTIPLE CORRELATION	ALPHA IF ITEM DELETED
VISAPEAL	73.7105	74.4815	-.0634	.6338	.8771
EXPROD	73.7632	63.6451	.6898	.7617	.8545
PRODSIZE	73.9474	69.7809	.2575	.6237	.8716
POTGROW	73.5526	70.1999	.3683	.5795	.8670
CURSIZE	73.9211	63.8044	.6403	.6624	.8564
UNIQUE	73.7105	68.8058	.5270	.6475	.8629
AVAILABLE	73.3684	69.7525	.4048	.6746	.8660
POTPROF	73.4737	67.0128	.5607	.7311	.8607
IMPACT	73.5000	69.4459	.4388	.7066	.8651
SEASON	74.3158	61.6273	.7127	.6297	.8525
LIFE	73.8158	66.7489	.3898	.6359	.8677
SIMILAR	74.1579	64.4068	.5304	.6374	.8613
THRUPUT	73.8947	61.9886	.7604	.7465	.8509
CDEMAND	73.2895	71.9950	.2063	.5509	.8710
CARRIED	74.7105	63.7788	.4733	.6268	.8654
MAXPROF	73.3684	70.8336	.3649	.6322	.8673
PAKLAB	73.6316	62.5633	.7079	.7538	.8532
LORPPACK	74.6053	61.8670	.6295	.6812	.8566
SALESMIX	73.8421	71.4339	.2421	.7321	.8703

ANALYSIS OF VARIANCE

SOURCE OF VARIATION	SUM OF SQ.	DF	MEAN SQUARE	F	PROB.
BETWEEN PEOPLE	144.4612	37	3.9044		
WITHIN PEOPLE	447.1579	684	.6537		
BETWEEN MEASURES	108.2244	18	6.0125	11.814	.000
RESIDUAL	338.9335	666	.5089		
NONADDITIVITY	17.8705	1	17.8705	37.014	.000
BALANCE	321.0630	665	.4828		
TOTAL	591.6191	721	.8206		

GRAND MEAN = 4.1011

TUKEY ESTIMATE OF POWER TO WHICH OBSERVATIONS
MUST BE RAISED TO ACHIEVE ADDITIVITY = 4.7256

RELIABILITY COEFFICIENTS 19 ITEMS

ALPHA = .8697 STANDARDIZED ITEM ALPHA = .8621

RELIABILITY ANALYSIS - SCALE (SUPPLIER)

1. TRAKREC SUPPLIER TRACK RECORD-PERFORMANCE
2. PROMCOM PROMO-ADVERTISING COMMITMENT SHOWN
3. FINASPEC FINANCIAL ASPECTS
4. CONSULT CONSULTATIONS WITH SUPPLIER
5. RELATNS PREVIOUS RELATIONS WITH SUPPLIER
6. PROMSPEC PROMOTIONAL MIX SPECIFICATIONS
7. SUPPINFO SUPPLIER INFORMATION-PRODUCT PERFORMANCE
8. SUPPMARK SUPPLIER INFORMATION OF MARKET
9. LEADTIME LEAD TIME REQUIRED WITH SUPPLIER

	MEAN	STD DEV	CASES
1. TRAKREC	4.2895	.5151	38.0
2. PROMCOM	4.5789	.5004	38.0
3. FINASPEC	4.7368	.4463	38.0
4. CONSULT	3.4737	.9223	38.0
5. RELATNS	3.4737	.9512	38.0
6. PROMSPEC	4.1053	.7637	38.0
7. SUPPINFO	3.7105	.8671	38.0
8. SUPPMARK	4.0263	.9149	38.0
9. LEADTIME	3.8158	.9824	38.0

OF CASES = 38.0

STATISTICS FOR SCALE # OF
 MEAN VARIANCE STD DEV VARIABLES
 36.2105 12.2248 3.4964 9

ITEM MEANS MEAN MINIMUM MAXIMUM RANGE MAX/MIN
 VARIANCE
 4.0234 3.4737 4.7368 1.2632 1.3636 .2051

ITEM VARIANCES MEAN MINIMUM MAXIMUM RANGE MAX/MIN
 VARIANCE
 .6230 .1991 .9651 .7660 4.8464 .0948

INTER-ITEM
 CORRELATIONS MEAN MINIMUM MAXIMUM RANGE MAX/MIN
 VARIANCE
 .1106 -.2475 .6231 .8706 -2.5171 .0411

ITEM-TOTAL STATISTICS

	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM- TOTAL CORRELATION	SQUARED MULTIPLE CORRELATION	ALPHA IF ITEM DELETED
TRAKREC	31.9211	11.7504	.0592	.3577	.6233
PROMCOM	31.6316	12.2390	-.0756	.0765	.6426
FINASPEC	31.4737	12.0398	-.0046	.1999	.6295
CONSULT	32.7368	8.6856	.4945	.3903	.5170
RELATNS	32.7368	9.4964	.3111	.3121	.5769
PROMSPEC	32.1053	9.9346	.3546	.2912	.5649
SUPPINFO	32.5000	9.5541	.3580	.5410	.5620
SUPPMARK	32.1842	8.8570	.4647	.6214	.5273
LEADTIME	32.3947	8.6238	.4568	.3569	.5276

ANALYSIS OF VARIANCE

SOURCE OF VARIATION	SUM OF SQ.	DF	MEAN SQUARE	F	PROB.
BETWEEN PEOPLE	50.2573	37	1.3583		
WITHIN PEOPLE	219.5556	304	.7222		
BETWEEN MEASURES	62.3392	8	7.7924	14.671	.000
RESIDUAL	157.2164	296	.5311		
NONADDITIVITY	14.3578	1	14.3578	29.649	.000
BALANCE	142.8586	295	.4843		
TOTAL	269.8129	341	.7912		

GRAND MEAN = 4.0234

TUKEY ESTIMATE OF POWER TO WHICH OBSERVATIONS
MUST BE RAISED TO ACHIEVE ADDITIVITY = 6.0370

RELIABILITY COEFFICIENTS 9 ITEMS

ALPHA = .6090 STANDARDIZED ITEM ALPHA = .5280

Table 6. Abbreviations Used for Criteria List

1.	PROFSALE	COMPANY PROFITS AND SALES OBJECTIVES
2.	PRESENTR	KNOWLEDGEABLE PRESENTER
3.	VISAPEAL	INITIAL VISUAL APPEAL OF PRODUCT
4.	EXPROD	NO OF EXISTING PRODUCTS IN CATEGORY
5.	TRAKREC	SUPPLIER TRACK RECORD-PERFORMANCE
6.	PROMCOM	PROMO-ADVERTISING COMMITMENT SHOWN
7.	PRODSIZE	PRODUCT SIZE
8.	ENTHUSE	ENTHUSIASM OF PRESENTER
9.	PRODIMAG	COMPANY-PRODUCT IMAGE MATCHING
10.	POTGROW	POTENTIAL GROWTH IN CATEGORY
11.	FINASPEC	FINANCIAL ASPECTS
12.	CURSIZE	CURRENT SIZE OF CATEGORY-\$ VOL
13.	UNIQUE	UNIQUE PRODUCT BENEFITS
14.	CONSULT	CONSULTATIONS WITH SUPPLIER
15.	SPACE	AVAILABILITY OF WAREHOUSE SPACE
16.	RELATNS	PREVIOUS RELATIONS WITH SUPPLIER
17.	PROMSPEC	PROMOTIONAL MIX SPECIFICATIONS
18.	SUPPINFO	SUPPLIER INFORMATION-PRODUCT PERFORMANCE
19.	DECISION	ABILITY OF PRESENTER TO DECIDE
20.	AVALABLE	AVAILABILITY OF PRODUCT
21.	SUPPMARK	SUPPLIER INFORMATION OF MARKET
22.	CUSTBASE	MATCHING PRODUCT TO CUSTOMER BASE
23.	POTPROF	POTENTIAL PROFITABILITY OF PRODUCT
24.	IMPACT	IMPACT OF PRODUCT WITHIN CATEGORY
25.	SEASON	SEASONALITY OF PRODUCT
26.	LIFE	LIFE OF PRODUCT
27.	LEADTIME	LEAD TIME REQUIRED WITH SUPPLIER
28.	SIMILAR	SIMILARITY OF PRODUCT TO WHATS AVAILABLE
29.	THRUPUT	LIKELY THROUGHPUT AT WAREHOUSE
30.	CREDPOL	SUPPLIER CREDIT POLICY FOR RETURNED GOOD
31.	REGLEG	REGULATIONS RE CONTENT-LABELS
32.	CDEMAND	LIKELY CONSUMER DEMAND
33.	CARRIED	PRODUCT CARRIED BY COMPETITION
34.	INOFFICE	IN OFFICE APPROVALS-TASTE PACK SIZE
35.	MAXPROF	ABILITY OF PRODUCT TO MAX PROFIT
36.	ECONOMIC	ECONOMIC CONDITIONS FOR SOME PRODUCTS
37.	MINPURCH	MINIMUM PURCHASE REQUIREMENT-ORDER SIZE
38.	PAKLAB	PACKAGE LABELLING-WHATS ON IT
39.	LORPPACK	LANDSCAPE-PORTRAIT SHELF PACKAGING
40.	SALES MIX	AFFECTS ON THE SALES MIX OF CATEGORY
41.	STOREMAN	ACCEPTANCE BY STORE MANAGEMENT

Central Importance and Sundry Tables

Table 5. Paired Central Importance Decision Factors

Decision Factor Pairs	No. of Connections	%
Approvers - Presenter	14	54
Demand - Supplier Information	12	46
Supplier Information - Category Impact	11	42
Category Impact - Company Objectives	11	42
Company Objectives - Promotion Specification	11	42
Company Objectives - Supplier Information	10	38
Category Impact - Demand	10	38
Demand - Promotion Specification	9	35
Appeal - Product Offer	8	31
Life-Value - Reputation	8	31
Supplier Information - Product Offer	7	27
Supplier Information - Reputation	7	27
Supplier Information - Promotion Specification	7	27
Product Offer - Reputation	7	27
Product Offer - Promotion Specification	7	27
Category Impact - Appeal	7	27
Product Offer - Life-Value	6	23
Company Objectives - Demand	6	23
Reputation - Appeal	6	23
Reputation - Promotion Specification	6	23
Life-Value - Promotion Specification	6	23
Life-Value - Company Objectives	6	23
Life-Value - Conditions	6	23
Demand - Product Offer	5	19
Demand - Appeal	5	19
Demand - Life-Value	5	19
Demand - Conditions	5	19
Appeal - Presenter	5	19
Appeal - Promtional Specification	5	19
Reputation - Approvers	5	19
Reputation - Company Objectives	5	19
Product Offer - Conditions	5	19
Product Offer - Company Objectives	4	15
Supplier Information - Appeal	4	15
Supplier Information - Presenter	4	15
Reputation - Demand	4	15
Reputation - Conditions	4	15
Category Impact - Presenter	4	15
Category Impact - Reputation	4	15
Category Impact - Life-Value	4	15
Presenter - Reputation	4	15
Presenter - Life-Value	4	15

Decision Factor Pairs	No. of Connections	%
Product Offer - Category Impact	3	11
Product Offer - Presenter	3	11
Product Offer - Approvers	3	11
Approvers - Life-Value	3	11
Approvers - Promotion Specification	3	11
Approvers - Company Objectives	3	11
Category Impact - Promotion Specification	3	11
Appeal - Life-value	3	11
Appeal - Company Objectives	3	11
Supplier Information - Conditions	2	8
Supplier Information - Life-Value	2	8
Appeal - Approvers	2	8
Appeal - Conditions	2	8
Category Impact - Approvers	2	8
Category impact - Conditions	2	8
Conditions - Promotion Specification	2	8
Conditions - Approvers	2	8
Conditions - Presenter	1	4
Conditions - company Objectives	1	4
Demand - Presenter	0	0
Demand - Approvers	0	0
Approvers - Supplier Information	0	0
Presenter - Company Objectives	0	0
Presenter - Promotion Specification	0	0

Table 6. Select Output from KYST-PC

Pre-Iterations	Stress	Dimensions	Stress
0	0.0851	1	0.3078
1	0.0719	2	0.1470
2	0.0648	3	0.0830
3	0.0611	4	0.0458

Decision Attribute	Final Configuration Plots		
	Dimensions		
	1	2	3
Product Offer	-0.199	0.460	0.396
Supplier Information	-0.547	-0.618	0.178
Demand	-0.867	-0.140	0.263
Appeal	0.292	-0.221	0.786
Category Impact	-0.180	-1.014	0.252
Presenter Enthusiasm	1.327	-0.144	0.225
Reputation	0.307	-0.013	-0.270
Life-Value	-0.102	0.744	-0.505
Promotion Specification	-0.579	0.076	-0.589
Approvers	1.283	0.018	-0.447
Company Objectives	-0.438	-0.435	-0.710
Conditions	-0.298	1.288	0.421

Note: Final configuration of 12 points in 3-dimensions was reached after 20 iterations

REVISED EXPLANATORY NOTES

for

Factor Descriptions

- The Product Offer:** Several product related criteria suggest a flow dimension (eg leadtime, throughput at warehouse) and policy issues (eg credit policy for returns, package labelling) which combine to suggest a basic threshold or constant.
- Supplier Information:** This factor pertains to both the likely performance of the product and the market itself in terms of volume and dollars. Other **informational input** includes the availability of the product and the supplier's promotional mix specification (dates, programme, media).
- Demand:** Identified here is the 'likely consumer demand' for the product and the 'overall impact of the product within the category (volume and dollars)'. These are **supported by** 'ability of product to maximise profitability', 'affects on the sales mix of product category' and 'potential growth in the product category'.
- Appeal:** This factor represents a rather **broad** application of the term 'appeal' in that it reflects **a blend** of several items; namely, 'likely acceptance by store management', 'the initial visual appeal of the package', 'supplier track record/performance', 'life of the product' and 'financial aspects'.
- Approvers:** The prime force here is external in nature in that it reflects the ability of a presenter to make a decision on the spot. A buyer can play a role in this by quietly 'insisting' on it and respecting its presence.
- Company Objectives:** This decision factor is represented by the solitary criterion 'company profit and sale objectives'. Undoubtedly these act as a conditioning force on the buyer, something to which they are forever aware and answerable. To this end, it is regarded as a constant.
- Conditions:** Separate to any financial aspects of a transaction, this factor highlights not only 'economic conditions' that may relate to some products at particular points in time, but also to 'company image and product image matching', 'previous relations with supplier' and 'consultations with supplier'. All reflect conditions that a buyer faces.
- Presenter Enthusiasm:** Dominant here is the presenter's enthusiasm and commitment to the product and transaction. Such enthusiasm can assist selling the product.

APPENDIX P

CONSURV Program Output

Block 1 Model - Laundry Detergent

MODEL ESTIMATED USING ORDINARY LEAST SQUARES (OLS)

$$Y = B_0 + B_1 \cdot X_1 + B_2 \cdot X_2 + B_3 \cdot X_3 + B_4 \cdot X_4 + B_5 \cdot X_5 + B_6 \cdot X_6 + B_7 \cdot X_7 + B_8 \cdot X_8 + B_9 \cdot X_9 + B_{10} \cdot X_{10} + B_{11} \cdot X_{11} + B_{12} \cdot X_{12}$$

X1 - Qualitative	Attribute: Conditions	Code Type: User Defined
X2 - Qualitative	Attribute: Conditions	Code Type: User Defined
X3 - Qualitative	Attribute: Product Offer	Code Type: Dummy
X4 - Qualitative	Attribute: Product Offer	Code Type: Dummy
X5 - Qualitative	Attribute: Presenter	Code Type: Dummy
X6 - Qualitative	Attribute: Approvers	Code Type: Dummy
X7 - Qualitative	Attribute: Supplier Information	Code Type: User Defined
X8 - Qualitative	Attribute: Supplier Information	Code Type: User Defined
X9 - Qualitative	Attribute: Demand	Code Type: User Defined
X10 - Qualitative	Attribute: Demand	Code Type: User Defined
X11 - Qualitative	Attribute: Appeal	Code Type: Dummy
X12 - Qualitative	Attribute: Appeal	Code Type: Dummy

AGGREGATE UTILITY

R-Square: 0.98

	B0	B1	B2	B3	B4

Coefficients	3.5556	0.9028	-0.8889	0.8472	0.9028
T-Statistics	3.6371	0.7239	-0.6456	1.3353	2.4580

	B5	B6	B7	B8	B9

Coefficients	0.7222	0.5833	0.1944	-1.0000	0.9306
T-Statistics	0.8207	1.3404	0.2431	-1.4102	0.8740

	B10	B11	B12		

Coefficients	-1.1806	1.1944	0.9444		
T-Statistics	-0.7725	1.1434	1.0965		

Block 2 Model - Laundry Detergent

MODEL ESTIMATED USING ORDINARY LEAST SQUARES (OLS)

$$Y = B_0 + B_1 \cdot X_1 + B_2 \cdot X_2 + B_3 \cdot X_3 + B_4 \cdot X_4 + B_5 \cdot X_5 + B_6 \cdot X_6 + B_7 \cdot X_7 + B_8 \cdot X_8 + B_9 \cdot X_9 + B_{10} \cdot X_{10} + B_{11} \cdot X_{11} + B_{12} \cdot X_{12}$$

X1 - Qualitative	Attribute: Conditions	Code Type: User Defined
X2 - Qualitative	Attribute: Conditions	Code Type: User Defined
X3 - Qualitative	Attribute: Product Offer	Code Type: Dummy
X4 - Qualitative	Attribute: Product Offer	Code Type: Dummy
X5 - Qualitative	Attribute: Presenter	Code Type: Dummy
X6 - Qualitative	Attribute: Approvers	Code Type: Dummy
X7 - Qualitative	Attribute: Supplier Information	Code Type: User Defined
X8 - Qualitative	Attribute: Supplier Information	Code Type: User Defined
X9 - Qualitative	Attribute: Demand	Code Type: User Defined
X10 - Qualitative	Attribute: Demand	Code Type: User Defined
X11 - Qualitative	Attribute: Appeal	Code Type: Dummy
X12 - Qualitative	Attribute: Appeal	Code Type: Dummy

AGGREGATE UTILITY

R-Square: 0.98

	B0	B1	B2	B3	B4
Coefficients	3.5278	0.4722	-0.7917	0.7500	0.5139
T-Statistics	2.1252	1.0036	-1.1392	1.1690	0.7135
	B5	B6	B7	B8	B9
Coefficients	0.7500	0.7500	0.3148	-0.3426	1.2083
T-Statistics	1.7009	1.0373	0.4318	-0.5818	0.8923
	B10	B11	B12		
Coefficients	-1.4444	0.6296	0.9537		
T-Statistics	-1.3662	1.0463	1.0347		

Block 3 Model - Laundry Detergent

MODEL ESTIMATED USING ORDINARY LEAST SQUARES (OLS)

$$Y = B_0 + B_1 \cdot X_1 + B_2 \cdot X_2 + B_3 \cdot X_3 + B_4 \cdot X_4 + B_5 \cdot X_5 + B_6 \cdot X_6 + B_7 \cdot X_7 + B_8 \cdot X_8 + B_9 \cdot X_9 + B_{10} \cdot X_{10} + B_{11} \cdot X_{11} + B_{12} \cdot X_{12}$$

X1 - Qualitative	Attribute: Conditions	Code Type: User Defined
X2 - Qualitative	Attribute: Conditions	Code Type: User Defined
X3 - Qualitative	Attribute: Product Offer	Code Type: Dummy
X4 - Qualitative	Attribute: Product Offer	Code Type: Dummy
X5 - Qualitative	Attribute: Presenter	Code Type: Dummy
X6 - Qualitative	Attribute: Approvers	Code Type: Dummy
X7 - Qualitative	Attribute: Supplier Information	Code Type: User Defined
X8 - Qualitative	Attribute: Supplier Information	Code Type: User Defined
X9 - Qualitative	Attribute: Demand	Code Type: User Defined
X10 - Qualitative	Attribute: Demand	Code Type: User Defined
X11 - Qualitative	Attribute: Appeal	Code Type: Dummy
X12 - Qualitative	Attribute: Appeal	Code Type: Dummy

AGGREGATE UTILITY

R-Square: 0.97

	B0	B1	B2	B3	B4
Coefficients	3.4944	0.3917	-0.5250	0.8000	0.4333
T-Statistics	2.7983	0.4731	-0.7334	1.0820	0.4675

	B5	B6	B7	B8	B9
Coefficients	0.5167	0.7333	0.5778	-0.8444	1.7167
T-Statistics	0.5510	0.7773	0.7325	-0.9683	1.0610

	B10	B11	B12
Coefficients	-1.3667	1.4222	1.0111
T-Statistics	-0.9915	1.4216	1.5738

RECODED DESIGN MATRIX

1.000	1.000	0.000	1.000	0.000	1.000	1.000	1.000	0.000	1.000	0.000	1.000	0.000
1.000	0.000	1.000	0.000	0.000	0.000	1.000	0.000	0.000	1.000	0.000	0.000	0.000
1.000	0.000	1.000	1.000	0.000	0.000	1.000	0.000	1.000	0.000	0.000	0.000	1.000
1.000	0.000	1.000	0.000	1.000	0.000	0.000	1.000	0.000	0.000	1.000	1.000	0.000
1.000	0.000	0.000	0.000	1.000	1.000	0.000	0.000	1.000	1.000	0.000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000	1.000	0.000
1.000	0.000	0.000	1.000	0.000	1.000	1.000	0.000	0.000	0.000	1.000	0.000	0.000
1.000	1.000	0.000	0.000	0.000	1.000	1.000	0.000	1.000	0.000	1.000	0.000	1.000
1.000	1.000	0.000	0.000	1.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1.000	1.000	0.000	1.000	0.000	1.000	0.000	0.000	1.000	0.000	1.000	0.000	0.000
1.000	1.000	0.000	0.000	1.000	1.000	1.000	1.000	0.000	1.000	0.000	0.000	1.000
1.000	0.000	1.000	0.000	1.000	1.000	1.000	0.000	1.000	0.000	0.000	0.000	0.000
1.000	0.000	1.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	1.000	0.000	1.000
1.000	1.000	0.000	0.000	0.000	1.000	1.000	0.000	0.000	0.000	0.000	1.000	0.000
1.000	0.000	1.000	1.000	0.000	1.000	0.000	0.000	0.000	1.000	0.000	1.000	0.000
1.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	1.000	1.000	0.000	0.000	0.000
1.000	0.000	0.000	0.000	1.000	0.000	1.000	0.000	0.000	0.000	1.000	1.000	0.000
1.000	0.000	0.000	1.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000	0.000	1.000

RESPONDENT T-STATISTICS

Num	R-Square	Std Error	B0	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12
1	0.91	0.8944	4.8962	1.7746	-0.9157	1.0920	1.6381	2.7471	0.6105	0.3525	-0.3525	-1.2209	-1.8314	2.8196	1.9385
2	0.95	1.4278	2.2931	-1.0804	-1.9327	1.6206	1.4046	2.4159	0.2416	1.1159	-1.5343	3.3823	-4.5902	1.8133	1.5343
3	0.95	1.2167	2.4592	0.8193	-0.7851	1.6386	2.1067	1.3086	1.0468	-1.8132	-3.6264	1.8320	-2.6171	5.4396	4.0797
4	0.77	1.1000	3.9187	3.690E-16	0.5505	1.7233	1.2309	1.1010	0.5505	0.4767	-3.176E-16	0.5505	-1.1010	2.3837	0.9535
5	0.58	9.8778	0.4882	0.5751	1.2859	0.1643	0.4929	-3.365E-16	0.7348	0.8485	-0.3712	-0.0919	1.1941	0.2651	-0.1061
6	0.93	2.1667	2.7922	4.0345	-3.1379	0.5262	0.8771	-0.3922	0.3922	-0.6794	-0.3397	1.7650	9.798E-17	-2.828E-16	1.0190
7	0.95	0.7444	4.2236	2.8429	-5.6878	3.7407	2.2444	-1.0037	1.6729	0.3863	-1.5453	1.6729	-0.6691	1.3522	0.9658
8	0.94	1.3278	2.9485	2.0167	-2.0042	-0.5602	0.5602	-1.0021	1.7537	0.2893	-1.1571	4.5094	-2.5052	1.0125	1.1571
9	0.95	0.7111	3.5417	1.9902	-1.7116	1.0717	0.1531	3.0809	2.3963	0.9882	-2.7670	1.0270	-2.0540	2.5694	2.1741
10	0.97	0.8167	3.6384	2.5714	-1.2778	0.7143	1.5714	3.1944	0.3194	0.5533	-2.2131	2.8749	-5.4305	1.1066	1.843E-16
11	0.98	0.3611	8.5721	-1.825E-15	-5.7646	3.2225	2.7928	3.8431	0.4804	1.1094	-1.9415	2.8823	-9.6077	0.5547	0.2774
12	0.94	0.2667	7.3222	-2.0000	-2.2361	3.5000	2.5000	3.3541	1.1180	-1.9365	-3.8730	-0.5590	-2.2361	2.9047	4.8412

RECODED DESIGN MATRIX

1.000	1.000	0.000	1.000	0.000	1.000	0.000	0.000	1.000	0.000	1.000	0.000	0.000
1.000	1.000	0.000	0.000	1.000	1.000	1.000	1.000	0.000	1.000	0.000	0.000	1.000
1.000	0.000	1.000	0.000	1.000	1.000	1.000	0.000	1.000	0.000	0.000	0.000	0.000
1.000	0.000	1.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	1.000	0.000	1.000
1.000	1.000	0.000	0.000	0.000	1.000	1.000	0.000	0.000	0.000	0.000	1.000	0.000
1.000	0.000	1.000	1.000	0.000	1.000	0.000	0.000	0.000	1.000	0.000	1.000	0.000
1.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	1.000	1.000	0.000	0.000	0.000
1.000	0.000	0.000	0.000	1.000	0.000	1.000	0.000	0.000	0.000	1.000	1.000	0.000
1.000	0.000	0.000	1.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000	0.000	1.000
1.000	0.000	0.000	1.000	0.000	1.000	1.000	0.000	1.000	1.000	0.000	1.000	0.000
1.000	0.000	0.000	0.000	1.000	1.000	1.000	1.000	0.000	0.000	0.000	0.000	0.000
1.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000	0.000	1.000	0.000	1.000
1.000	0.000	1.000	1.000	0.000	1.000	1.000	1.000	0.000	0.000	1.000	0.000	0.000
1.000	0.000	1.000	0.000	1.000	1.000	1.000	0.000	0.000	1.000	0.000	0.000	1.000
1.000	0.000	1.000	0.000	0.000	1.000	0.000	0.000	1.000	0.000	0.000	1.000	0.000
1.000	1.000	0.000	1.000	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	1.000
1.000	1.000	0.000	0.000	1.000	0.000	1.000	0.000	1.000	0.000	1.000	1.000	0.000
1.000	1.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	1.000	0.000	0.000	0.000

RESPONDENT T-STATISTICS

Num	R-Square	Std Error	B0	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12
1	0.85	0.9944	4.9304	1.4474	-3.2365	1.1579	0.5178	2.0264	-0.5790	1.3371	0.1671	0.5790	1.446E-16	1.6713	1.8384
2	0.92	1.4611	0.2068	1.9105	-0.6408	2.1494	2.6701	1.9105	1.1941	-1.1031	0.6894	3.3435	-1.9105	0.2758	2.6198
3	0.98	0.6667	3.0619	3.533E-16	-0.6325	3.5355	1.5811	1.4142	2.1213	-2.040E-16	-1.2247	8.1317	-6.0104	0.6124	2.4495
4	0.82	1.1500	4.4294	7.621E-16	-0.9631	1.3460	1.8058	0.5384	1.3460	0.4663	-1.3988	-0.5384	-0.2692	1.8650	1.8650
5	0.93	1.0444	4.4032	1.1299	-1.5159	1.1299	1.5159	1.1299	2.8247	-0.8154	-0.6523	0.5649	-4.8019	-0.6523	0.6523
6	0.88	0.4111	8.8379	1.500E-16	-2.0135	-1.500E-16	0.8054	3.6018	1.080E-14	0.5199	-2.8593	-0.4502	-1.3507	0.2599	0.5199
7	0.63	4.1500	1.2681	0.2834	-0.3802	0.4251	0.4436	0.2834	0.7085	-0.4909	8.175E-17	0.5668	-1.8422	-8.175E-17	0.4909
8	0.91	1.0111	1.1602	2.0096	-0.1284	0.8613	-0.6419	0.2871	3.7321	1.1602	0.8287	0.8613	-1.4354	0.8287	4.1437
9	0.97	0.4944	3.9109	1.299E-15	-2.5704	0.4105	-1.2852	3.2843	2.0527	3.0813	-1.6592	8.6212	-1.2316	1.8962	-1.1851
10	0.93	0.5778	6.1394	1.1393	0.8492	3.4180	0.5095	1.1393	-0.3798	1.0963	-1.7541	1.8989	-3.7978	2.1926	-0.2193
11	0.99	0.2444	8.4275	2.3355	-5.7446	4.6710	0.5222	1.1677	3.5032	1.6855	-0.6742	4.6710	-9.9259	2.3597	2.6968
12	0.98	0.1944	10.0161	0.6547	-3.2205	-1.3093	1.1711	3.2733	1.3093	3.7796	-0.3780	5.2372	-6.5465	5.2915	3.7796

RESPONDENT UTILITIES

Num	Respondent ID	Segment	Weight	B0	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12
1	1	1	1.00	4.6944	1.0833	-0.5000	0.6667	1.0000	1.5000	0.3333	0.2222	-0.2222	-0.6667	-1.0000	-.7778	1.2222
2	1	1	1.00	2.7778	-0.8333	-1.3333	1.2500	1.0833	1.6667	0.1667	0.8889	-1.2222	2.3333	-3.1667	1.4444	1.2222
3	1	1	1.00	2.7500	0.5833	-0.5000	1.1667	1.5000	0.8333	0.6667	-1.3333	-2.6667	1.1667	-1.6667	4.0000	3.0000
4	1	1	1.00	4.1667	2.498E-16	0.3333	1.1667	0.8333	0.6667	0.3333	0.3333	-2.220E-16	0.3333	-0.6667	1.6667	0.6667
5	1	1	1.00	1.5556	1.1667	2.3333	0.3333	1.0000	-6.106E-16	1.3333	1.7778	-0.7778	-0.1667	2.1667	0.5556	-0.2222
6	1	1	1.00	4.1667	3.8333	-2.6667	0.5000	0.8333	-0.3333	0.3333	-0.6667	-0.3333	1.5000	8.327E-17	-2.776E-16	1.0000
7	1	1	1.00	3.6944	1.5833	-2.8333	2.0833	1.2500	-0.5000	0.8333	0.2222	-0.8889	0.8333	-0.3333	0.7778	0.5556
8	1	1	1.00	3.4444	1.5000	-1.3333	-0.4167	0.4167	-0.6667	1.1667	0.2222	-0.8889	3.0000	-1.6667	0.7778	0.8889
9	1	1	1.00	3.0278	1.0833	-0.8333	0.5833	0.0833	1.5000	1.1667	0.5556	-1.5556	0.5000	-1.0000	1.4444	1.2222
10	1	1	1.00	3.3333	1.5000	-0.6667	0.4167	0.9167	1.6667	0.1667	0.3333	-1.3333	1.5000	-2.8333	0.6667	1.110E-16
11	1	1	1.00	5.2222	-7.078E-16	-2.0000	1.2500	1.0833	1.3333	0.1667	0.4444	-0.7778	1.0000	-3.3333	0.2222	0.1111
12	1	1	1.00	3.8333	-0.6667	-0.6667	1.1667	0.8333	1.0000	0.3333	-0.6667	-1.3333	-0.1667	-0.6667	1.0000	1.6667

RESPONDENT UTILITIES

Num	Respondent ID	Segment	Weight	B0	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12
1	1	1	1.00	4.9167	0.8333	-2.0833	0.6667	0.3333	1.1667	-0.3333	0.8889	0.1111	0.3333	8.327E-17	1.1111	1.2222
2	1	1	1.00	0.2500	1.3333	-0.5000	1.5000	2.0833	1.3333	0.8333	-0.8889	0.5556	2.3333	-1.3333	0.2222	2.1111
3	1	1	1.00	2.5000	1.665E-16	-0.3333	1.6667	0.8333	0.6667	1.0000	-1.110E-16	-0.6667	3.8333	-2.8333	0.3333	1.3333
4	1	1	1.00	4.7500	4.718E-16	-0.6667	0.8333	1.2500	0.3333	0.8333	0.3333	-1.0000	-0.3333	-0.1667	1.3333	1.3333
5	1	1	1.00	4.5000	0.6667	-1.0000	0.6667	1.0000	0.6667	1.6667	-0.5556	-0.4444	0.3333	-2.8333	-0.4444	0.4444
6	1	1	1.00	5.6667	5.551E-17	-0.8333	-5.551E-17	0.3333	1.3333	3.997E-15	0.2222	-1.2222	-0.1667	-0.5000	0.1111	0.2222
7	1	1	1.00	2.5433	0.3333	-0.5000	0.5000	0.5833	0.3333	0.8333	-0.6667	1.110E-16	0.6667	-2.1667	-1.110E-16	0.6667
8	1	1	1.00	1.1667	1.1667	-0.0833	0.5000	-0.4167	0.1667	2.1667	0.7778	0.5556	0.5000	-0.8333	0.5556	2.7778
9	1	1	1.00	2.7500	5.274E-16	-1.1667	0.1667	-0.5833	1.3333	0.8333	1.4444	-0.7778	3.5000	-0.5000	0.8889	-0.5556
10	1	1	1.00	4.6667	0.5000	0.4167	1.5000	0.2500	0.5000	-0.1667	0.5556	-0.8889	0.8333	-1.6667	1.1111	-0.1111
11	1	1	1.00	4.1667	0.6667	-1.8333	1.3333	0.1667	0.3333	1.0000	0.5556	-0.2222	1.3333	-2.8333	0.7778	0.8889
12	1	1	1.00	4.4167	0.1667	-0.9167	-0.3333	0.3333	0.8333	0.3333	1.1111	-0.1111	1.3333	-1.6667	1.5556	1.1111

RESPONDENT UTILITIES

Num	Respondent ID	Segment	Weight	B0	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12
1	1	1	1.00	4.0833	-0.7500	-1.5833	0.0833	-0.1667	-0.1667	0.8333	0.6667	-0.6667	3.8333	-3.5000	.3333	1.0000
2	1	1	1.00	4.3333	-0.1667	-1.1667	-0.1667	-1.0000	0.3333	-1.0000	1.3333	-2.220E-16	2.1667	-0.3333	3.0000	2.0000
3	1	1	1.00	2.6111	1.2500	-0.2500	1.6667	0.6667	0.1667	-2.776E-17	-0.2222	-1.4444	2.0000	-1.6667	1.2222	0.4444
4	1	1	1.00	3.8056	1.7500	0.2500	0.0833	-0.1667	0.8333	0.5000	-1.1111	-0.2222	3.0000	-1.3333	0.1111	0.2222
5	1	1	1.00	3.3333	-0.4167	-1.2500	1.3333	0.3333	-1.1667	2.6667	1.0000	-2.0000	1.1667	0.8333	3.0000	1.0000
6	1	1	1.00	0.8333	1.0000	-1.0000	2.0000	2.0000	2.3333	1.3333	1.3333	-1.6667	-0.1667	-1.6667	1.3333	1.6667
7	1	1	1.00	5.1667	1.0000	8.882E-16	1.3333	1.6667	0.6667	0.6667	0.3333	-2.0000	-1.1667	-3.5000	1.6667	1.3333
8	1	1	1.00	3.3889	0.4167	0.5833	0.6667	1.0000	0.8333	1.0000	1.2222	0.4444	2.0000	-0.3333	0.1111	0.2222
9	1	1	1.00	4.7222	0.1667	-0.1667	0.5000	-0.3333	1.3333	1.0000	0.2222	-0.5556	0.6667	-0.5000	0.7778	0.5556
10	1	1	1.00	2.6667	-0.3333	-0.6667	0.5000	0.3333	1.443E-15	0.3333	1.0000	-0.3333	3.6667	-1.6667	1.6667	1.6667

Model Output Laundry Detergent

REGRESSION /DEPENDENT SCORE /METHOD ENTER CONDFAV TO APPLATTR INT1 INT2 INT3 INT4.

* * * * MULTIPLE REGRESSION * * * *

Listwise Deletion of Missing Data

Equation Number 1 Dependent Variable.. SCORE

Block Number 1. Method: Enter

CONDFAV CONDUNFV PROD100 PROD90 PRESENTH APPRDECI SUPPEXC SUPPPOOR
 DEMANAPP DEMANNEG APPLVERY APPLATTR INT1 INT2 INT3 INT4

Variable(s) Entered on Step Number

- 1.. INT4 condunfv * prod90
- 2.. APPLATTR
- 3.. DEMANNEG
- 4.. SUPPPOOR
- 5.. APPRDECI
- 6.. PRESENTH
- 7.. INT3 condunfv * prod100
- 8.. INT2 condfav * prod90
- 9.. INT1 condfav * prod100
- 10.. DEMANAPP
- 11.. APPLVERY
- 12.. SUPPEXC
- 13.. CONDUNFV
- 14.. PROD90
- 15.. PROD100
- 16.. CONDFAV

Multiple R .98963
 R Square .97937
 Adjusted R Square .94635
 Standard Error .35558

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	16	60.01525	3.75095
Residual	10	1.26437	.12644

F = 29.66668 Signif F = .0000

----- Variables in the Equation -----

Variable	B	SE B	Beta	T	Sig T
INT4	.152667	.410587	.031847	.372	.7178
APPLATTR	.832000	.167622	.260340	4.964	.0006
DEMANNEG	-1.322444	.167622	-.413804	-7.889	.0000
SUPPPOOR	-.689556	.167622	-.215768	-4.114	.0021
APPRDECI	.643333	.145165	.201305	4.432	.0013
PRESENTH	.748000	.145165	.234056	5.153	.0004
INT3	-.186333	.410587	-.038870	-.454	.6596
INT2	.014000	.410587	.002920	.034	.9735
INT1	.214667	.410587	.044781	.523	.6125
DEMANAPP	1.280778	.167622	.400766	7.641	.0000
APPLVERY	1.078333	.167622	.337420	6.433	.0001
SUPPEXC	.470889	.167622	.147345	2.809	.0185
CONDUNFV	-.706333	.290329	-.221018	-2.433	.0353
PROD90	.610667	.290329	.191083	2.103	.0617
PROD100	.816667	.290329	.255542	2.813	.0184
CONDFAV	.546667	.290329	.171057	1.883	.0891
(Constant)	3.472111	.298285		11.640	.0000

REGRESSION /DEPENDENT SCORE /METHOD ENTER CONDFAV TO APPLATTR.

Listwise Deletion of Missing Data

Equation Number 1 Dependent Variable.. SCORE

Block Number 1. Method: Enter

CONDFAV CONDUNFV PROD100 PROD90 PRESENTH APPRDECI SUPPEXC SUPPPOOR
DEMANAPP DEMANNEG APPLVERY APPLATTR

Variable(s) Entered on Step Number

- 1.. APPLATTR
- 2.. DEMANNEG
- 3.. SUPPPOOR
- 4.. APPRDECI
- 5.. PRESENTH
- 6.. PROD90
- 7.. CONDUNFV
- 8.. DEMANAPP
- 9.. PROD100
- 10.. APPLVERY
- 11.. SUPPEXC
- 12.. CONDFAV

Multiple R .98762
R Square .97539
Adjusted R Square .95430
Standard Error .32819

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	12	59.77166	4.98097
Residual	14	1.50795	.10771

F = 46.24388 Signif F = .0000

----- Variables in the Equation -----

Variable	B	SE B	Beta	T	Sig T
APPLATTR	.832000	.154712	.260340	5.378	.0001
DEMANNEG	-1.322444	.154712	-.413804	-8.548	.0000
SUPPPOOR	-.689556	.154712	-.215768	-4.457	.0005
APPRDECI	.643333	.133984	.201305	4.802	.0003
PRESENTH	.748000	.133984	.234056	5.583	.0001
PROD90	.666222	.154712	.208467	4.306	.0007
CONDUNFV	-.717556	.154712	-.224529	-4.638	.0004
DEMANAPP	1.280778	.154712	.400766	8.278	.0000
PROD100	.826111	.154712	.258497	5.340	.0001
APPLVERY	1.078333	.154712	.337420	6.970	.0000
SUPPEXC	.470889	.154712	.147345	3.044	.0088
CONDFAV	.622889	.154712	.194907	4.026	.0013
(Constant)	3.450444	.244621		14.105	.0000

Block 1 Model - Health Bar

MODEL ESTIMATED USING ORDINARY LEAST SQUARES (OLS)

$$Y = B0 + B1*X1 + B2*X2 + B3*X3 + B4*X4 + B5*X5 + B6*X6 + B7*X7 + B8*X8 + B9*X9 + B10*X10 + B11*X11 + B12*X12$$

X1 - Qualitative	Attribute: Conditions	Code Type: User Defined
X2 - Qualitative	Attribute: Conditions	Code Type: User Defined
X3 - Qualitative	Attribute: Product Offer	Code Type: Dummy
X4 - Qualitative	Attribute: Product Offer	Code Type: Dummy
X5 - Qualitative	Attribute: Presenter	Code Type: Dummy
X6 - Qualitative	Attribute: Approvers	Code Type: Dummy
X7 - Qualitative	Attribute: Supplier Information	Code Type: User Defined
X8 - Qualitative	Attribute: Supplier Information	Code Type: User Defined
X9 - Qualitative	Attribute: Demand	Code Type: User Defined
X10 - Qualitative	Attribute: Demand	Code Type: User Defined
X11 - Qualitative	Attribute: Appeal	Code Type: Dummy
X12 - Qualitative	Attribute: Appeal	Code Type: Dummy

AGGREGATE UTILITY

R-Square: 0.98

	B0	B1	B2	B3	B4
Coefficients	3.2374	0.5455	-1.0303	0.8333	0.7121
T-Statistics	2.4469	0.6188	-1.0515	1.0460	1.3082

	B5	B6	B7	B8	B9
Coefficients	0.7576	0.5152	0.8990	-0.3232	0.8333
T-Statistics	0.7764	0.6051	0.8751	-0.3203	0.6444

	B10	B11	B12		
Coefficients	-1.6667	1.5253	0.8990		
T-Statistics	-1.9921	1.6895	1.0369		

Block 2 Model - Health Bar

MODEL ESTIMATED USING ORDINARY LEAST SQUARES (OLS)

$$Y = B0 + B1*X1 + B2*X2 + B3*X3 + B4*X4 + B5*X5 + B6*X6 + B7*X7 + B8*X8 + B9*X9 + B10*X10 + B11*X11 + B12*X12$$

X1 - Qualitative	Attribute: Conditions	Code Type: User Defined
X2 - Qualitative	Attribute: Conditions	Code Type: User Defined
X3 - Qualitative	Attribute: Product Offer	Code Type: Dummy
X4 - Qualitative	Attribute: Product Offer	Code Type: Dummy
X5 - Qualitative	Attribute: Presenter	Code Type: Dummy
X6 - Qualitative	Attribute: Approvers	Code Type: Dummy
X7 - Qualitative	Attribute: Supplier Information	Code Type: User Defined
X8 - Qualitative	Attribute: Supplier Information	Code Type: User Defined
X9 - Qualitative	Attribute: Demand	Code Type: User Defined
X10 - Qualitative	Attribute: Demand	Code Type: User Defined
X11 - Qualitative	Attribute: Appeal	Code Type: Dummy
X12 - Qualitative	Attribute: Appeal	Code Type: Dummy

AGGREGATE UTILITY

R-Square: 0.98

	B0	B1	B2	B3	B4

Coefficients	3.2083	0.5333	-1.2333	1.2167	0.5083
T-Statistics	2.2234	0.5661	-1.6026	1.3904	0.7619

	B5	B6	B7	B8	B9

Coefficients	0.8667	0.8167	0.2667	-0.7333	1.0000
T-Statistics	0.9995	0.8589	0.5421	-0.9566	0.9461

	B10	B11	B12		

Coefficients	-1.6167	0.9333	0.8667		
T-Statistics	-1.2615	1.4212	1.0036		

BLock 3 Model - Health Bar

MODEL ESTIMATED USING ORDINARY LEAST SQUARES (OLS)

$$Y = B_0 + B_1 \cdot X_1 + B_2 \cdot X_2 + B_3 \cdot X_3 + B_4 \cdot X_4 + B_5 \cdot X_5 + B_6 \cdot X_6 + B_7 \cdot X_7 + B_8 \cdot X_8 + B_9 \cdot X_9 + B_{10} \cdot X_{10} + B_{11} \cdot X_{11} + B_{12} \cdot X_{12}$$

X1 - Qualitative	Attribute: Conditions	Code Type: User Defined
X2 - Qualitative	Attribute: Conditions	Code Type: User Defined
X3 - Qualitative	Attribute: Product Offer	Code Type: Dummy
X4 - Qualitative	Attribute: Product Offer	Code Type: Dummy
X5 - Qualitative	Attribute: Presenter	Code Type: Dummy
X6 - Qualitative	Attribute: Approvers	Code Type: Dummy
X7 - Qualitative	Attribute: Supplier Information	Code Type: User Defined
X8 - Qualitative	Attribute: Supplier Information	Code Type: User Defined
X9 - Qualitative	Attribute: Demand	Code Type: User Defined
X10 - Qualitative	Attribute: Demand	Code Type: User Defined
X11 - Qualitative	Attribute: Appeal	Code Type: Dummy
X12 - Qualitative	Attribute: Appeal	Code Type: Dummy

AGGREGATE UTILITY

R-Square: 1.00

	B0	B1	B2	B3	B4
Coefficients	3.4639	0.2750	-0.6083	0.6750	0.4500
T-Statistics	1.9735	0.4877	-0.8629	0.7278	0.7864

	B5	B6	B7	B8	B9
Coefficients	0.7833	0.8167	1.0222	-0.8889	1.4333
T-Statistics	0.9419	1.1115	1.8458	-1.2902	1.2894

	B10	B11	B12		
Coefficients	-1.1500	1.3778	1.0556		
T-Statistics	-1.0691	1.5182	1.7078		

RECODED DESIGN MATRIX

1.000	1.000	0.000	1.000	0.000	1.000	1.000	1.000	0.000	1.000	0.000	1.000	0.000
1.000	0.000	1.000	0.000	0.000	0.000	1.000	0.000	0.000	1.000	0.000	0.000	0.000
1.000	0.000	1.000	1.000	0.000	0.000	1.000	0.000	1.000	0.000	0.000	0.000	1.000
1.000	0.000	1.000	0.000	1.000	0.000	0.000	1.000	0.000	0.000	1.000	1.000	0.000
1.000	0.000	0.000	0.000	1.000	1.000	0.000	0.000	1.000	1.000	0.000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000	1.000	0.000
1.000	0.000	0.000	1.000	0.000	1.000	1.000	0.000	0.000	0.000	1.000	0.000	0.000
1.000	1.000	0.000	0.000	0.000	1.000	1.000	0.000	1.000	0.000	1.000	0.000	1.000
1.000	1.000	0.000	0.000	1.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1.000	1.000	0.000	1.000	0.000	1.000	0.000	0.000	1.000	0.000	1.000	0.000	0.000
1.000	1.000	0.000	0.000	1.000	1.000	1.000	1.000	0.000	1.000	0.000	0.000	1.000
1.000	0.000	1.000	0.000	1.000	1.000	1.000	0.000	1.000	0.000	0.000	0.000	0.000
1.000	0.000	1.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	1.000	0.000	1.000
1.000	1.000	0.000	0.000	0.000	1.000	1.000	0.000	0.000	0.000	0.000	1.000	0.000
1.000	0.000	1.000	1.000	0.000	1.000	0.000	0.000	0.000	1.000	0.000	1.000	0.000
1.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	1.000	1.000	0.000	0.000	0.000
1.000	0.000	0.000	0.000	1.000	0.000	1.000	0.000	0.000	0.000	1.000	1.000	0.000
1.000	0.000	0.000	1.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000	0.000	1.000

RESPONDENT T-STATISTICS

Num	R-Square	Std Error	B0	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12
1	0.77	3.3778	0.8349	-0.5620	-0.6283	0.9834	0.9834	1.8848	1.5707	1.7230	-0.0907	0.1571	-0.4712	0.9975	-0.1814
2	0.94	0.8500	1.6048	-1.4003	-1.8787	0.9802	1.2603	3.7573	2.1918	1.6270	1.0847	2.8180	-3.4442	3.2540	-2.709E-16
3	0.73	4.1667	1.3289	0.3162	-1.2728	0.0632	0.1897	0.1414	-0.1414	1.7146	1.2247	0.7071	-1.1314	1.4697	4.079E-17
4	0.86	0.7278	4.3038	0.9080	1.127E-16	1.9673	1.0593	-0.6768	-0.3384	0.1954	-0.1954	2.0303	-2.3687	1.5629	1.3676
5	0.93	1.7667	1.7935	1.0684	-2.3890	1.0684	1.2627	1.0859	0.6516	-0.3762	-2.2571	1.9547	-1.9547	3.7618	2.2571
6	0.83	4.9944	0.9318	0.1155	-0.5167	-0.1733	-0.0578	0.2583	1.1625	0.3729	0.0746	2.4543	-1.9376	1.1932	0.5966
7	0.98	0.6111	4.2410	3.1377	-2.5849	0.8257	2.4772	0.3693	0.3693	1.7056	-1.0660	4.0620	-7.3855	1.4924	1.0660
8	0.99	0.1000	10.1376	2.0412	-8.2158	7.7567	2.0412	10.0416	6.3901	2.370E-15	-6.3246	-4.561E-16	-3.6515	7.9057	9.4868
9	0.72	6.7000	1.9371	1.1471	0.7807	0.5486	0.2494	-0.1115	-0.7807	-0.1932	-0.7727	0.7807	-1.4498	1.3522	1.3522
10	0.96	0.4778	7.3334	0.1868	-4.5940	0.1868	0.5603	4.5940	0.4176	2.4112	-0.9645	-0.4176	-2.9234	1.2056	1.6878
11	0.88	2.7611	2.8032	1.3985	-2.4322	2.4085	1.6316	-0.3475	0.8686	2.2066	-0.1003	-1.9110	-2.2585	0.2006	0.7021

RECODED DESIGN MATRIX

1.000	1.000	0.000	1.000	0.000	1.000	0.000	0.000	1.000	0.000	1.000	0.000	0.000
1.000	1.000	0.000	0.000	1.000	1.000	1.000	1.000	0.000	1.000	0.000	0.000	1.000
1.000	0.000	1.000	0.000	1.000	1.000	1.000	0.000	1.000	0.000	0.000	0.000	0.000
1.000	0.000	1.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	1.000	0.000	1.000
1.000	1.000	0.000	0.000	0.000	1.000	1.000	0.000	0.000	0.000	0.000	1.000	0.000
1.000	0.000	1.000	1.000	0.000	1.000	0.000	0.000	0.000	1.000	0.000	1.000	0.000
1.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	1.000	1.000	0.000	0.000	0.000
1.000	0.000	0.000	0.000	1.000	0.000	1.000	0.000	0.000	0.000	1.000	1.000	0.000
1.000	0.000	0.000	1.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000	0.000	1.000
1.000	0.000	0.000	1.000	0.000	1.000	1.000	0.000	1.000	1.000	0.000	1.000	0.000
1.000	0.000	0.000	0.000	1.000	1.000	1.000	1.000	0.000	0.000	0.000	0.000	0.000
1.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000	0.000	1.000	0.000	1.000
1.000	0.000	1.000	1.000	0.000	1.000	1.000	1.000	0.000	0.000	1.000	0.000	0.000
1.000	0.000	1.000	0.000	1.000	1.000	1.000	0.000	0.000	1.000	0.000	0.000	1.000
1.000	0.000	1.000	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000
1.000	0.000	1.000	0.000	1.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	1.000
1.000	1.000	0.000	1.000	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	1.000
1.000	1.000	0.000	0.000	1.000	0.000	1.000	0.000	1.000	0.000	1.000	1.000	0.000
1.000	1.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	1.000	0.000	0.000	0.000

RESPONDENT T-STATISTICS

Num	R-Square	Std Error	B0	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12
1	0.96	0.4667	8.0512	0.4226	-2.0788	0.4226	0.5669	1.2677	0.4226	2.438E-16	-3.6596	1.6903	-6.7612	2.1958	1.4639
2	0.85	2.9611	2.2761	0.5033	-1.4254	2.0131	0.9003	2.8519	-1.3421	0.1937	-0.7748	1.8453	-1.5098	0.0969	-0.0969
3	0.94	0.4278	3.9498	3.9723	-0.9869	3.5309	0.7895	3.9723	3.5309	1.2741	-1.2741	-1.3241	-1.7655	3.3127	2.0386
4	0.90	1.9278	2.8209	2.0791	-3.3473	0.2079	1.0228	0.8317	1.0396	0.2401	-1.6805	1.039E-16	-1.2475	0.8403	0.6002
5	0.99	0.1778	1.1859	-0.6847	-6.4299	11.6391	3.3680	4.7926	7.5312	-0.3953	-3.1623	6.8465	-6.1619	6.3246	17.2774
6	0.88	1.4667	1.5138	0.2384	-0.5330	2.1453	1.8122	1.6686	1.1918	-0.8257	0.4129	2.6220	-2.1453	-0.4129	1.2386
7	0.87	1.0167	2.0662	3.4356	-1.0243	0.2863	-0.1280	1.1452	2.0041	0.4959	-1.9835	-0.2863	-1.1452	0.9918	0.0000
8	0.99	0.3667	6.8810	1.9069	-2.5584	2.8604	-2.1320	8.892E-15	2.8604	0.8257	2.750E-16	8.1044	-13.3485	2.4772	3.3029
9	0.87	1.1278	3.5312	-0.2718	-1.8235	2.1746	0.2431	-0.2718	3.2620	0.7847	-1.7264	1.0873	-0.2718	2.0402	0.3139
10	0.86	1.5444	3.0845	-1.3937	-1.6621	2.3229	1.2466	0.4646	0.4646	1.4752	0.5364	1.6260	-2.5551	1.7434	1.4752

RECODED DESIGN MATRIX

1.000	1.000	0.000	1.000	0.000	1.000	1.000	1.000	1.000	0.000	1.000	0.000	1.000	0.000
1.000	0.000	1.000	0.000	0.000	0.000	1.000	0.000	0.000	1.000	0.000	0.000	0.000	0.000
1.000	0.000	1.000	1.000	0.000	0.000	1.000	0.000	1.000	0.000	0.000	0.000	0.000	1.000
1.000	0.000	1.000	0.000	1.000	0.000	0.000	0.000	1.000	0.000	0.000	1.000	1.000	0.000
1.000	0.000	0.000	0.000	1.000	1.000	0.000	0.000	1.000	1.000	0.000	0.000	0.000	1.000
1.000	0.000	0.000	0.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000	0.000	1.000	0.000
1.000	0.000	0.000	1.000	0.000	1.000	1.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000
1.000	1.000	0.000	0.000	0.000	1.000	1.000	0.000	1.000	0.000	1.000	0.000	0.000	1.000
1.000	1.000	0.000	0.000	1.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1.000	0.000	0.000	1.000	0.000	1.000	1.000	0.000	1.000	1.000	0.000	1.000	0.000	0.000
1.000	0.000	0.000	0.000	1.000	1.000	1.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000
1.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	1.000
1.000	0.000	1.000	1.000	0.000	1.000	1.000	1.000	0.000	0.000	1.000	0.000	0.000	0.000
1.000	0.000	1.000	0.000	1.000	1.000	1.000	0.000	0.000	1.000	0.000	0.000	0.000	1.000
1.000	0.000	1.000	0.000	0.000	1.000	0.000	0.000	1.000	0.000	0.000	0.000	1.000	0.000
1.000	1.000	0.000	1.000	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000
1.000	1.000	0.000	0.000	1.000	0.000	0.000	1.000	0.000	1.000	0.000	1.000	0.000	0.000
1.000	1.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	1.000	0.000	0.000	0.000	0.000

RESPONDENT T-STATISTICS

Num	R-Square	Std Error	B0	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12
1	0.86	1.3667	1.6875	3.090E-15	-0.4417	-0.2209	0.9877	0.9877	1.4816	1.7108	-1.2831	1.4816	-1.4816	2.9939	1.7108
2	0.84	1.5667	5.5165	-1.2377	-2.0628	-0.6189	0.4613	-1.8451	0.9225	0.3995	-1.5979	1.1532	-0.2306	3.9947	2.7963
3	0.91	1.0944	3.9548	0.9872	-0.9872	4.0723	3.0353	1.6556	-0.2759	3.0270	-0.1593	-1.1038	-1.3797	1.2745	1.1152
4	0.92	0.6167	5.1291	1.9728	-1.3152	1.8084	-0.3676	2.2056	0.3676	1.9101	-1.9101	1.4704	-1.8380	1.2734	1.2734
5	0.94	0.8778	1.5208	4.039E-15	-1.836E-16	1.1024	2.052E-16	3.0812	4.3137	1.7789	-0.1779	3.3893	-1.539E-16	1.4231	0.1779
6	0.99	0.1444	3.6047	1.3587	-1.3587	3.3968	1.5191	4.5573	7.5955	3.5082	-3.5082	10.6338	-8.3551	7.0165	6.1394
7	0.95	0.5111	4.9057	1.0835	-1.0835	1.4446	1.6151	4.0379	2.4227	1.1656	-3.9631	1.6151	-3.2303	3.7300	1.5644
8	0.97	0.6167	5.0244	1.4796	-0.1644	-8.761E-16	1.4704	1.8380	0.7352	1.2734	-1.2734	5.8817	-6.2493	1.2734	1.2734
9	0.94	0.6000	2.7591	1.0000	0.3333	0.3333	3.103E-16	1.4907	1.4907	3.2275	-3.225E-16	6.3355	0.3727	1.2910	1.2910
10	0.96	0.9611	4.8351	4.035E-15	-3.1604	2.2387	0.2945	1.1778	0.8834	0.8500	-2.8901	3.8279	-5.0058	1.1900	1.8701

RESPONDENT UTILITIES

Num	Respondent ID	Segment	Weight	B0	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12
1	1	1.00	1.5556	-0.6667	-0.6667	1.1667	1.1667	2.0000	1.6667	2.1111	-0.1111	0.1667	-0.5000	1.2222	-0.2222	
2	1	1.00	1.5000	-0.8333	-1.0000	0.5833	0.7500	2.0000	1.1667	1.0000	0.6667	1.5000	-1.8333	2.0000	-1.665E-16	
3	1	1.00	2.7500	0.4167	-1.5000	0.0833	0.2500	0.1667	-0.1667	2.3333	1.6667	0.8333	-1.3333	2.0000	5.551E-17	
4	1	1.00	3.7222	0.5000	5.551E-17	1.0833	0.5833	-0.3333	-0.1667	0.1111	-0.1111	1.0000	-1.1667	0.8889	0.7778	
5	1	1.00	2.4167	0.9167	-1.8333	0.9167	1.0833	0.8333	0.5000	-0.3333	-2.0000	1.5000	-1.5000	3.3333	2.0000	
6	1	1.00	2.1111	0.1667	-0.6667	-0.2500	-0.0833	0.3333	1.5000	0.5556	0.1111	3.1667	-2.5000	1.7778	0.8889	
7	1	1.00	3.3611	1.5833	-1.1667	0.4167	1.2500	0.1667	0.1667	0.8889	-0.5556	1.8333	-3.3333	0.7778	0.5556	
8	1	1.00	3.2500	0.4167	-1.5000	1.5833	0.4167	1.8333	1.1667	4.996E-16	-1.3333	-8.327E-17	-0.6667	1.6667	2.0000	
9	1	1.00	5.0833	1.9167	1.1667	0.9167	0.4167	-0.1667	-1.1667	-0.3333	-1.3333	1.1667	-2.1667	2.3333	2.3333	
10	1	1.00	5.1389	0.0833	-1.8333	0.0833	0.2500	1.8333	0.1667	1.1111	-0.4444	-0.1667	-1.1667	0.5556	0.7778	
11	1	1.00	4.7222	1.5000	-2.3333	2.5833	1.7500	-0.3333	0.8333	2.4444	-0.1111	-1.8333	-2.1667	0.2222	0.7778	

RESPONDENT UTILITIES

Num	Respondent ID	Segment	Weight	B0	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12
1	1	1.00	5.5000	0.1667	-0.9167	0.1667	0.2500	0.5000	0.1667	1.110E-16	-1.6667	0.6667	-2.6667	1.0000	0.6667	
2	1	1.00	3.9167	0.5000	-1.5833	2.0000	1.0000	2.8333	-1.3333	0.2222	-0.8889	1.8333	-1.5000	0.1111	-0.1111	
3	1	1.00	2.5833	1.5000	-0.4167	1.3333	0.3333	1.5000	1.3333	0.5556	-0.5556	-0.5000	-0.6667	1.4444	0.8889	
4	1	1.00	3.9167	1.6667	-3.0000	0.1667	0.9167	0.6667	0.8333	0.2222	-1.5556	8.327E-17	-1.0000	0.7778	0.5556	
5	1	1.00	0.5000	-0.1667	-1.7500	2.8333	0.9167	1.1667	1.8333	-0.1111	-0.8889	1.6667	-1.5000	1.7778	2.8889	
6	1	1.00	1.8333	0.1667	-0.4167	1.5000	1.4167	1.1667	0.8333	-0.6667	0.3333	1.8333	-1.5000	-0.3333	1.0000	
7	1	1.00	2.0833	2.0000	-0.6667	0.1667	-0.0833	0.6667	1.1667	0.3333	-1.3333	-0.1667	-0.6667	0.6667	0.0000	
8	1	1.00	4.1667	0.6667	-1.0000	1.0000	-0.8333	3.109E-15	1.0000	0.3333	1.110E-16	2.8333	-4.6667	1.0000	1.3333	
9	1	1.00	3.7500	-0.1667	-1.2500	1.3333	0.1667	-0.1667	2.0000	0.5556	-1.2222	0.6667	-0.1667	1.4444	0.2222	
10	1	1.00	3.8333	-1.0000	-1.3333	1.6667	1.0000	0.3333	0.3333	1.2222	0.4444	1.1667	-1.8333	1.4444	1.2222	

RESPONDENT UTILITIES

Num	Respondent ID	Segment	Weight	B0	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12
1	1	1.00	2.0000	2.331E-15	-0.3333	-0.1667	0.6667	0.6667	1.0000	1.3333	-1.0000	1.0000	-1.0000	2.3333	1.3333	
2	1	1.00	7.0000	-1.0000	-1.6667	-0.5000	0.3333	-1.3333	0.6667	0.3333	-1.3333	0.8333	-0.1667	3.3333	2.3333	
3	1	1.00	4.1944	0.6667	-0.6667	2.7500	1.8333	1.0000	-0.1667	2.1111	-0.1111	-0.6667	-0.8333	0.8889	0.7778	
4	1	1.00	4.0833	1.0000	-0.6667	0.9167	-0.1667	1.0000	0.1667	1.0000	-1.0000	0.6667	-0.8333	0.6667	0.6667	
5	1	1.00	1.4444	2.442E-15	-1.110E-16	0.6667	1.110E-16	1.6667	2.3333	1.1111	-0.1111	1.8333	-8.327E-17	0.8889	0.1111	
6	1	1.00	1.3889	0.3333	-0.3333	0.8333	0.3333	1.0000	1.6667	0.8889	-0.8889	2.3333	-1.8333	1.7778	1.5556	
7	1	1.00	3.5556	0.5000	-0.5000	0.6667	0.6667	1.6667	1.0000	0.5556	-1.8889	0.6667	-1.3333	1.7778	1.2222	
8	1	1.00	4.0000	0.7500	-0.0833	-4.441E-16	0.6667	0.8333	0.3333	0.6667	-0.6667	2.6667	-2.8333	0.6667	0.6667	
9	1	1.00	2.1667	0.5000	0.1667	0.1667	1.388E-16	0.6667	0.6667	1.6667	-1.665E-16	2.8333	0.1667	0.6667	0.6667	
10	1	1.00	4.8056	2.554E-15	-2.0000	1.4167	0.1667	0.6667	0.5000	0.5556	-1.8889	2.1667	-2.8333	0.7778	1.2222	

Model Output Health Bar

REGRESSION /VARIABLES (COLLECT) /DEPENDENT SCORES /METHOD ENTER CONDFAV TO INT4.

*** MULTIPLE REGRESSION ***

Listwise Deletion of Missing Data

Equation Number 1 Dependent Variable.. SCORES Health Bar means

Block Number 1. Method: Enter

CONDFAV CONDUNFV PROD100 PROD90 PRESENTH APPRDECI SUPPEXC SUPPPOOR
 DEMANAPP DEMANNEG APPLVERY APPLATTR INT1 INT2 INT3 INT4

Equation Number 1 Dependent Variable.. SCORES Health Bar means

Variable(s) Entered on Step Number

- 1.. INT4 condunfv * prod90
- 2.. APPLATTR
- 3.. DEMANNEG
- 4.. SUPPPOOR
- 5.. APPRDECI
- 6.. PRESENTH
- 7.. INT3 condunfv * prod100
- 8.. INT2 condfav * prod90
- 9.. INT1 condfav * prod100
- 10.. DEMANAPP
- 11.. APPLVERY
- 12.. SUPPEXC
- 13.. CONDUNFV
- 14.. PROD90
- 15.. PROD100
- 16.. CONDFAV

Multiple R .97565
 R Square .95189
 Adjusted R Square .87492
 Standard Error .58061

Analysis of Variance			
	DF	Sum of Squares	Mean Square
Regression	16	66.70442	4.16903
Residual	10	3.37105	.33711

F = 12.36714 Signif F = .0002

----- Variables in the Equation -----

Variable	B	SE B	Beta	T	Sig T
INT4	.560000	.670428	.109242	.835	.4231
APPLATTR	.874444	.273701	.255873	3.195	.0096
DEMANNEG	-1.467778	.273701	-.429490	-5.363	.0003
SUPPPOOR	-.674444	.273701	-.197351	-2.464	.0334
APPRDECI	.650000	.237032	.190198	2.742	.0208
PRESENTH	.788333	.237032	.230676	3.326	.0077
INT3	.520000	.670428	.101439	.776	.4559
INT2	.050000	.670428	.009754	.075	.9420
INT1	.560000	.670428	.109242	.835	.4231
DEMANAPP	1.094444	.273701	.320248	3.999	.0025
APPLVERY	1.288889	.273701	.377145	4.709	.0008
SUPPEXC	.741111	.273701	.216858	2.708	.0220
CONDUNFV	-1.280000	.474064	-.374544	-2.700	.0223
PROD90	.416667	.474064	.121922	.879	.4001
PROD100	.580000	.474064	.169715	1.223	.2492
CONDFAV	.283333	.474064	.082907	.598	.5633
(Constant)	3.498889	.487054		7.184	.0000

REGRESSION /DEPENDENT SCORES /METHOD ENTER CONDFAV TO APPLATTR.

Listwise Deletion of Missing Data

Equation Number 1 Dependent Variable.. SCORES Health Bar means

Block Number 1. Method: Enter

CONDFAV CONDUNFV PROD100 PROD90 PRESENTH APPRDECI SUPPEXC SUPPPOOR
DEMANAPP DEMANNEG APPLVERY APPLATTR

Variable(s) Entered on Step Number

- 1.. APPLATTR
- 2.. DEMANNEG
- 3.. SUPPPOOR
- 4.. APPRDECI
- 5.. PRESENTH
- 6.. PROD90
- 7.. CONDUNFV
- 8.. DEMANAPP
- 9.. PROD100
- 10.. APPLVERY
- 11.. SUPPEXC
- 12.. CONDFAV

Multiple R .97143
R Square .94368
Adjusted R Square .89541
Standard Error .53093

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	12	66.12908	5.51076
Residual	14	3.94638	.28188

F = 19.54970 Signif F = .0000

----- Variables in the Equation -----

Variable	B	SE B	Beta	T	Sig T
APPLATTR	.874444	.250282	.255873	3.494	.0036
DEMANNEG	-1.467778	.250282	-.429490	-5.864	.0000
SUPPPOOR	-.674444	.250282	-.197351	-2.695	.0174
APPRDECI	.650000	.216750	.190198	2.999	.0096
PRESENTH	.788333	.216750	.230676	3.637	.0027
PROD90	.620000	.250282	.181420	2.477	.0266
CONDUNFV	-.920000	.250282	-.269203	-3.676	.0025
DEMANAPP	1.094444	.250282	.320248	4.373	.0006
PROD100	.940000	.250282	.275056	3.756	.0021
APPLVERY	1.288889	.250282	.377145	5.150	.0001
SUPPEXC	.741111	.250282	.216858	2.961	.0103
CONDFAV	.486667	.250282	.142405	1.944	.0722
(Constant)	3.311111	.395730		8.367	.0000

Health Bar

Score = 0.248889

Laundry Detergent

Score = 0.720888

Appeal Ordinary	1	.000000	0	.000000	0
Appeal Attractive	0	0.874444	0	0.832000	0
Appeal V. Attractive	0	1.288889	0	1.078333	0
Demand negligible	1	-1.467778	-1.46778	-1.322444	-1.32244
Demand Average	0	.000000	0	.000000	0
Demand Appreciable	0	1.094444	0	1.280778	0
Supplier Info Poor	1	-0.674444	-0.67444	-0.689556	-0.68956
Supplier Info Avg	0	.000000	0	.000000	0
Supplier Info Exc.	0	0.741111	0	0.470889	0
Approvers NOT decide	1	.000000	0	.000000	0
Approvers CAN decide	0	0.650000	0	0.643333	0
Presenter UNenthusiastic	1	.000000	0	.000000	0
Presenter enthusiastic	0	0.788333	0	0.748000	0
Product Offer 80%	1	.000000	0	.000000	0
Product Offer 90%	0	0.620000	0	0.666222	0
Product Offer 100%	0	0.940000	0	0.826111	0
Conditions Unfavourable	1	-0.920000	-0.92	-0.717556	-0.71756
Conditions Neutral	0	.000000	0	.000000	0
Conditions Favourable	0	0.486667	0	0.622889	0
(Constant)	1	3.311111	3.311111	3.450444	3.450444

Health Bar

Score = 6.663888

Laundry Detergent

Score = 6.931221

Appeal Ordinary	0	.000000	0	.000000	0
Appeal Attractive	1	0.874444	0.874444	0.832000	0.832
Appeal V. Attractive	0	1.288889	0	1.078333	0
Demand negligible	0	-1.467778	0	-1.322444	0
Demand Average	0	.000000	0	.000000	0
Demand Appreciable	1	1.094444	1.094444	1.280778	1.280778
Supplier Info Poor	1	-0.674444	-0.67444	-0.689556	-0.68956
Supplier Info Avg	0	.000000	0	.000000	0
Supplier Info Exc.	0	0.741111	0	0.70889	0
Approvers NOT decide	0	.000000	0	.000000	0
Approvers CAN decide	1	0.650000	0.65	0.643333	0.643333
Presenter UNenthusiastic	0	.000000	0	.000000	0
Presenter enthused	1	0.788333	0.788333	0.748000	0.748
Product Offer 80%	0	.000000	0	.000000	0
Product Offer 90%	1	0.620000	0.62	0.666222	0.666222
Product Offer 100%	0	0.940000	0	0.826111	0
Conditions Unfavourable	0	-0.920000	0	-0.717556	0
Conditions Neutral	1	.000000	0	.000000	0
Conditions Favourable	0	0.486667	0	0.622889	0
(Constant)	1	3.311111	3.311111	3.450444	3.450444

Health Bar

Score = 7.417778

Laundry Detergent

Score = 7.091999

Appeal Ordinary	0	.000000	0	.000000	0
Appeal Attractive	0	0.874444	0	0.832000	0
Appeal V. Attractive	1	1.288889	1.288889	1.078333	1.078333
Demand negligible	0	-1.467778	0	-1.322444	0
Demand Average	1	.000000	0	.000000	0
Demand Appreciable	0	1.094444	0	1.280778	0
Supplier Info Poor	0	-0.674444	0	-0.689556	0
Supplier Info Avg	0	.000000	0	.000000	0
Supplier Info Exc.	1	0.741111	0.741111	0.470889	0.470889
Approvers NOT decide	0	.000000	0	.000000	0
Approvers CAN decide	1	0.650000	0.65	0.643333	0.643333
Presenter UNenthusiastic	1	.000000	0	.000000	0
Presenter enthusiastic	0	0.788333	0	0.748000	0
Product Offer 80%	0	.000000	0	.000000	0
Product Offer 90%	0	0.620000	0	0.666222	0
Product Offer 100%	1	0.940000	0.94	0.826111	0.826111
Conditions Unfavourable	0	-0.920000	0	-0.717556	0
Conditions Neutral	0	.000000	0	.000000	0
Conditions Favourable	1	0.486667	0.486667	0.622889	0.622889
(Constant)	1	3.311111	3.311111	3.450444	3.450444

Health Bar

Score = 9.300555

Laundry Detergent

Score = 9.120777

Appeal Ordinary	0	.000000	0	.000000	0
Appeal Attractive	0	0.874444	0	0.832000	0
Appeal V. Attractive	1	1.288889	1.288889	1.078333	1.078333
Demand negligible	0	-1.467778	0	-1.322444	0
Demand Average	0	.000000	0	.000000	0
Demand Appreciable	1	1.094444	1.094444	1.280778	1.280778
Supplier Info Poor	0	-0.674444	0	-0.689556	0
Supplier Info Avg	0	.000000	0	.000000	0
Supplier Info Exc.	1	0.741111	0.741111	0.470889	0.470889
Approvers NOT decide	0	.000000	0	.000000	0
Approvers CAN decide	1	0.650000	0.65	0.643333	0.643333
Presenter UNenthused	0	.000000	0	.000000	0
Presenter enthused	1	0.788333	0.788333	0.748000	0.748
Product Offer 80%	0	.000000	0	.000000	0
Product Offer 90%	0	0.620000	0	0.666222	0
Product Offer 100%	1	0.940000	0.94	0.826111	0.826111
Conditions Unfavour	0	-0.920000	0	-0.717556	0
Conditions Neutral	0	.000000	0	.000000	0
Conditions Favour	1	0.486667	0.486667	0.622889	0.622889
(Constant)	1	3.311111	3.311111	3.450444	3.450444

Conjoint Analysis Sundry Tables

Table 1. Decision Levels and Background Associations (Total - LD*)

Decision Levels	Background Elements	Significance	Near Significance
Appreciable Demand	Role in buying	p=0.0521	
Excellent Supplier Information	Company Respondent age Use ranging committee		p=0.1568 p=0.1440 p=0.1358
Very Attractive Appeal	Company Role in buying Proportion central warehousing	p=0.0215 p=0.0942	p=0.1453
Attractive Appeal	Company Proportion central warehousing Number in ranging committee	p=0.0986 p=0.0424	p=0.1734
Product Offer 90%	Role in buying Use ranging committee		p=0.1053 p=0.1804
Can Decide	Company		p=0.1174
Enthused Presenter	Number in ranging committee Respondent age		p=0.1265 p=0.1691

Note: LD refers to Laundry Detergent

Table 2. Mean Utility Value Comparisons (Total - LD)

Decision Levels	Background Elements	Significance	Near Significance
Appreciable Demand	Respondent age (2 with 3)	p=0.0500	p=0.1169
	Use of ranging committee Number in ranging committee (1 > 2)	p=0.0891	
Favourable Conditions	Company (4 with 3) Number in ranging committee	p=0.0500	p=0.1784
Excellent Supplier Information	Company (4 with 2 & 7) Use ranging committee	p=0.0500	p=0.1414
Very Attractive Appeal	Company (3 with all except 2) Use category management	p=0.0500	p=0.1794
Product Offer 100%	Company (5 with 2, 6 & 7)	p=0.0500	p=0.1246
	Years with company (1 with 2) Product part of responsibility	p=0.0500	
Product Offer 90%	Years as a buyer (2 with 3) Number in ranging committee	p=0.0500	p=0.1262
Can Decide	Number in ranging committee (1 > 2)	p=0.0388	
Enthused Presenter	Company (1 with 3)	p=0.0500	
	Number in ranging committee (2 > 1)	p=0.0105	

- Notes:
1. Bracketed figures represent sub-groups of Background elements.
 2. Seven (7) companies participated in the research and all are represented in some form across most decision factors.
 3. A large number of significance values are shown at 95% as this was the default tolerance in SPSSPC using One-Way Analysis and a multigroup mean comparison.

Table 3. Decision Levels and Background Associations (Majority & Minority -LD)

Decision Levels	Background Elements	Significance	Near Significance
Favourable Conditions	Respondent age		p=0.1937
Very Attractive Appeal (Majority)	Proportion central warehousing		p=0.1181
	Use category management		p=0.1693
	Part of responsibility		p=0.1693
Attractive Appeal (Minority)	Company	p=0.0351	p=0.1704
	Years as buyer		p=0.1324
	Respondent age		
	Part of responsibility		p=0.1866
Product Offer 90% (Minority)	Role in buying		p=0.1234
Enthused Presenter	Use category management		p=0.1296
	Number in ranging committee		p=0.1328
Can Decide	Company Buyer	p=0.0984	p=0.1910

Table 4. Mean Value Differences and Background Elements (Majority & Minority - LD)

Decision Levels	Background Elements	Significance	Near Significance
Appreciable Demand	Respondent age (1 with 2) Number in ranging committee Product part of responsibility	p=0.0500	p=0.1813 p=0.1604
Favourable Conditions	Use of ranging committee		p=0.1219
Very Attractive Appeal (Majority)	Company (3 with 1, 4 & 5)	p=0.0500	
Attractive Appeal (Minority)	Company (2 with 4 & 7) Use ranging committee	p=0.0500	p=0.1971
Excellent Supplier Information	Company (2 with 5 & 6) Respondent age (2 with 3)	p=0.0500 p=0.0500	
Product Offer 100% (Majority)	Years with company (1 with 2)	p=0.0500	
Product Offer 90% (Minority)	Role in buying (2 with 1 & 3)	p=0.0500	
Enthusied Presenter	Product part of responsibility Years with company (1 with 2) Years as a buyer (1 with 3)	p=0.0895 p=0.0500 p=0.0500	
Can Decide	Number in ranging committee		p=0.1051

- Notes: 1. Bracketed figures represent sub-groups of Background elements.
 2. A large number of significance values are shown at 95% as this was the default tolerance in SPSSPC using One-Way Analysis and a multigroup mean comparison.

Table 5. Decision Levels and Background Associations (Total - HB*)

Decision Levels	Background Elements	Significance	Near-Significance
Excellent Supplier Information	Respondent age		p=0.1440
Favourable Conditions	Company Use category management Proportion central warehousing Use ranging committee	p=0.0402	p=0.1609 p=0.1620 p=0.1616
Very Attractive Appeal	Role in buying	p=0.0430	
Attractive Appeal	Company Use category management Years as a buyer Product part of responsibility	p=0.0185 p=0.0379	p=0.1082 p=0.1955
Product Offer 100%	Buyer Role in buying	p=0.0755	p=0.1934
Product Offer 90%	Company Respondent Age Buyer Years as a buyer	p=0.0541 p=0.0246	p=0.1325 p=0.1871
Enthusied Presenter	Use category management Company	p=0.0546	p=0.1821
Can Decide	Number in ranging committee		p=0.1185

Note: HB refers to Health Bar

Table 6. Mean Value Differences and Background Elements (Total - HB)

Decision Levels	Background Elements	Significance	Near Significance
Excellent Supplier Information	Company (4 with 2 & 7) Number in ranging committee Respondent age	p=0.0500	p=0.1414 p=0.1771
Favourable Conditions	Company (1 with 4) Use of ranging committee Number in ranging committee	p=0.0500 p=0.0715	p=0.1028
Very Attractive Appeal	Years as a buyer Product part of responsibility	p=0.0875	p=0.1400
Attractive Appeal	Respondent age (1 with 2 & 3) Company (6 with 1,4 & 5) Years as a buyer (1 with 2) Role in buying Years with company	p=0.0500 p=0.0500 p=0.0500 p=0.0716	p=0.1839
Product Offer 100%	Number in ranging committee	p=0.0984	
Product Offer 90%	Years with company Years as a buyer (1 with 3)	p=0.0500	p=0.1850
Enthused Presenter	Company (6 with 1,2,3 & 4)	p=0.0500	
Can Decide	Product part of responsibility		p=0.1157

Notes: 1. Bracketed figures represent sub-groups of Background elements.
 2. A large number of significance values are shown at 95% as this was the default tolerance in SPSSPC using One-Way Analysis and a multigroup mean comparison.

Table 7. Decision Levels and Background Associations (Majority & Minority - HB)

Decision Levels	Background Elements	Significance	Near Significance
Appreciable Demand	Buyer	p=0.0680	
	Years as a buyer		p=0.1144
	Proportion central warehousing		p=0.1220
	Use ranging committee		p=0.1450
Favourable Conditions	Respondent age	p=0.0282 p=0.0159 p=0.0801	p=0.1836
	Company		p=0.1440
	Buyer		p=0.1768
	Proportion central warehousing		
	Use ranging committee		
	Number in ranging committee		
Very Attractive Appeal (Majority)	Years as a buyer		p=0.1688
	Role in buying		p=0.1453
	Product part of responsibility		p=0.1058
Attractive Appeal (Minority)	Company	p=0.0307	p=0.1680
	Years as buyer		p=0.1433
	Proportion central warehousing		
	Number in ranging committee		p=0.1780
	Product part of responsibility		p=0.1443
Excellent Supplier Information	Years with company		p=0.1764
	Number in ranging committee		p=0.1928
Product Offer 100% (Majority)	Years with company	p=0.0209 p=0.0511	p=0.1238
	Buyer		
	Years as buyer		
Product Offer 90% (Minority)	Company	p=0.0035 p=0.0941 p=0.0084	p=0.1303
	Buyer		
	Use category management		
	Use ranging committee		
Enthusied Presenter	Use category management	p=0.0052	
	Company		p=0.1909
	Product part of responsibility		p=0.1794
Can Decide	Years with company	p=0.0369 p=0.0366	
	Years as buyer		
	Role in buying		p=0.1142
	Number in ranging committee		p=0.1330

Table 8. Mean Value Differences and Background Elements (Majority & Minority - HB)

Decision Levels	Background Elements	Significance	Near Significance
Appreciable Demand	Years as a buyer (2 with 1 & 3)	p=0.0500	
Favourable Conditions	Use of ranging committee Company (4 & 2 with 1 & 5) Buyer (1 with 3) Proportion central warehousing (3 with 4)	p=0.0035 p=0.0500 p=0.0500 p=0.0500	
Very Attractive Appeal (Majority)	Respondent age (1 with 2 & 3) Proportion central warehousing (3 with 4)	p=0.0500 p=0.0500	
	Role in buying Product part of responsibility	p=0.0305	p=0.1464
Attractive Appeal (Minority)	Number in ranging committee		p=0.1272
Excellent Supplier Information	Company (1 with 3) Number in ranging committee	p=0.0500 p=0.0651	
	Role in buying Use of ranging committee Company (3 with 4) Buyer (1 with 3)	p=0.0500 p=0.0068	p=0.1804 p=0.1236
Product Offer 90% (Minority)	Use category management	p=0.0429	
	Use ranging committee	p=0.0019	
	Buyer (1 with 3)	p=0.0029	
	Company (4 & 6 with 1 & 5)	p=0.0500	
Enthusied Presenter	Product part of responsibility		p=0.1588
	Use category management		p=0.1069
	Company (6 with 1,2,3,4 & 5)	p=0.0500	
Can Decide	Number in ranging committee	p=0.0300	
	Product part of responsibility	p=0.0769	
	Company (5 with 1,2 & 7)	p=0.0500	
	Years as a buyer (2 with 3)	p=0.0500	

Notes: 1. Bracketed figures represent sub-groups of Background elements.

2. A large number of significance values are shown at 95% as this was the default tolerance in SPSSPC using One-Way Analysis and a multigroup mean comparison.

Table 10. Total Utility Range Proportions and Experience

Decision Factor	Total Utility %	Years with Company %	Years as a Buyer %	Age %
Demand	31.5	1. 32.2	1. 31.3	1. 38.9
		2. 28.9	2. 26.9	2. 29.5
		3. 33.8	3. 35.0	3. 29.0
Conditions	16.4	1. 21.5	1. 18.0	1. 26.6
		2. 15.6	2. 15.9	2. 14.9
		3. 12.3	3. 15.6	3. 12.3
Supplier Information	13.0	1. 12.4	1. 11.5	1. 2.6
		2. 13.1	2. 17.1	2. 13.8
		3. 13.4	3. 11.0	3. 17.1
Appeal	12.9	1. 16.0	1. 15.1	1. 11.5
		2. 10.2	2. 9.7	2. 13.3
		3. 14.6	3. 13.7	3. 16.0
Product Offer	9.7	1. 6.6	1. 10.6	1. 11.2
		2. 12.8	2. 11.5	2. 9.0
		3. 8.3	3. 7.8	3. 9.6
Approvers	8.3	1. 7.2	1. 6.0	1. 7.3
		2. 10.0	2. 10.7	2. 9.8
		3. 7.0	3. 8.2	3. 6.6
Enthusied Presenter	8.2	1. 3.9	1. 7.4	1. 1.9
		2. 9.3	2. 8.2	2. 9.6
		3. 10.5	3. 8.7	3. 9.2
	8.2280	1. 8.0666 2. 8.9442 3. 7.6162	1. 8.3027 2. 8.5582 3. 7.9484	1. 10.4498 2. 7.9362 3. 7.9906

Table 11. Total Utility Range Values and Business Philosophy (Total - LD)

Decision Factor	Total Utility	Category Management	Ranging Committee	Number in Committee	% Central Warehousing
Demand	2.5880	1. 2.3863 2. 2.9583	1. 2.2083 2. 2.9259	1. 2.5833 ## 2. 1.9833	2. 2.4334 3. 2.9231 4. 2.3646
Conditions	1.3490	1. 1.0810 2. 1.7222	1. 1.2396 2. 1.4445	1. 1.2506 2. 1.2333	2. 0.7833 3. 0.9616 4. 1.8386
Supplier Information	1.0720	1. 1.2222 2. 0.7962	1. 1.2987 2. 0.8704	1. 1.3888 2. 1.2444	2. 1.7111 3. 0.8717 4. 1.0347
Appeal	1.0620	1. 1.2222 (VA) 2. 0.7685 (VA)	1. 1.1111 (VA) 2. 1.0185 (VA)	1. 1.3889 (VA) 2. 0.9444 (VA)	2. 1.5778 (VA) 3. 1.1795 (VA) # 4. 0.9028 (A)
Product Offer	0.7990	1. 0.8182 (100) 2. 0.7639 (100)	1. 0.7187 (100) 2. 0.8704 (100)	1. 0.6805 (100) 2. 0.8417 (90)	2. 0.9667 (100) 3. 0.8013 (100) 4. 0.7448 (100)
Approvers	0.6860	1. 0.6894 2. 0.6806	1. 0.6979 2. 0.6759	1. 1.1667 ## 2. 0.4167	2. 1.1000 3. 0.4872 4. 0.7188
Enthusied Presenter	0.6720	1. 0.6742 2. 0.6667	1. 0.7083 2. 0.6389	1. 0.0278 ### 2. 1.1167	2. 0.2667 3. 0.8077 4. 0.6875
	8.2280	1. 8.0935 2. 8.3564	1. 7.9826 2. 8.4445	1. 8.4860 2. 7.7805	2. 8.8390 3. 8.0321 4. 8.2918

Note: 1. (A) refers to 'Attractive Appeal' and (VA) to 'Very Attractive Appeal'
 2. (100) refers to 'Product Offer 100%' and (90) to 'Product Offer 90%'.
 3. '1' and '2' above and '2', '3' and '4' are response categories. See Appendix B for detail.
 4. ## shows that a significant difference between means existed, while # indicates significant association as per crosstabulations.

Table 12. Total Utility Range Proportions and Business Philosophy (Total - LD)

Decision Factor	Total Utility %	Category Management %	Ranging Committee %	Number in Committee %	% Central Warchoused %
Demand	31.5	1. 29.5 2. 35.4	1. 27.7 2. 34.6	1. 30.4 2. 25.5	2. 27.5 3. 36.4 4. 28.5
Conditions	16.4	1. 13.3 2. 20.6	1. 15.5 2. 17.1	1. 14.7 2. 15.8	2. 8.9 3. 12.0 4. 22.0
Supplier Information	13.0	1. 15.1 2. 9.5	1. 16.3 2. 10.3	1. 16.4 2. 16.0	2. 19.4 3. 10.8 4. 12.5
Appeal	12.9	1. 15.1 2. 9.2	1. 13.9 2. 12.1	1. 16.4 2. 12.1	2. 17.8 3. 14.7 4. 10.9
Product Offer	9.7	1. 10.1 2. 9.1	1. 9.0 2. 10.3	1. 8.0 2. 10.8	2. 10.9 3. 10.0 4. 9.0
Approvers	8.3	1. 8.5 2. 8.1	1. 8.7 2. 8.0	1. 13.7 2. 5.4	2. 12.4 3. 6.1 4. 8.7
Enthusied Presenter	8.2	1. 8.3 2. 8.0	1. 8.9 2. 7.6	1. * 2. 14.4	2. 3.0 3. 10.0 4. 8.3
	8.2280	1. 8.0935 2. 8.3564	1. 7.9826 2. 8.4445	1. 8.4860 2. 7.7805	2. 8.8390 3. 8.0321 4. 8.2918

Note: * indicates a value of less than 1%

Table 13. Total Utility Range Values, Proportions and Decision Involvement (Total - LD)

Decision Factor	Total Utility	Role in Buying	%	Part of Responsibility	%
Demand	2.5880	1. 2.4298	29.6	1. 3.1333	37.4
		2. 3.0695 #	36.2	2. 2.1579	26.6
		3. 1.6666	21.6		
Conditions	1.3490	1. 1.4299	17.4	1. 1.4000	16.7
		2. 1.3542	16.0	2. 1.3070	16.1
		3. 0.8055	10.4		
Supplier Information	1.0720	1. 1.0176	12.4	1. 1.0444	12.5
		2. 1.1296	13.3	2. 1.0936	13.5
		3. 1.1852	15.3		
Appeal	1.0620	1. 1.1754	14.3	1. 0.9999	11.9
		2. 0.8518	10.0	2. 1.1111	13.7
		3. 1.1852	15.3		
Product Offer	0.7990	1. 0.8509 (100)	10.4	1. 0.6056 (100)	7.2
		2. 0.6944 (100)	8.2	2. 0.9517 (100)	11.7
		3. 1.2222 (90)	15.8		
Approvers	0.6860	1. 0.7719	9.4	1. 0.7111	8.5
		2. 0.5556	6.6	2. 0.6667	8.2
		3. 0.6667	8.6		
Enthusied Presenter	0.6720	1. 0.5263	6.4	1. 0.4889	5.8
		2. 0.8194	9.7	2. 0.8158	10.1
		3. 1.0000	12.9		
	8.2280	1. 8.2018		1. 8.3832	
		2. 8.4745		2. 8.1038	
		3. 7.7314			

Note: 1. (100) refers to 'Product Offer 100%' and (90) to 'Product Offer 90%'. All Appeal values are 'Very Attractive'.
 2. '1', '2' and '3' above represent response categories. See Appendix B for detail.
 3. # indicates significant association as per crosstabulations.

Table 14. Majority and Minority Utility Range Values and Experience (LD)

Decision Factor	Total Utility	Years with Company	Years as a Buyer	Age
Demand	3.1666	1. 3.2292 2. 3.4167 3. 2.8333	1. 2.9073 2. 3.3571 3. 3.2576	1. 4.0666 2. 2.6444 <i>###</i> 3. 3.6428
Conditions	1.7500	1. 2.0208 2. 1.7778 3. 1.4048	1. 1.8438 2. 2.2500 3. 1.4545	1. 3.2708 2. 1.4375 <i>&&</i> 3. 1.4583
Appeal (Majority)	1.5056 *	1. 2.1481 2. 1.1528 3. 1.6319	1. 1.8000 2. 1.0926 3. 1.6508	1. 1.0556 2. 1.5926 3. 1.5238
Supplier Information	1.4399	1. 1.1250 2. 1.6667 3. 1.4762	1. 1.1270 2. 1.7902 3. 1.3333	1. 1.2223 2. 1.3095 <i>###</i> 3. 1.6913
Appeal (Minority)	1.1458	1. 1.2222 2. 1.3333 3. 0.6389	1. 1.1111 2. 1.0556 3. 1.1111	1. 1.4815 2. 0.8571 <i>#</i> 3. 1.2223
Product Offer (Minority)	1.0611 **	1. 0.8667 2. 1.1167 3. 1.0000	1. 1.0000 2. 1.0667 3. 0.9167	1. 1.4583 2. 0.9167 3. 0.9167
Product Offer (Majority)	1.0263	1. 0.6500 2. 1.3452 <i>##</i> 3. 0.8056	1. 1.1250 2. 1.1875 <i>##</i> 3. 0.7500	1. 1.2788 2. 0.8833 3. 0.9667
Enthusiast Presenter	0.9167	1. 0.6191 2. 1.2500 <i>##</i> 3. 0.8033	1. 0.8958 2. 1.4722 <i>##</i> 3. 0.6905	1. 1.0000 2. 0.9889 3. 0.8033
Approvers	0.8278	1. 0.7917 2. 0.8974 3. 0.7593	1. 0.6875 2. 0.9167 3. 0.8472	1. 0.7666 2. 0.9111 3. 0.7333
	10.6329 (Majority) 10.3079 (Minority)	1. 10.5839 9.8747	1. 10.3864 9.5725	1. 12.6597 13.2661
		2. 11.5066 11.4586	2. 12.0663 11.9085	2. 9.7673 9.0652
		3. 9.7144 8.9158	3. 9.9839 9.6109	3. 10.8195 10.4680

Notes: * Appeal (Majority) refers to 'Very Attractive Appeal' and Appeal (Minority) to 'Attractive Appeal'.
 ** Product Offer (Majority) and (Minority) refers to 'Product Offer 100%' and 'Product Offer 90%' respectively.
 # indicates a significant association as per crosstabulations
 ## shows that a significant difference between means exists
 && additional significant difference between means uncovered

Table 15. Majority and Minority Utility Range Proportions and Experience (LD)

Decision Factor		Total Utility %	Years with Company		Years as a Buyer		Age	
			% *	% **	%	%	%	%
Demand	*	29.8	1. 30.5	32.7	1. 28.0	30.4	1. 32.1	30.7
	**	30.7	2. 29.7	29.8	2. 27.8	28.2	2. 27.1	29.2
			3. 29.2	31.8	3. 32.6	33.9	3. 33.4	34.8
Conditions		16.5	1. 19.1	20.5	1. 17.8	19.3	1. 25.8	24.7
		17.0	2. 15.4	15.5	2. 18.6	19.9	2. 14.7	15.9
			3. 14.5	15.8	3. 14.6	15.1	3. 13.5	13.9
Appeal (Majority)		14.2	1. 20.3	-	1. 17.3	-	1. 8.3	-
		-	2. 10.2	-	2. 9.1	-	2. 16.3	-
			3. 16.8	-	3. 16.5	-	3. 14.1	-
Supplier Information		13.5	1. 10.6	11.4	1. 10.9	11.8	1. 9.7	9.2
		14.0	2. 14.5	14.5	2. 14.8	15.0	2. 13.4	14.4
			3. 15.2	16.6	3. 13.5	13.9	3. 15.6	16.2
Appeal (Minority)		-	1. -	12.4	1. -	11.6	1. -	11.2
		11.1	2. -	11.6	2. -	8.9	2. -	9.5
			3. -	7.2	3. -	11.6	3. -	11.7
Product Offer (Minority)		-	1. -	8.8	1. -	10.4	1. -	11.0
		10.3	2. -	9.7	2. -	8.9	2. -	10.1
			3. -	11.2	3. -	9.5	3. -	8.8
Product Offer (Majority)		9.7	1. 6.1	-	1. 10.8	-	1. 10.1	-
		-	2. 11.7	-	2. 9.8	-	2. 9.0	-
			3. 8.3	-	3. 7.5	-	3. 8.9	-
Enthusiased Presenter		8.6	1. 5.8	6.3	1. 8.6	9.4	1. 7.9	7.5
		8.9	2. 10.9	10.9	2. 12.2	12.4	2. 10.1	10.9
			3. 8.3	9.0	3. 6.9	7.2	3. 7.4	7.7
Approvers		7.8	1. 7.5	8.0	1. 6.6	7.2	1. 6.1	5.8
		8.0	2. 7.8	7.8	2. 7.6	7.7	2. 9.3	10.1
			3. 7.8	8.5	3. 8.5	8.8	3. 6.8	7.0

Notes: 1. See Table 16 for totals on which proportions are based.
 2. In all cases, * and ** relate to Majority and Minority sub-samples.

Table 16. Majority and Minority Utility Range Values and Business Philosophy (LD)

Decision Factor	Total Utility	Category Management	Ranging Committee	Number in Committee	% Central Warehousing
Demand	3.1666	1. 3.2708 2. 3.0151	1. 2.8182 2. 3.4062	1. 3.1334 2. 2.5555	2. 3.3333 3. 3.3937 4. 2.9358
Conditions	1.7500	1. 1.6429 2. 1.9000	1. 1.4487 2. 2.1061	1. 1.5834 2. 1.3889	2. 0.7709 3. 1.3148 && 4. 2.4621
Appeal (Majority)	1.5056	1. 1.7475 2. 1.1270	1. 1.5079 2. 1.5050	1. 1.8889 2. 1.3556	2. 2.0471 3. 1.6528 4. 1.0952
Supplier Information	1.4399	1. 1.5347 2. 1.2716	1. 1.4296 2. 1.4555	1. 1.3888 2. 1.4567	2. 1.9722 3. 1.2099 4. 1.4352
Appeal (Minority)	1.1458	1. 1.1111 2. 1.0667	1. 0.8254 2. 1.3651	1. + 2. 0.8888	2. 1.3333 3. 0.8056 4. 1.1975
Product Offer (Minority)	1.0611	1. 0.9479 2. 1.0556	1. 0.8333 2. 1.2833	1. 0.8333 2. 0.8333	2. 1.0833 3. 1.0595 4. 0.8125
Product Offer (Majority)	1.0263	1. 0.9653 2. 0.9861	1. 0.9722 2. 0.9722	1. 0.9166 2. 1.0833	2. 1.5000 3. 0.9167 4. 0.9000
Enthusied Presenter	0.9167	1. 0.9259 2. 0.8999	1. 0.9405 2. 0.8929	1. 0.5000 2. 1.1167	2. 0.6250 3. 0.8889 4. 1.0417
Approvers	0.8278	1. 0.8684 2. 0.7576	1. 0.8333 2. 0.8229	1. 1.1667 2. 0.5833	2. 1.1000 3. 0.5909 4. 0.9167
<hr/>					
	10.6329 *	1. 10.9555	1. 9.9504	1. 10.5778	2. 11.3485
	10.3079 **	9.9573	11.1607	9.5400	10.2180
		2. 10.3017	2. 9.1290	2. 8.6055	3. 9.9677
		9.9665	11.3319	8.8232	9.2633
					4. 10.7867
					10.8015

Notes: '+' represents a utility value of -.0000.
 * and ** indicate Majority and Minority samples respectively.
 && additional significant difference between means uncovered.

Table 17. Majority and Minority Proportions and Business Philosophy (LD)

Decision Factor	Total Utility %	Category Management %		Ranging Committee %		Number in Committee %		% Central Warehousing %	
		%	%	%	%	%	%	%	%
Demand	29.8 *	*	**	28.3	25.3	29.6	32.8	29.4	32.6
	30.7 **	29.9	32.8	37.3	30.1	29.7	29.0	34.0	36.6
		29.3	30.3					27.2	27.2
Conditions	16.5	15.9	16.5	14.6	13.0	15.0	16.6	6.8	7.5
	17.0	18.4	19.1	23.1	18.6	16.1	15.7	13.2	14.2
								22.8	22.8
Appeal (Majority)	14.2	15.9	-	15.2	-	17.9	-	18.0	-
	-	12.3	-	16.5	-	15.7	-	16.6	-
								10.2	-
Supplier Information	13.5	14.0	15.4	14.4	12.8	13.1	14.6	17.4	19.3
	14.0	10.9	12.8	15.9	12.8	16.9	16.5	12.1	13.1
								13.3	13.3
Appeal (Minority)	-	-	11.2	-	7.4	-	+	-	13.0
	11.1	-	10.7	-	12.0	-	10.1	-	8.7
								-	11.1
Product Offer (Minority)	-	-	9.5	-	7.5	-	8.7	-	10.6
	10.3	-	10.6	-	11.3	-	9.4	-	11.4
								-	7.5
Product Offer (Majority)	9.7	8.8	-	9.8	-	8.7	-	13.2	-
	-	9.6	-	10.6	-	12.6	-	9.2	-
								8.3	-
Enthusied Presenter	8.6	8.5	9.3	9.5	8.4	4.7	5.2	5.5	6.1
	8.9	8.7	9.0	9.8	7.9	13.0	12.7	8.9	9.6
								9.7	9.6
Approvers	7.8	7.9	8.7	8.4	7.5	11.0	12.2	9.7	10.8
	8.0	7.3	7.6	9.0	7.3	6.8	6.6	5.9	6.4
								8.5	8.5
	10.6329 *	1. 10.9555		1. 9.9504		1. 10.5778		2. 11.3485	
	10.3079 **	9.9573		11.1607		9.5400		10.2180	
		2. 10.3017		2. 9.1290		2. 8.6055		3. 9.9677	
		9.9665		11.3319		8.8232		9.2633	
								4. 10.7867	
								10.8015	

Notes: '+' represents a proportion of less than 0.01%.
* and ** indicate Majority and Minority samples respectively.

Table 18. Utility Range Values, Proportions and Decision Involvement (Majority & Minority - LD)

Decision Factor	Total Utility	%	Role in Buying	% *	% **	Part of Responsibility	%	%
Demand	3.1666	29.8 * 30.7 **	1. 3.0104 2. 3.5000 3. 2.3333	27.2 34.9 28.5	27.0 36.9 29.5	1. 3.7084 2. 2.7333	35.6 25.5	36.3 26.6
Conditions	1.7500	16.5 17.0	1. 2.1364 2. 1.4470 3. 1.2917	19.3 14.4 15.8	19.1 15.3 16.3	1. 1.7727 2. 1.7307	17.0 16.2	17.4 16.8
Appeal (Majority)	1.5056	14.2 -	1. 1.6296 2. 1.0278 3. 1.7223	14.7 10.2 21.0	- - -	1. 1.3968 2. 1.5758	13.4 14.7	- -
Supplier Information	1.4399	13.5 14.0	1. 1.5741 2. 1.3555 3. 1.1852	14.2 13.5 14.5	14.1 14.3 15.0	1. 1.2820 2. 1.6111	12.3 15.1	12.6 15.7
Appeal (Minority)	1.0611	- 11.1	1. 1.3704 2. 0.9841 3. 0.2222	- - -	12.3 10.4 2.8	1. 1.0741 2. 1.1111	- -	10.5 10.8
Product Offer (Minority)	1.0263	- 10.3	1. 1.2778 2. 0.5167 ## 3. 1.2222	- - -	11.5 5.5 15.4	1. 0.8854 2. 1.1389	- -	8.7 11.1
Product Offer (Majority)	0.9722	9.7 -	1. 0.9444 2. 1.0278 3. -	8.5 10.2 -	- - -	1. 0.7619 2. 1.1061	7.3 10.3	- -
Enthused Presenter	0.9167	8.6 8.9	1. 0.8690 2. 0.9545 3. 1.0000	7.8 9.5 12.2	7.8 10.1 12.6	1. 0.7083 2. 1.0729 ##	6.8 10.0	6.9 10.4
Approvers	0.8278	7.8 8.0	1. 0.9216 2. 0.7167 3. 0.6667	8.3 7.1 8.1	8.3 7.6 8.4	1. 0.7738 2. 0.8750	7.4 8.2	7.6 8.5
	10.6329 * 10.3079 **		1. 11.0855 11.1597			1. 10.4039 10.2047		
			2. 10.0293 9.4745			2. 10.4079 10.2730		
			3. 8.1992 7.9213					

Notes: * and ** represent majority and minority sub-samples.
shows that a significant difference between means exists

Table 19. Total Utility Range Values and Experience (Total - HB)

Decision Factor	Total Utility	Years with Company	Years as a Buyer	Age
Demand	2.5650	1. 2.5476 2. 2.7820 3. 2.3182	1. 1.5556 2. 3.3182 3. 2.4048	1. 4.5556 2. 2.3704 3. 2.3166
Supplier Information	1.3730	1. 1.5556 2. 1.6069 3. 0.9798	1. 1.7963 2. 1.3536 3. 1.2063	1. 0.9259 2. 1.5803 3. 1.1333
Conditions	1.3010	1. 1.1309 2. 1.7564 3. 0.8717	1. 1.1806 2. 1.7803 3. 0.9762	1. 2.0000 2. 1.2778 3. 1.1333
Appeal	1.2870	1. 0.9365 (VA) 2. 1.5043 (VA) 3. 1.2525 (VA)	1. 0.9074 (VA) 2. 1.1616 (A) ## 3. 1.6111 (VA)	1. 2.0471 (A) 2. 1.1358 (VA)## 3. 1.3333 (VA)
Product Offer	0.9060	1. 0.8571 (100) 2. 0.9743 (100) 3. 0.8561 (100)	1. 1.2639 (100) 2. 1.0758 (100) ## 3. 0.6190 (100)	1. 1.5833 (100) 2. 0.9398 (100)# 3. 0.6417 (100)
Enthusiased Presenter	0.8010	1. 1.0714 2. 0.6795 3. 0.7727	1. 1.1389 2. 0.8182 3. 0.6429	1. 0.6667 2. 0.8241 3. 0.8000
Approvers	0.7100	1. 0.2857 2. 0.8718 3. 0.7879	1. 0.5278 2. 0.6212 3. 0.8571	1. 1.1111 2. 0.6482 3. 0.7000
	8.2280	1. 8.3848 2. 10.1752 3. 7.8389	1. 8.3705 2. 10.1289 3. 8.3174	1. 12.8897 2. 8.7764 3. 8.0582

Note: 1. (A) refers to 'Attractive Appeal' and (VA) to 'Very Attractive Appeal'.
 2. (100) refers to 'Product Offer 100%' and (90) to 'Product Offer 90%'.
 3. '1', '2' and '3' above represent response categories. See Appendix B for detail.
 # indicates a significant association as per crosstabulations
 ## shows that a significant difference between means exists

Table 20. Total Utility Range Proportions and Experience (Total - HB)

Decision Factor	Total Utility %	Years with Company %	Years as a Buyer %	Age %
Demand	28.7	1. 30.4 2. 27.3 3. 29.6	1. 18.6 2. 32.8 3. 28.9	1. 35.3 2. 27.0 3. 28.7
Supplier Information	15.4	1. 18.6 2. 15.8 3. 12.5	1. 21.5 2. 13.4 3. 14.5	1. 7.2 2. 18.0 3. 14.1
Conditions	14.5	1. 13.5 2. 17.3 3. 11.1	1. 14.1 2. 17.6 3. 11.7	1. 15.5 2. 14.6 3. 14.1
Appeal	14.4	1. 11.2 2. 14.8 3. 16.0	1. 10.8 2. 11.5 3. 19.3	1. 15.9 2. 12.9 3. 16.6
Product Offer	10.1	1. 10.2 2. 9.6 3. 10.9	1. 15.1 2. 10.6 3. 7.4	1. 12.3 2. 10.7 3. 8.0
Enthusied Presenter	8.9	1. 12.8 2. 6.7 3. 9.9	1. 13.6 2. 8.1 3. 7.7	1. 5.2 2. 9.4 3. 9.9
Approvers	7.9	1. 3.4 2. 8.6 3. 10.1	1. 6.3 2. 6.1 3. 10.3	1. 8.6 2. 7.4 3. 8.7
	8.9430	1. 8.3848 2. 10.1752 3. 7.6162	1. 8.3705 2. 10.1289 3. 8.3174	1. 12.8897 2. 8.7764 3. 8.0582

Table 21. Total Utility Range Values and Business Philosophy (Total - HB)

Decision Factor	Total Utility	Category Management	Ranging Committee	Number in Committee	% Central Warehousing
Demand	2.5650	1. 2.6508 2. 2.3834	1. 2.5881 2. 2.5357	1. 2.2037 2. 3.0208	2. 1.7500 3. 2.9722 4. 2.5641
Supplier Information	1.3730	1. 1.2963 2. 1.5333	1. 1.3529 2. 1.3969	1. 1.5432 2. 1.1389	2. 1.5185 3. 1.2593 4. 1.4103
Conditions	1.3010	1. 1.3968 2. 1.1000	1. 1.3039 ## 2. 1.2976	1. 1.5093 2. 1.0730	2. 1.5833 3. 1.2848 4. 1.1859
Appeal	1.2870	1. 1.2169 (VA) # 2. 1.4333 (VA)	1. 1.3137 (VA) 2. 1.2540 (VA)	1. 1.3951 (VA) 2. 1.2222 (VA)	2. 1.4074 (VA) 3. 1.5093 (VA) 4. 1.0256 (VA)
Product Offer	0.9060	1. 0.9087 (100) 2. 0.9000 (100)	1. 0.9363 (100) 2. 0.8691 (100)	1. 1.3333 (100) ## 2. 0.4896 (100)	2. 1.3472 (100) 3. 0.8333 (100) 4. 0.7692 (100)
Enthusiased Presenter	0.8010	1. 0.6746 # 2. 1.0667	1. 0.8235 2. 0.7738	1. 0.8704 2. 0.7708	2. 1.0000 3. 0.7084 4. 0.7949
Approvers	0.7100	1. 0.7540 2. 0.6167	1. 0.8235 2. 0.5714	1. 0.9815 2. 0.6459	2. 1.0555 3. 0.7778 4. 0.4872
	8.9430	1. 8.8981 2. 9.0334	1. 9.1420 2. 8.6985	1. 9.8365 2. 8.3612	2. 9.6619 3. 9.3451 4. 8.2372

Note: 1. (VA) refers to 'Very Attractive Appeal' and (100) refers to 'Product Offer 100%'.
 2. '1' and '2' above and '2', '3' and '4' are response categories. See Appendix B for detail.
 # indicates a significant association as per crosstabulations
 ## shows that a significant difference between means exists

Table 22. Total Utility Range Proportions and Business Philosophy (Total - HB)

Decision Factor	Total Utility %	Category Management %	Ranging Committee %	Number in Committee %	% Central Warehoused %
Demand	28.7	1. 29.8 2. 26.4	1. 28.3 2. 29.2	1. 22.4 2. 36.1	2. 18.1 3. 31.8 4. 31.1
Supplier Information	15.4	1. 14.6 2. 17.0	1. 14.8 2. 16.1	1. 15.7 2. 13.6	2. 15.7 3. 13.5 4. 17.1
Conditions	14.5	1. 15.7 2. 12.2	1. 14.3 2. 14.9	1. 15.3 2. 12.8	2. 16.4 3. 13.7 4. 14.4
Appeal	14.4	1. 13.7 2. 15.9	1. 14.4 2. 14.4	1. 14.2 2. 14.6	2. 14.6 3. 16.2 4. 12.5
Product Offer	10.1	1. 10.2 2. 10.0	1. 10.2 2. 10.0	1. 13.6 2. 5.9	2. 13.9 3. 8.9 4. 9.3
Enthused Presenter	8.9	1. 7.6 2. 11.8	1. 9.0 2. 8.9	1. 8.8 2. 9.2	2. 10.3 3. 7.6 4. 9.7
Approvers	7.9	1. 8.5 2. 6.8	1. 9.0 2. 6.6	1. 10.0 2. 7.7	2. 10.9 3. 8.3 4. 5.9
	8.9430	1. 8.8981 2. 9.0334	1. 9.1420 2. 8.6985	1. 9.8365 2. 8.3612	2. 9.6619 3. 9.3451 4. 8.2372

Table 23. Total Utility Range Values, Proportions and Decision Involvement (Total - HB)

Decision Factor	Total Utility	Role in Buying	%	Part of Responsibility	%
Demand	2.5650	1. 2.5476 2. 2.6000	29.5 27.2	1. 3.3166 2. 2.2063	36.4 24.9
Supplier Information	1.3730	1. 1.4074 2. 1.3000	16.3 13.6	1. 1.4445 2. 1.3386	15.8 15.1
Conditions	1.3010	1. 1.2579 2. 1.3917	14.6 14.5	1. 1.2834 2. 1.3095	14.1 14.8
Appeal	1.2870	1. 1.2487 (VA) # 2. 1.3667 (VA) ##	14.5 14.2	1. 0.9111 (VA) ## 2. 1.4656 (VA)	10.0 16.5
Product Offer	0.9060	1. 0.7976 (100) 2. 1.1333 (100)	9.2 11.8	1. 1.0000 (100) 2. 0.8611 (100)	11.0 9.7
Enthusiast Presenter	0.8010	1. 0.7937 2. 0.8167	9.2 8.5	1. 0.8000 2. 0.8016	8.8 9.1
Approvers	0.7100	1. 0.5873 2. 0.9667	6.8 10.1	1. 0.3667 2. 0.8730	4.0 9.9
	8.9430	1. 8.6402 2. 9.5751		1. 9.1223 2. 8.8557	

Note: 1. (100) refers to 'Product Offer 100%' and (VA) refers to 'Very Attractive Appeal'.

2. '1', '2' above represent response categories. See Appendix B for detail.

indicates a significant association as per crosstabulations

shows that a significant difference between means exists

Table 24. Majority and Minority Utility Range Values and Experience (HB)

Decision Factor	Total Utility	Years with Company	Years as a Buyer	Age
Demand	3.0666	1. 4.0417 2. 3.1970 3. 2.5134	1. 1.8334 2. 4.3125 ## 3. 2.7500 &&	1. 4.5556 2. 2.8928 3. 2.8125
Conditions	1.4734	1. 1.1310 2. 2.2871 && 3. 0.9259	1. 1.5000 2. 1.9250 3. 1.0531	1. 2.2084 2. 1.4389 3. 1.3542
Appeal (Majority)	1.4259 *	1. 1.0000 2. 1.6790 3. 1.4111	1. 0.9074 2. 1.6000 3. 1.5983	1. 3.3333 2. 1.3504 ### 3. 1.3333
Supplier Information	1.3969	1. 1.5556 2. 1.6768 3. 0.9778	1. 1.7963 2. 1.3222 3. 1.2593	1. 0.3334 2. 1.6144 3. 1.1333
Product Offer (Majority)	1.3292	1. 1.4799 2. 1.7024 3. 0.9722	1. 1.8125 2. 1.4881 # 3. 0.9907	1. 1.9167 2. 1.5227 3. 0.8572
Appeal (Minority)	1.3030	1. 1.0556 2. 1.5111 3. 1.1667	1. - 2. 1.1111 3. 1.6389	1. 2.1111 2. 1.2540 3. 0.6667
Enthusied Presenter	0.8010	1. 1.0714 2. 0.9545 3. 1.1459	1. 1.4000 2. 0.9333 3. 0.9849	1. 0.6667 2. 1.2024 3. 0.9259
Approvers	0.7100	1. 0.7000 2. 0.8718 # 3. 1.2708	1. 1.1667 # 2. 0.6212 ## 3. 1.2273	1. 1.1111 2. 0.9556 3. 0.9167
Product Offer (Minority)	0.6875 **	1. 0.3889 2. 0.8691 3. 0.5000	1. 0.7778 2. 0.7833 3. 0.5000	1. 1.0833 2. 0.6875 3. 0.5556
	10.2030 (Majority) 9.4384 (Minority)	1. 10.9796 9.9442	1. 10.4163 8.4742	1. 14.1252 12.0696
		2. 12.3686 11.3674	2. 12.2023 11.0086	2. 10.9772 10.0456
		3. 9.2371 8.5205	3. 9.8636 9.4135	3. 9.3331 8.3649

Notes: * Appeal (Majority) refers to 'Very Attractive Appeal' and Appeal (Minority) to 'Attractive Appeal'.
 ** Product Offer (Majority) and (Minority) refers to 'Product Offer 100%' and 'Product Offer 90%' respectively.
 # indicates a significant association as per crosstabulations
 ## shows that a significant difference between means exists
 && additional significant difference between means uncovered

Table 25. Majority and Minority Utility Range Proportions and Experience (HB)

Decision Factor	Total Utility %	Years with Company		Years as a Buyer		Age				
		% *	% **	%	%	%	%			
Demand	* ** 32.5	1.	36.7	40.6	1.	17.6	21.6	1.	32.3	37.7
		2.	25.8	28.1	2.	35.3	39.2	2.	26.4	28.8
		3.	27.4	29.7	3.	27.9	29.2	3.	30.1	33.6
Conditions	14.4 15.6	1.	10.3	11.4	1.	14.4	17.7	1.	15.6	18.3
		2.	18.5	20.1	2.	15.8	17.5	2.	13.1	14.3
		3.	10.2	10.9	3.	10.7	11.2	3.	14.5	16.2
Appeal (Majority)	14.0 -	1.	9.1	-	1.	8.7	-	1.	23.6	-
		2.	13.6	-	2.	13.1	-	2.	12.3	-
		3.	15.3	-	3.	16.2	-	3.	14.3	-
Supplier Information	13.7 14.8	1.	14.2	15.6	1.	17.2	21.2	1.	2.4	2.8
		2.	13.6	14.8	2.	10.8	12.0	2.	14.7	16.1
		3.	10.6	11.5	3.	12.8	13.4	3.	12.1	13.5
Product Offer (Majority)	13.0 -	1.	13.5	-	1.	17.4	-	1.	13.6	-
		2.	13.8	-	2.	12.2	-	2.	13.9	-
		3.	10.5	-	3.	10.0	-	3.	9.2	-
Appeal (Minority)	- 13.8	1.	-	10.6	1.	-	-	1.	-	17.5
		2.	-	13.3	2.	-	10.1	2.	-	12.5
		3.	-	13.7	3.	-	17.4	3.	-	8.0
Enthusiased Presenter	7.9 8.5	1.	9.8	10.8	1.	13.4	16.5	1.	4.7	5.5
		2.	7.7	8.4	2.	7.6	8.5	2.	10.9	12.0
		3.	12.4	13.4	3.	10.0	10.5	3.	9.9	11.1
Approvers	6.9 7.5	1.	6.4	7.0	1.	11.2	13.8	1.	7.9	9.2
		2.	7.0	7.7	2.	5.1	5.6	2.	8.7	9.5
		3.	13.8	14.9	3.	12.4	13.0	3.	9.8	11.0
Product Offer (Minority)	- 7.3	1.	-	3.9	1.	-	9.2	1.	-	9.0
		2.	-	7.6	2.	-	7.1	2.	-	6.8
		3.	-	5.9	3.	-	5.3	3.	-	6.6

Notes: 1. See Table 34 for totals on which proportions are based.
 2. In all cases, * and ** relate to Majority and Minority sub-samples.

Table 26. Majority and Minority Utility Range Values and Business Philosophy (HB)

Decision Factor	Total Utility	Category Management	Ranging Committee	Number in Committee	% Central Warehousing
Demand	3.0666	1. 3.5222 2. 2.3834	1. 3.2179 2. 2.9028	1. 3.1111 2. 3.3095	2. 2.5001 3. 3.4833 4. 2.8940
Conditions	1.4734	1. 1.5047 2. 1.3929	1. 1.4346 # 2. 1.5228 ##	1. 1.5001 # 2. 1.3473	2. 1.9375 # 3. 1.3713 ### 4. 1.4000
Appeal (Majority)	1.4259	1. 1.4206 2. 1.4333	1. 1.6667 2. 1.2540	1. 1.5778 2. 1.7556	2. 1.6111 3. 1.8750 ### 4. 1.0648
Supplier Information	1.3969	1. 1.3223 2. 1.5833	1. 1.3889 2. 1.4074	1. 1.6389 ### 2. 1.1389	2. 1.6667 3. 1.2222 4. 1.4444
Product Offer (Majority)	1.3292	1. 1.4808 2. 1.0476	1. 1.5917 2. 1.0667	1. 1.7262 2. 1.2778	2. 1.9167 3. 1.3691 4. 1.0370
Appeal (Minority)	1.3030	1. 1.3333 2. 1.2222	1. 1.3333 2. 1.2222	1. 1.7500 2. 0.9167	2. 1.4445 3. 1.3889 # 4. 1.1111
Enthusiased Presenter	0.8100	1. 0.8982 # 2. 1.3750	1. 1.0445 2. 1.0455	1. 1.0209 2. 1.0714	2. 1.2667 3. 0.8940 4. 1.1000
Approvers	0.7100	1. 0.9074 2. 1.0834	1. 0.9556 2. 0.9697	1. 1.3095 ### 2. 0.6459	2. 1.0556 3. 0.9667 4. 0.9000
Product Offer (Minority)	0.6875	1. 0.5417 # 2. 0.9792 ##	1. 0.4524 # 2. 1.0167 ##	1. 0.5278 2. 0.3958	2. 0.7084 3. 0.5167 4. 0.8500
	10.2030 *	1. 11.0562	1. 11.2999	1. 11.8845	2. 11.9544
	9.4384 **	10.0298	9.8272	10.8583	10.5795
		2. 10.2989	2. 10.1689	2. 10.5464	3. 11.1816
		10.0194	10.0871	8.8255	9.8431
					4. 9.8402
					9.6995

Note: * and ** indicate Majority and Minority samples respectively.
indicates a significant association as per crosstabulations
shows that a significant difference between means exists

Table 27. Majority and Minority Proportions and Business Philosophy (HB)

Decision Factor	Total Utility %	Category Management		Ranging Committee		Number in Committee		% Central Warehousing	
		%	%	%	%	%	%	%	%
Demand	30.1 *	31.9	35.1	28.5	32.7	26.2	28.7	20.9	23.6
	32.5 **	23.1	23.8	28.5	28.8	31.4	37.5	31.2	35.4
								29.4	29.8
Conditions	14.4	13.6	15.0	12.7	14.6	12.6	13.8	16.2	18.3
	15.6	13.5	13.9	15.0	15.1	12.8	15.3	12.3	13.9
								14.2	14.4
Appeal (Majority)	14.0	12.8	-	14.7	-	13.3	-	13.5	-
	-	13.9	-	12.3	-	16.6	-	16.8	-
								10.8	-
Supplier Information	13.7	12.0	13.2	12.3	14.1	13.8	15.1	13.9	15.8
	14.8	15.4	15.8	13.8	14.0	10.8	12.9	10.9	12.4
								14.7	14.9
Product Offer (Majority)	13.0	13.4	-	14.1	-	14.5	-	16.0	-
	-	10.2	-	10.5	-	12.1	-	12.2	-
								10.5	-
Appeal (Minority)	-	-	13.3	-	13.6	-	16.1	-	13.7
	13.8	-	12.2	-	12.1	-	10.4	-	14.1
								-	11.5
Enthusied Presenter	7.9	8.1	9.0	9.2	10.6	8.6	9.4	10.6	12.0
	8.5	13.4	13.7	10.3	10.4	10.2	12.1	8.0	9.1
								11.2	11.3
Approvers	6.9	8.2	9.0	8.5	9.7	11.0	12.1	8.8	10.0
	7.5	10.5	10.8	9.5	9.6	6.1	7.3	8.6	9.8
								9.1	9.3
Product Offer (Minority)	-	-	5.4	-	4.6	-	4.9	-	6.7
	7.3	-	9.8	-	10.1	-	4.5	-	5.2
								-	8.8

Notes: see Table 26 for totals
 * and ** indicate Majority and Minority samples respectively.

Table 29. Total Utility Range Value Comparison (Total Sample)

Decision Factors	Laundry Detergent	%	Health Bar	%
Demand	2.5880	31.5	2.5650	28.7
Conditions	1.3490	16.4	1.3010	14.5
Supplier Information	1.0720	13.0	1.3730	15.4
Appeal	1.0620	12.9	1.2870	14.4
Product Offer	.7990	9.7	.9060	10.1
Approvers	.6860	8.3	.7100	7.9
Presenter Enthusiasm	.6720	8.2	.8010	8.9
	<u>8.2280</u>		<u>8.9430</u>	

Table 30. Total Utility Range Value Comparison (Majority Sample)

Decision Factors *	Laundry Detergent	%	Health Bar	%
Demand	3.1666	29.8	3.0666	28.7
Conditions	1.7500	16.5	1.4734	13.8
Supplier Information	1.4399	13.5	1.3969	13.1
Appeal	1.5056	14.2	1.4259	13.3
Product Offer	1.0263	9.7	1.3292	12.4
Approvers	.8278	7.8	.9615	8.9
Presenter Enthusiasm	.9167	8.6	1.0449	9.8
	<u>10.6329</u>		<u>10.6984</u>	

Note: * decision factor ranks are the same as shown in Table 39.