

**The Role of Brand Trust within Related and Unrelated Brand Extension  
Activities: A Consumer Perspective**

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Jon David Reast

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The candidate confirms that the work submitted is his own and that appropriate credit  
has been given where reference has been made to the work of others.

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## **Abstract**

The research examines the structure of consumer-brand 'trust', and the concept's role within brand extension evaluation decisions, an association largely neglected within existing consumer brand extension literature. A review of the literature, which covered the interpersonal relations, psychology, sales management, source credibility, and relationship marketing areas, served to develop a list of thirty 'trust-related' variables, which were hypothesised to split into a number of dimensions of trust. The variables and dimensions were screened and tested, initially, within four qualitative focus groups and a pilot quantitative survey of 108 respondents. The final research study, which utilised 411 respondent-consumers within the Tea, Coffee, Grocery Shops, Pens, and Internet Retail product/service categories, tested four research hypotheses. Findings related to Hypothesis 1, which postulated a six dimensional model of brand trust, found, instead, strong support for a four dimensional model of brand trust, based around the dimensions of Probity, Equity, Reliability and Satisfaction, reflecting and supporting both 'affective' and 'cognitive' elements of trust previously identified within the literature. The finding extends the work on consumer trust within the Relationship Marketing literature, where a definitive definition and conceptualisation of trust are yet to emerge.

Findings related to Hypothesis 2, which postulated that brands with differing mean ratings on brand trust would correlate positively at statistically significant levels with differing mean ratings for brand extensions measurement responses, 'likely to try' and 'trust brand to provide', found clear support for the hypothesis.

Findings related to Hypothesis 3, which postulated a positive correlation between brand trust, the dimensions of brand trust, and brand extension measurement responses, 'likely to try' and 'trust brand to provide', found statistically significant, though weaker, levels of association between 'brand trust', 'dimensions of brand trust' and brand extension measurement responses. The findings for Hypothesis 2 and 3, are felt to add a further dimension to the brand extension literature, where consumer-brand trust has largely been overlooked.

Findings related to Hypothesis 4, which postulated that females, lesser educated, and older respondents would exhibit higher 'brand trust', 'brand trust dimension', and brand extension response variable measurements, found: strong support for gender type mediating the evaluation of brand trust and brand extensions; support for differences in age playing a role within brand trust; and limited support for educational level playing a role within brand trust and brand extension evaluation. These demographic findings, particularly relating to gender and age, extend both the literatures on consumer-brand trust and brand extension, neither of which had previously related to demography as a mediator.



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## **CHAPTER ONE Introduction**

This Chapter will provide: an overview of the thesis; the rationale for the study; the nature and relevance of brand extension; an overview of brand trust and Relationship Marketing; the perceived linkage between brand trust, relationship marketing and brand extension; the outline research objectives initially driving the research; an overview of the research methodological approach; and confirmation of the specific research hypothesis developed for the study.

### **1.1 Introduction to the Thesis**

This thesis is concerned with the nature of end-user consumer brand trust, and its role within brand extension evaluation and success. Following on from a full literature review regarding 'Trust' and 'Brand Extension', model building and hypothesis development, initial qualitative and quantitative pilot research, the thesis will report the findings of research conducted amongst 411 UK end-user consumers of brands across five consumer categories of goods and services. The categories and brands selected for use within this research are Grocery Shops (Sainsbury, Co-op), Tea (Tetley and Typhoo), Coffee (Nescafe and Maxwell House), Pens (Parker and Pilot), and Internet Retail (Amazon.com). The research also includes three 'dummy', or fictitious, brands, in order to gain a generic category level response. These brands are included within the Grocery Shops, Tea and Internet Retail categories. The research will seek to establish whether higher trust brands within each category gain higher levels of brand extension measurement response than moderate and lower brand trust same category rivals, and also whether consumer-respondent brand trust and brand extension measurement responses are correlated. The research analysis and findings are based upon two samples: a Combined Experiment Sample (CES) of 204 respondents drawn from the five product/service categories stated above; and a Tea Large Sample (TLS) of 247 respondents using 40 of the original respondents from the Combined Experiment Sample and boosting it by a further 207 respondents. All respondents, drawn from modern mid-priced housing estates within East Yorkshire, had to meet strict recruitment criteria in terms of usage of both of the brands for which they were responding.

### **1.2 Rationale for the Focus of Study**

#### **1.2.1 Researcher's Prior Brand Extension Experience**

The origins of this research study date back to the late 1980s and the early 1990s when the researcher was employed within brand management and responsible for several brand and line extension projects, which commonly involved qualitative and sometimes quantitative consumer research. Discussion with colleagues had often focussed around the 'magic



ingredients' for successful brand extension. The interest in brand extension was continued with consulting experience, where literature searching was a feature. As a brand management practitioner, the researcher was also aware of the measurement of 'brand trust' as part of many 'Usage and Attitude' surveys and ongoing brand image tracking research projects.

### **1.2.2 The Research Idea**

Having moved into academia, and with a thesis in mind, the researcher undertook exploratory literature review work, and developed an interest in the combined areas of brand extension and 'brand trust'. As the following sections have illustrated, the practice of undertaking brand extensions was commonplace (Branson, 1998) and being increasingly heavily researched by academics, and the subjects of 'trust' and 'Relationship Marketing' were being enthusiastically debated within the marketing literature, though rarely related to end-user consumers at this time.

## **1.3 The Nature and Relevance of Brand Extension**

### **1.3.1 Brand and line extension - popularity**

Brand extensions, 'the stretch of the established franchise to a different product class' (Aaker and Keller, 1990) had become increasingly popular way of gaining growth (Springen & Miller 1990). One survey of leading consumer product companies had found that 89% of new product introductions were line extensions, 6% were brand extensions and only 5% were new brands (Aaker 1991). Brand extensions, moving a brand to a different product class, were delineated from 'line extensions', which tended to offer modifications to existing products or services in the same product class (e.g. flavour, size, packaging format, McDonalds 'Drive thru'). Such brand extension strategies were perhaps prompted by harsh economic conditions, and the need to minimise the risk and cost of new launch failure (Aaker 1991). The area of line and brand extension was the subject of much controversy in the past, with concerns that extensions cannibalised sales of existing products and diluted the image of the parent brand over time (Ries and Trout, 1986; Economist, 1990). Line and brand extensions, were however, just as popular as ever, and Reddy, Holat and Bhat (1994) provided some reassurance for brand owners when they discovered that, over a 20 year period of the US cigarette industry, cannibalisation effects appeared to have been outweighed by incremental sales, and many brands' survival appeared to have been based upon extension activities. Webster (2000) provided a background to the extent of brand extension activities for major international brands: Calvin Klein (from jeans to dishes and bed sheets); Starbucks (from coffee to ice-cream and CDs); Martha Stewart (from TV and magazines to home furnishings and finishes); Ralph Lauren (from clothing to glasses and house-paint); Nine West (from shoes to handbags and accessories); Jack Daniels (from bourbon to clothes); and Brooks

Brothers (from clothes to wine). Whilst many of the examples provided by Webster were for US orientated, and in most cases premium brands, they served to demonstrate the popularity of the strategy amongst marketing practitioners.

### 1.3.2 Brand Extension Success Factors?

A large amount of academic research, seeking to isolate the key components of successful brand extension, has taken place over the last 10-15 years. This was perhaps in recognition of the emphasis, which many businesses had placed upon leveraging their 'brand assets' via line and brand extension activities. The academic literature on brand extension, which has isolated a long list of key components felt to have a role within brand extension success, is large and diverse, and to this point has had little order or structure applied to it. As a simplification of the literature, and as an aid to review, these various components have been grouped within this thesis as 'Consumer Characteristics', 'Parent Brand Characteristics', and 'Brand Extension Characteristics'. Figure 1.1, repeated and discussed in more depth within the literature chapter (section 2.14.3), provides a summary of some of the key influences on brand extension success, derived from the literature.

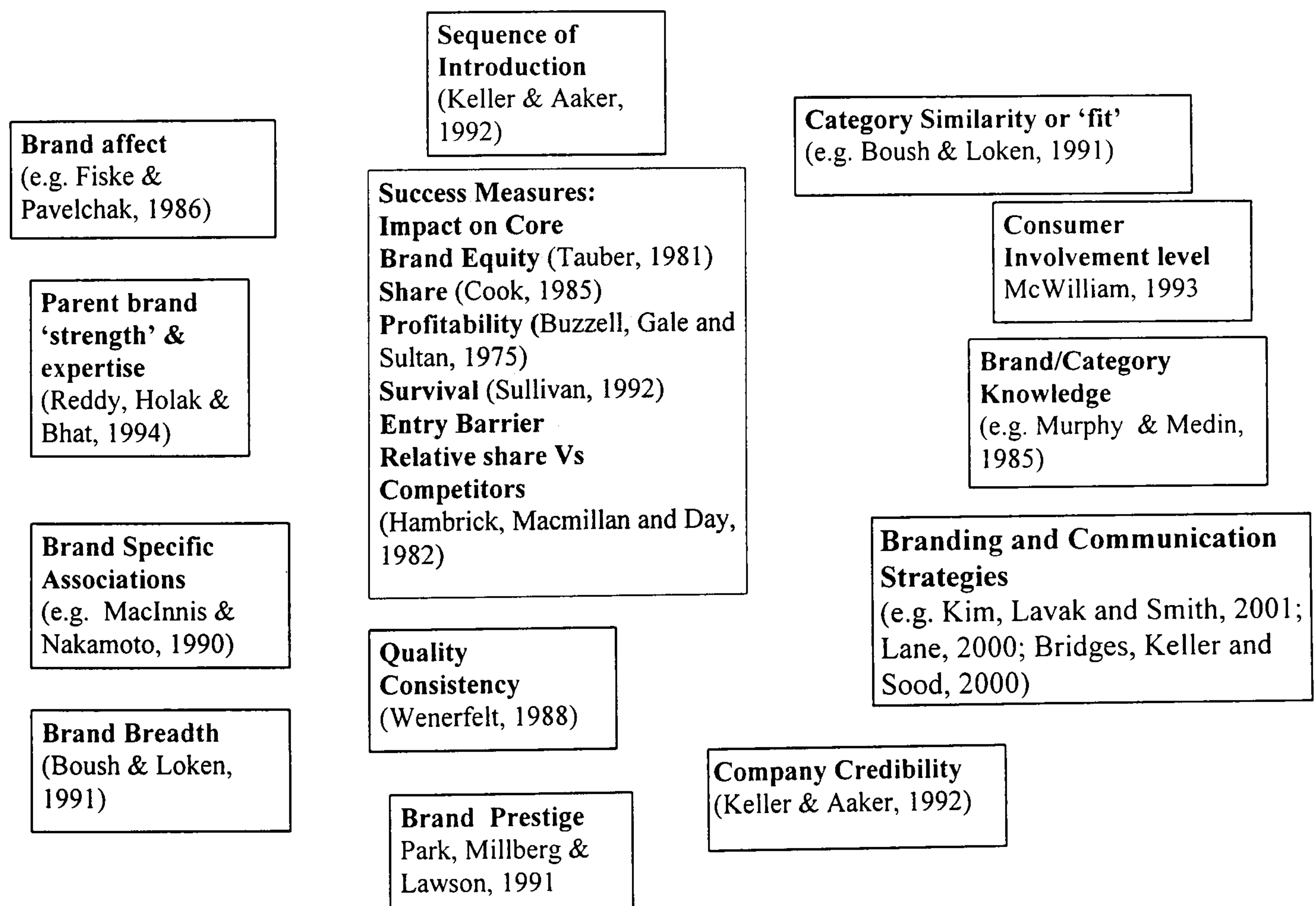


Figure 1.1 Brand Extension – Success Factors and Measures of Success



### 1.3.2.1 Brand Extension Success Factors

#### Consumer Characteristics

These factors all relate to the unique experiences, perceptions, interests, knowledge and beliefs of the target customers, and would specifically include customer's user status, their brand or category knowledge, whether they are of novice or expert status within a given category, the extent to which they would be considered to be innovative, and the extent of their interest or involvement level within a particular category. Whilst a more detailed review of each factor is provided within the literature chapter (section 2.14.5), a brief overview is provided here.

Kirmani, Sood and Bridges (1999) noted that attitudes to extensions may be dependent upon current **usership behaviour** and the potential wish to maintain brand exclusivity. **Brand/category knowledge** (e.g. Murphy and Medin, 1985) was shown to influence 'brand specific associations' and thus extension evaluations, and being of **novice or expert status** (Broniarczyk and Alba, 1994) was influential in impacting on the role of brand specific associations of brand extensions. The research on novice or expert status may also be related, partially, to the exploratory discussions on the potential role of **consumer involvement level** (McWilliam, 1993) on brand extension evaluation. Klink and Smith (2001) also noted, more recently, that prior brand extension research had failed to take account of an individual consumers' '**innovativeness**', the authors finding this to be influential within evaluations of brand extensions.

#### Parent Brand Characteristics

These factors all relate to elements which the parent brand could be regarded as having 'given' or 'transferred' to the brand extension, and would specifically include the level of 'affect' which most customers have in the parent brand, the prestige of the parent brand, perceptions about the breadth of the parent brand portfolio, any strong 'associations' related to the parent brand, the parent brand strength and expertise, the parent brand quality associations, and the perceived credibility of the parent brand. Again, whilst a more detailed review of each factor is provided within the literature chapter (section 2.14.4), a brief overview is provided here.

**Brand affect**, or how much a brand was 'liked' in its original category, had been isolated as a key component by many authors (e.g. Fiske and Pavelchak, 1986; Boush and Loken, 1991;). **Brand specific associations**, defined by MacInnis and Nakamoto (1990) as "an attribute or benefit that differentiates a brand from competing brands" were felt to be a further significant success factor (Park, Millberg and Lawson, 1991). In addition, **generic versus product level associations** of the parent were found to be a salient factor in the likely success of extensions



(Rangaswamy, Burke and Oliva, 1993). **Parent brand strength/expertise** (brand in terms of age, share, advertising share of voice, company in terms of size, assets, marketing competence, brand portfolio profitability levels) was found to be influential. Boush and Loken (1991), indicated that **brand breadth**, the extent to which an extension came from a narrow or wide portfolio brand, was an influencing factor on consumer evaluation of brand extensions. Keller and Aaker (1992) found a link between **company credibility** and brand extension acceptance, with **company credibility** being measured via the perceptions of the company's 'brand trustworthiness' and 'expertise'. **Quality status** of the parent has also been found to be influential on acceptance of brand extensions (Keller and Aaker, 1992). Park, Millberg and Lawson (1991) also found that more **prestigious** brands would more readily extend to distant categories, overcoming some of the issues of 'category similarity'.

### **Brand Extension Characteristics**

These factors all relate to the specifics of the brand extension concept itself, and would include: the extent to which the extension is 'similar' to the parent brand category, the extent to which the concept is consistent with the brand image of the parent, the extent to which the extension is launched as part of a sequence of launches, the extent to which the quality of the extension is consistent with that of the parent, the extent to which the extension concept is competitive within the newly entered category, and the impact of the chosen communication strategy for the concept, on its acceptance. Again, whilst a more detailed review of each factor is provided within the literature chapter (section 2.14.6), a brief overview is provided here. "**Fit**" (e.g. Aaker, 1990; Aaker and Keller 1990;) or **category similarity** (e.g. Boush & Loken, 1991), the perceived difference between the original and extension categories, summed up by Aaker (1991) "the customer must feel comfortable with the idea of the brand name being on the extension" have been found to be one of the the most important factors in the likely success of brand extensions. The area of **category similarity** was further subdivided into 'product level' and 'image level' similarity by Bridges, (1990) and Park, Millberg and Lawson (1991), these researchers finding that brands displaying strong 'product level' associations were less likely to be transferred, easily, to other category areas than 'image level' associated brands. Wenerfelt, (1988) and other authors have found that **quality consistency** in a portfolio can have a mediating effect on extension '**fit**'. **Quality consistency** reflects the extent to which the extension launch meets the standards of quality expected of a particular brand or company, with quality variance confusing consumers. Aaker (1991) supported the importance of quality when he talked about the 'difficulties' of 'upscale' and 'downscale' brand extension activities. The extent to which the particular brand extension concept had been preceded by other **successful extensions** or was part of a **sequence of introductions** was found to influence the evaluation of the brand extension



(Keller and Aaker, 1992). Finally, various authors including Kim, Lavak and Smith (2001), have found that the method of communication of brand extension activities can be influential in the evaluation of such extensions.

## **1.4 Trust and Relationship Marketing within the Business to Business Domain**

### **1.4.1 The Literature on Trust**

The literature within the area of trust, spanning a 30-40 year period, had covered many discipline and subject areas ranging from psychology and interpersonal relations (Deutsch, 1960; Rotter, 1967; Schenkler, et al., 1973); channel relations and relational exchanges (e.g. Dwyer, Schurr and Oh 1987); sales management (Swan and Nolan 1985; Swan, Trawick and Silva 1985; Hawkes Strong and Winick, 1996; Rich, 1997); through to the area of relationship marketing (e.g. Morgan and Hunt 1994); and source credibility (Giffin 1967).

The construct of trust regained prominence on the marketing agenda in the 1990s (e.g. Doney and Cannon, 1997; Hocutt, 1998; Michell, Reast and Lynch, 1998; Blois, 1999; Delgado-Ballester and Munuera-Aleman, 2001; Nicholson, Compeau and Sethi, 2001; Raimondo, 2000; Guibert, 1998), following the pioneering work of the 1960s (Deutsch, 1960; Rotter, 1967). Examined in a wide range of settings (Rousseau, et al., 1998) as discussed by Morgan and Hunt (1994), trust had been seen as pivotal to the success of strategic alliances (Sherman, 1992; Hunt, Lambe and Wittman, 2002), as fundamental to the development of loyalty towards retailers (Berry, 1993; Ganesan, 1994), as central to the modelling work of the IMP Group (Ford, 1990), as “the cornerstone of strategic partnerships” (Spekman, 1988; Zaheer, McEvily and Perrone, 1998), as critical in maintaining successful agency-client relationships (Labalm & Kohli, 1997; Moorman, Deshpandé and Zaltman, 1993), as an essential element in building strong customer relationships and sustainable market share (Urban, Sultan, and Qualls, 2000) and, more latterly, as influential in risk-related relationship enhancement decisions (Selnes, 1998). Also, Berry (1996), asserted that “the inherent nature of services, coupled with abundant mis-trust in America, positions trust as perhaps the single most powerful relationship marketing tool available to a company”. Viewing consumers as capable of ‘trusting’ brands could be seen in the light of many recent publications, which focussed on the consumer’s ‘relationship’ with brands (Aaker, 1997; Fournier, 1998; Garbarino and Johnson, 1999). Whilst publications over the last few years had considered the role of trust in the end-user consumer domain, research in the main had related to the interpersonal and business to business contexts, with the academic research often under-emphasising the importance and significance of consumer-brand trust.



### 1.4.2 Definition and Conceptualisation of Trust?

Given the variety of applications of trust outlined above, it was perhaps not too surprising that a wide variety of definitions and conceptualisations of trust were found. Some of the earliest definitions of trust dated back to Rotter (1967), who defined trust as:

“a generalised expectancy held by an individual that the word of another can be relied on”.

The Literature Chapter will outline the full range of definitions (Table 2.1), which tended to reflect both ‘affective’ and ‘cognitive’ elements of trust, and included more recent definitions from researchers such as McAllister (1995), who defined trust as:

“the extent to which a person is confident in, and willing to act on the basis of the words, actions, decisions of others”.

With only one definition being found to relate specifically to the consumer context (Chaudhuri and Holbrook, 2001), the search of definitions underlined the lack of focus on the consumer context within the literature. Chaudhuri and Holbrook (2001) defined brand trust as:

“the willingness of the average consumer to rely on the ability of the brand to perform its stated function”.

The researcher, as a result of this research study, will suggest a revised definition of consumer-brand trust within the Summary and Conclusions Chapter (Section 6.5). The definition is felt to reflect both the ‘affective’ and ‘cognitive’ dimensions of trust, as well as the behavioural intention, or willingness, to rely on the trusted party.

There has also been debate within the literature about the conceptualisation of trust. Authors such as Ganesan (1994) proposed that trust was multidimensional and included both ‘Benevolent’ as well as ‘Credibility’ (or expertise) dimensions. Smith and Barclay (1997) proposed a tripartite conceptualisation of trust, which was held to include ‘Character Motives’, ‘Role Competence’ and ‘Judgement’. However, other such as Selnes (1998) held that trust was a unidimensional concept, which could be measured directly. The full range of multidimensional conceptualisations of trust will be provided within the Literature Review (Section 2.6).

### 1.4.3 The Origins of Relationship Marketing (RM)

Relationship Marketing was borne out of the services marketing literature area, with Berry (1983) being the first to use the term. As research within the Relationship Marketing field expanded, ‘trust’ was commonly found to be a key component in the development (Morgan and Hunt, 1994), maintenance (Anderson and Weitz, 1989; Crosby, Evans and Cowles, 1990; Mohr and Spekman, 1994; Kumar, 1996), and enhancement of relationships (Selnes, 1998). Whilst Berry (1983), had not initially recognised the role of trust within RM, by 1995 he was



singing its praises, stating that “relationship marketing is built upon a foundation of trust”. Whilst the importance and relevance of trust had been widely acknowledged within relationship marketing research, only in the last 10-15 years had the concept of ‘relationship marketing’ been studied and applied in the context of consumers, with Dwyer, et al. (1987) proposing that:

“consumer markets could also benefit from attention to conditions that foster relational bonds leading to reliable repeat business”.

There has been, however, been much debate about the legitimate application of relationship marketing in the context of consumer markets, with detractors (e.g. Barnes, 1994; Sheaves and Barnes, 1996; O’Malley and Tynan, 1998), as well as supporters of this application within the academic literature (e.g. Christy, et al., 1996; Webster, 1994; Ramsey and Sohi, 1997; Crutchfield, 2001). Much of the debate revolved around whether trusting relationships could be developed within low involvement, low risk category areas.

#### **1.4.4 Definitions of Relationship Marketing (RM)**

In much the same way as the ‘trust’ concept, the Relationship Marketing concept also lacks a single unifying definition and conceptualisation. According to Gummesson (1994), ‘the perception of RM ... varies between authors’. A popular definition, however, used by several authors, is that of Gronroos (1990), who defined RM as a mechanism:

“to establish, maintain, and enhance relationships with customers and other parties, at a profit, so that objectives of the parties involved are met. This is achieved by mutual exchange and fulfilment of promises”.

Another favoured definition of RM comes from Morgan and Hunt (1994), who refer to Relationship Marketing as:

“all marketing activities directed towards establishing, developing, and maintaining successful relational exchanges”.

Morgan and Hunt (1994), with their ‘Key Mediating Variables’ (KMV) model of Relationship Marketing, saw ‘trust’ as being central to the development and maintenance of successful relationships.

#### **1.5 Perceived Linkage between Trust, Relationship Marketing and Brand Extension**

Although intuitively, brand trust seemed, to the researcher, a logical influence on the evaluation and usage of brand extension activities - particularly where an increased level of perceived risk was associated with a purchase decision (Jacoby and Kaplan, 1972; Bettman, 1973; Selnes, 1998), the literature in the area of brand extension, outlined within Chapter 2, makes little mention of the possible influence of **brand trust** in consumer brand extension evaluation and purchase behaviour. A notable exception in the development of a link between brand trust and brand extension response, was the work of Aaker (1990), and Keller and

Aaker (1992). Aaker (1990) had identified four dimensions on which brand names could add value to extensions: brand awareness, brand associations, quality associations and credibility of the parent brand. Aaker then used 'brand trustworthiness' as a partial measure of brand credibility in his later research with Keller (1992). Keller and Aaker (1992) had measured the impact of 'company credibility' on proposed brand extension evaluation, and found a significant association between 'company credibility' (via its 'expertise' and its 'brand trustworthiness') and brand extension acceptance, and invited further research within the area of credibility. The work of Selnes (1998) also provided some support for the notion of a link between brand trust and brand extension acceptance, noting the importance of trust in gaining 'relationship enhancement' in buyer-seller interactions. The purchase of a brand extension by a current brand user could be seen as 'relationship enhancement', trust being present to reduce perceived risk in making the purchase. Additionally, McWilliam (1993) stated a very supportive view of a role for 'trust' within brand extension, as a result of research amongst marketing practitioners. McWilliam found that practitioners viewed consumers to be quite flexible with regard to brand extensions. The practitioners felt that as long as the parent brand was sufficiently highly regarded and **trusted**, and the explanation was sufficiently plausible, consumers would be willing to try the brand extension. Hence, it appeared that, there were some implied linkages between brand trust and brand extension within the literature. The linkage between brand trust and loyalty was also felt to add weight to the proposition that brand trust might have a role in brand extension acceptance, where Reichheld and Schefter (2000) observed that "to gain the loyalty of customers, you must first gain their trust".

## **1.6 Outline Research Objectives**

Following on from the researcher's experiences as a brand management practitioner, and initial tentative consideration of the academic literature, the following outline research objectives were established in order to guide the study. These research objectives were to be refined into the four specific research hypotheses, which were used later in the study.

### **1.6.1 Objective 1**

To establish the nature, relevance and structure of brand trust in an end-user consumer context



### **1.6.2 Objective 2**

To establish the relevance of end-user consumer brand trust within brand extension evaluation and success

### **1.6.3 Objective 3**

To establish the possible relevance of demographic variables such as gender, age and educational level within end-user consumer-brand trust, and within brand extension evaluation.

## **1.7 Overview of Research Methodological Approach**

The research approach, which is outlined within Chapter 3 (Research Methodology) involves both inductive and deductive phases of research (see Figure 3.2).

### **1.7.1 The Inductive Phase**

The earlier stages of the research study, defined as the ‘inductive phase’, were undertaken in order to develop a better understanding of the concepts under study, in order to develop a possible model of end-user consumer brand trust, and in order to develop detailed research hypotheses which could be tested at a later stage. The inductive phase of research included elements such as the literature review, exploratory qualitative research amongst consumer-respondents, and the development of a working model of consumer brand trust, which was tested in a pilot quantitative research project.

### **1.7.2 The Deductive Phase**

Following on from the earlier inductive phase of research, having established an improved understanding of the concept of end-user consumer brand trust, a revised working model and detailed research hypotheses, the research study moved into the deductive phase. The ‘deductive phase’ of research was conducted in order to test the four hypotheses detailed below, and included: several stages of pre-testing in order to select appropriate categories, real brands, and ‘dummy’ brands; the development of a survey instrument; collection of a pilot sample; and finally, the collection and analysis of the two full samples, the Combined Experiment Sample and the Tea Large Sample. Data analysis techniques utilised in order to test the research hypotheses, as part of the deductive phase of research, included Cronbach alpha, standard multiple regression, t-testing, Chi-Square testing, and One-Way and Two-Way Anova.

### **1.7.3 The Research Hypotheses**

Having conducted the ‘inductive phase’ of research, specific research hypotheses were generated for testing within deductive research. The research hypotheses guiding the main study have been outlined below.

### **Hypothesis 1**

Brand trust can be shown to be associated with a number of key ‘associative variables’- which form a ‘model’ of the construct, in that:

Brand trust will be positively correlated with the six dimensions overall and with each of the six ‘Dimensions’ (Probity, Equity, Reliability, Satisfaction, Brand Communication and Process) for both ‘Brand 1’ and ‘Brand 2’ within the full samples (Combined Experiment and Tea Large) and at product category level.

### **Hypothesis 2**

Brands with higher brand trust levels will be more likely to succeed in extension categories (particularly distant extension categories), with success measured by ‘likelihood to try’ (LTT) or ‘trust to provide extension’ (TTP), in that:

- a) Brand 1 (the higher trust brand) will outperform Brand 2 (the moderate trust brand) in extension 1, 2 and 3 (in total and split sample).
- b) Brand 1 (the higher trust brand) will outperform Brand 3 (the lower trust ‘fictitious’ brand) in extension 1, 2 and 3 (in total and split sample).
- c) Brand 2 (the moderate trust brand) will outperform Brand 3 (the lower trust ‘fictitious’ brand) in extension 1, 2 and 3 (in total and split sample).

### **Hypothesis 3**

Brand Trust, or the dimensions of brand trust, will be positively correlated with brand extension measures.

### **Hypothesis 4**

Differences in the level of ‘brand trust’, in the six hypothesised ‘Dimensions of Brand trust’, and in brand extension acceptance (TTP and LTT) will occur according to gender, age and educational level such that:

- a) Older respondents will score the above at higher levels than will younger respondents.
- b) Females will rate the above at higher levels than will males.
- c) More highly educated respondents will rate the above at lower levels than will those respondents of lower education.



## CHAPTER 2                    LITERATURE REVIEW

### 2.1     Chapter Structure

The opening section of this literature review chapter will provide an overview of the areas to be covered. The chapter will start with a review of the history of 'trust' within the academic literature, which spans a 30-40 year period, and covers areas such as psychology and interpersonal relations, source credibility, and more latterly, relationship marketing. Discussion of the concept and definition of trust will then follow, with a review of the many definitions of trust within the literature. Having looked at the origins of the concept and considered various definitions, the chapter will examine the various contexts in which trust has been emphasised. Specific consideration will be given to the linkages between trust and relationship marketing at this stage. Attention will be drawn to the increasing focus and debate within the relationship marketing literature concerning its application to the consumer context, with the implications for the role of trust within the consumer context considered. The role of trust within new channels of communication and distribution (the internet) will be considered, together with the potential impact of culture on relationship marketing and trust. The chapter will then consider the question as to whether the trust concept is 'uni-dimensional' or 'multi-dimensional' in nature, with arguments provided for both conceptualisations. The chapter will next consider the many postulated antecedents and dimensions of trust drawn from the academic literature.

Following on from the specific focus on trust, its history, definition, relevance, and debates about the dimensionality of the concept, the literature chapter will then consider the possible linkages between 'brand trust' and 'brand extension'. Having considered the possible linkages between the literature areas, focus is then given over to the brand extension literature area. The origins of the literature will be examined, the concept defined, and the apparent importance (of brand extension) to marketing practitioners emphasised. The chapter will draw out and summarise the various success factors emphasised within the literature, and provide a classification of brand extension success factors under the following categories: parent brand or company characteristics; consumer characteristics; brand extension characteristics; and, brand extension communication strategies.

In conclusion, the chapter will consider the key points of relevance to the research propositions, and to the possible development of a working model of brand trust and its dimensions and correlates. The key aspects taken into the research methodology and development and refinement of research hypotheses will be noted.



## **2.2 Trust - History and Definition**

This section of the literature chapter will start by providing an overview of the context in which the concept of trust arises. A more detailed examination of the relevance of trust to various literature bodies will be conducted in later sections of the chapter.

The literature within the area of trust, spanning a 30-40 year period, covers many discipline and subject areas ranging from psychology and interpersonal relations (Deutsch, 1960; Rotter, 1967; Schenkler, et al. 1973); channel relations and relational exchanges (e.g. Dwyer, Schurr and Oh 1987); sales management (Swan and Nolan 1985; Swan, Trawick and Silva 1985; Hawkes Strong and Winick, 1996; Rich, 1997); through to the area of relationship marketing (e.g. Morgan and Hunt 1994); and source credibility (Giffin 1967).

The construct of trust has regained prominence on the marketing agenda in the 1990s (e.g. Doney and Cannon, 1997; Hocutt, 1998; Michell, Reast and Lynch, 1998; Blois, 1999; Delgado-Ballester and Munuera-Aleman, 2001; Nicholson, Compeau and Sethi, 2001; Raimondo, 2000; Guibert, 1998), following the pioneering work of the 1960s (Deutsch, 1960; Rotter, 1967). Examined in a wide range of settings (Rousseau, et al. 1998) as discussed by Morgan and Hunt (1994), trust has been seen as pivotal to the success of strategic alliances (Sherman, 1992; Hunt, Lambe and Wittman, 2002), as fundamental to the development of loyalty towards retailers (Berry, 1993; Ganesan, 1994), as central to the modelling work of the IMP Group (Ford, 1990), as “the cornerstone of strategic partnerships” (Spekman, 1988; Zaheer, McEvily and Perrone, 1998), as critical in maintaining successful agency-client relationships (Labalm & Kohli, 1997; Moorman, Deshpandé and Zaltman, 1993) and, more latterly, as influential in risk-related relationship enhancement decisions (Selnes, 1998). Viewing consumers as capable of ‘trusting’ brands can be seen in the light of many recent publications, which focussed on the consumer’s ‘relationship’ with brands (Aaker, 1997; Fournier, 1998; Garbarino and Johnson, 1999).

## **2.3 Trust Concept and Definition**

Trust, as a concept, has been discussed for many decades and in many different academic fields. It can be seen from the Table ‘Definitions of Trust 1967-2001’, that there were many definitions of trust, some placed more emphasis on a behavioural willingness to rely upon an ‘exchange partner’ whilst other literature placed emphasis on psychological disposition.

### **2.3.1 Trust, Trustworthy and Trusting Behaviour**

There was an element of debate within the literature regarding the precise definition of trust, and its delineation from other related constructs. Mayer, Davis and Schoorman (1995) held that perceived trustworthiness and trusting behaviour were, respectively, a determinant and a consequence of trust and, therefore, that these two concepts were distinct from the trust



concept itself. According to the authors, the three factors that led a subject to consider a partner trustworthy (the three components of trustworthiness) were: ability (which related to the partner's competence to supply what the trustor expects); integrity (which related to the fact that the partner was guided by principles acceptable to the trustor); and benevolence (which related to the intention of the trustee to do his best for the trustor, putting to one side his egoistic profit motives, and generally always acting in the interest of the trustor). In the light of these distinctions, trust was therefore defined by Raimondo (2000), as 'the willingness of one party to be vulnerable to the actions of the other party, on the basis of the expectation that the other one will carry out a particular action for the trustor, irrespective of the ability to control that party'. Making oneself vulnerable meant taking a risk, but according to Mayer, Davis and Schoorman (1995) trust did not represent the real assumption of the risk, rather it was the willingness to assume it. The risk was only inherent in the behavioural manifestation of the willingness to be vulnerable. For Mayer, et al., the difference between the 'willingness to assume the risk' and the 'assumption of the risk' itself defined the difference between 'trust' and trusting behaviour. On the basis of what these authors held, then, trust was a unidimensional construct, which was strongly related with others classes of constructs: some cognitive constructs, such as the 'perception of ability', and 'absence of opportunism' - similar to those which Andaleeb (1992) and Ganesan (1994) had proposed - and 'perceptions of goal congruence' in a broad sense (sharing principles); and some emotive constructs, such as behavioural intention to trust - as originally proposed by Moorman, Zaltman and Deshpandè (1992) - and 'vulnerability'. Similarly, a study of the relationships between partners in sales alliances presented by Smith and Barclay (1997), considered the concepts of 'perceived trustworthiness' and 'trusting behaviour' as two distinct, but linked, dimensions of trust. These were felt to impact on the effectiveness of the relationship in terms of perceived performance objectives and reciprocal satisfaction. In particular, mutual perceived trustworthiness, which was defined as 'the degree to which partners have joint expectations of a fiduciary responsibility in the performance of their individual roles and believe that each of them will act in the best interest of the partnership', was composed of four dimensions. The first three of these were 'character', 'role competence' and 'motives', which could be aligned to the 'integrity', 'ability' and 'benevolence' identified by Mayer, Davis and Schoorman (1995). The fourth dimension was 'judgement', defined as 'the belief that each partner was able to apply his own knowledge to a given situation, and thus to decide and act appropriately in favour of partnership interests'. Mutual trusting behaviours were the actions of both partners, which reflected a willingness to accept vulnerability in the face of uncertainty, and were defined by five components: 'relationship investment', 'influence acceptance', 'communication openness', 'control



reduction', and 'forbearance from opportunism'. Although the relationship between mutual trustworthiness and mutual trusting behaviour was iterative from a dynamic point of view, Smith and Barclay (1997) thought it was appropriate to hypothesize that the former occurred prior to the latter at any given moment. The differentiation between trust and perceived trustworthiness was of great importance from the conceptual point of view, as it led to revision, once more, of the meaning of trust and to reflect on its development process. Most authors proposed a definition of trust related to the perceptions of other parties' 'reliability', 'ability' and 'absence of opportunism'. The distinction between cognitive dimensions, always related to the above components, and emotive dimensions is recurrent within the literature. In a sense, the literature reveals that the problem is still open, alternative definitions of trust, lack of precise delineation between trust, trustworthy and trusting behaviour, and a lack of an accepted dimensionalisation of the trust construct.

As noted above, much debate rested around whether **trust** was present if behaviour had not actually taken place, acting to rely upon another party. It was argued by some authors that trust without the behaviour element was merely a perception of the **trustworthiness** of a brand (or company, person, etc.), that might not necessarily be acted upon. Hence for some, trust was both psychological and behavioural (Moorman, et al., 1992; McAllister, 1995;), for others a 'psychological' disposition was a sufficient definition of trust (Morgan and Hunt, 1994). Some authors such as Blois (1999), have concluded that the great diversity of opinion as to what trust is, and the lack of universally defined core issues, reduces the usefulness of the concept.

Whilst there are undoubtedly a wide range of conceptualisations and definitions of trust, these can be simplified into key themes running through the literature.

- Trust as a 'behaviour' or 'relying on' **versus** trust as a 'psychological disposition' or 'willingness to rely on', with perceptions about the 'trustworthy status' held of another.
- Several key terms commonly occurred within definitions of trust: honesty; reliability; confidence; obligation fulfilment; credibility; and benevolence.
- The multi-dimensional nature of trust was emphasised within several definitions.
- 'Cognitive' and 'Affective' dimensions of trust were commonly emphasised.
- Perceived risk and vulnerability were emphasised in many definitions or conceptualisations of trust.
- Trust was expressed as a belief.

Definitions of trust also carried a wide array of terminology to describe the parties involved in the 'trust relationship', with terms such as 'another', 'exchange partner', 'person', 'other party', 'supplier', 'target of trust' being used. This, however, was not felt to be an issue, since



it merely reflected the variety of research settings in which the concept had been considered. Only one recent addition to the literature, from Chaudhuri and Holbrook (2001), added the terms 'consumer' and 'brand' to the vocabulary of trust definitions.

<p><b>Rotter (1967).</b> Defined trust as “a generalized expectancy held by an individual that the word of another can be relied on.”, and also that behaviourally ‘honesty makes trust possible’ (Rotter,1971)</p> <p><b>Deutsch, (1973).</b> Trust was based on the expectation that one will find what is expected rather than what is feared</p> <p><b>Schurr and Ozanne (1985)</b> defined trust as “a belief that an exchange partner is reliable and will fulfil the perceived obligations of the relationship”.</p> <p><b>Bialaszewski and Giallourakis, (1985)</b> Trust was defined as ‘an attitude displayed in situations where ... a person is relying on another person, a person is risking something of value, and/or a person is attempting to achieve a desired goal’</p> <p><b>Anderson and Narus, (1984).</b> Trust has also been defined as ‘a partner’s belief that the other partner will perform actions that will result in positive outcomes, as well as not take unexpected actions that would result in negative outcomes’.</p> <p><b>Anderson, et al. (1987).</b> [Mutual trust is] “the degree to which the channel member perceives that its relationship with the supplier is based upon mutual trust and thus is willing to accept short-term dislocation because it is confident that such dislocation will balance out in the long-run”.</p> <p><b>Anderson and Weitz, (1989)</b> “We define trust as one party’s belief that its needs will be fulfilled in the future by actions undertaken by the other party”.</p> <p><b>Moorman, et al. (1992)</b> Trust was defined as a “willingness to rely on an exchange partner in whom one has confidence”.</p> <p><b>Morgan and Hunt, (1994).</b> “We conceptualize trust as existing when one party has confidence in an exchange partner’s reliability and integrity”.</p> <p><b>Ganesan, (1994).</b> “Trusting behaviour involves a future expectation about an exchange partner resulting from the partner’s current level of reliability and the degree of satisfactory experience of the partner”.</p> <p><b>McAllister (1995)</b> defined trust as “the extent to which a person is confident in, and willing to act on the basis of the words, actions and decisions of others”.</p> <p><b>Doney and Cannon (1997)</b> defined trust as “the perceived credibility and benevolence of a target of trust”.</p> <p><b>Chaudhuri and Holbrook (2001)</b> “defined brand trust as the willingness of the average consumer to rely on the ability of the brand to perform its stated function”.</p>
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**Table 2.1 ‘Definitions of Trust 1967-2001’**

Pioneering work on the concept of trust took place in the 1960s with Deutsch (1960) and Rotter (1967). Rotter, defining trust as “a generalized expectancy held by an individual that the word of another can be relied on.”, and also stating that behaviourally ‘honesty makes trust possible’, emphasised the pivotal role of honesty within trust (Rotter, 1967 and Larson, 1992). Deutsch (1973) emphasised the importance of risk and uncertainty within the operationalisation of trust when he stated that ‘trust is based on the expectation that one will find what is expected rather than what is feared’. Building on this, Anderson and Narus (1984) defined trust as “a partner’s belief that the other partner will perform actions that will result in positive outcomes, as well as not take unexpected actions that would result in



negative outcomes', they emphasised that trust helped to reduce risks and uncertainty of outcomes, with trusted partners hopefully working for mutual gain. Echoing the work of Rotter (1967), Schurr and Ozanne (1985) defined trust as 'a belief that an exchange partner is reliable and will fulfil the perceived obligations of the relationship', this definition emphasised both the honesty and reliability of the exchange partner in obligation fulfilment. Following the line taken by Deutsch, authors such as Bialaszewski and Giallourakis (1985) emphasised the risks involved in relying on another.

Anderson, et al., (1987) defined trust as "the degree to which the channel member perceives that its relationship with the supplier is based upon mutual trust and thus is willing to accept short-term dislocation because it is confident that such dislocation will balance out in the long-run". This had many similarities with Anderson and Narus (1984), and very much supported the view of 'mutuality' in exchange. This theme was consistent with the Anderson and Weitz (1989) definition of trust, which emphasised the implied 'equity' of exchange partners. Moorman, et al., (1992) and Morgan and Hunt (1994) both expressed trust in terms of the 'confidence' one feels in an exchange partner, although the Morgan and Hunt definition also showed the source of this confidence to be the 'reliability' and 'integrity' of the exchange partner. Ganesan indicated that trust involves future expectations about an exchange partner, these being based upon 'reliability' and 'satisfaction' with the partner in the past. McAllister (1995) followed the definitions of Morgan and Hunt (1994) and Moorman, et al. (1992), emphasising 'confidence in' another, but based upon 'words, actions and decisions', McAllister also conceived of trust as 'risk-taking behaviour', and indicated that interpersonal trust has cognitive and affective foundations (Lewis and Wiegert, 1985). Doney and Cannon (1997), defined trust as the 'perceived credibility and benevolence of a target of trust'. This definition again emphasised 'mutuality' via the inclusion of the benevolence term, and also the inferred reliability of the exchange partner via the 'credibility' term. Finally, Chaudhuri and Holbrook (2001) talked about the perceived ability of the brand to perform as a basis for trust.

Of the thirteen definitions reviewed from the 1967 to 2001 period, four definitions explicitly emphasised a 'willingness to rely' or a 'willingness to act' as part of the definition of trust (Bialaszewski and Giallourakis (1985); Moorman, et al., (1992); McAllister (1995); Chaudhuri and Holbrook (2001)). The remainder appeared to take the line that this willingness to act or rely on an exchange partner is implied in the 'psychological disposition' of trusting the exchange partner. On the subject of whether prior experience of 'partners' is required in order to form trust judgements, Blau (1964) stated that the initial problem was to prove oneself trustworthy under the social exchange theory of reciprocity. However, Smith and Barclay (1997) argued that consumers can learn about brands (via peers, positive word of



mouth) and build trust in brands prior to personal experience, and Swan and Nolan (1985) asserted that trusted peers can be sufficient to develop brand trust in a third party prior to interaction. Doney and Cannon (1997) outlined five cognitive processes by which trust can be developed, one of which is the 'Transference Process'. This process, relying on the earlier work of Strub and Priest (1976) and Milliman and Fugate (1988) has suggested that trust can be transferred from one trusted 'proof source' to another person or group where the trustor has had little or no direct experience.

Blois (1999) noted the common themes and inconsistencies in the various definitions, which he felt had led to a "somewhat woolly concept". Further, Blois (1999) questioned whether trust could actually be deliberately created by organisations, quoting the work of Sato (1994, p. 6): 'trust is a cultural norm can rarely be created intentionally because attempts to create trust in a calculative manner would destroy the affective basis to trust'. Luhman (1995, p 129) stated that trust development was a process which 'begins with small risks and building on confirmation', but Luhman also commented on the difficulty of convincing another that one is trustworthy, stating that where participants could infer that a process is being employed in order to build up trust, 'motives are unavoidably put in question, and such questioning can easily turn into mis-trust (Luhman, 1979, p. 43). So, it thus appears that for some authors, there were difficulties demonstrating trustworthiness.

#### **2.4 Conditions for Trust Development**

Drawing upon the definitions within the earlier section as well as further discussion within the literature, attention will now be focussed specifically on the conditions for trust development.

Behaviourally, "honesty makes trust possible" (Rotter, 1971; Larson, 1992), whilst fair-mindedness focussed on the motives and intentions rather than the specific behaviours of the exchange partner (Rempel, Holmes and Zanna, 1985). As such, both partners have a belief that even in conditions of uncertainty rewards will be shared equitably (Anderson and Weitz, 1992). It is clear from the prior 'trust definition' section that there has been a debate as to whether it is possible for trust to be obtained without prior 'exchange' interaction, which could be formed as a result of positive word of mouth or possibly a successful advertising campaign. Source credibility (Giffin, 1967), is of course of importance within this process, and some research has suggested that consumers have been increasingly critical of the messages of brand building advertising (Alwit and Prabhaker, 1994), and had been ready to experiment and trust their own judgement (Biel, 1990; King, 1991). According to Ambler (1996), trust does not have a linear symmetrical relationship with sales, but rather it builds slowly if customers are fully satisfied.



Christy, et al., (1996) and Palmer (1997), suggested that establishing a marketing relationship would depend upon obtaining an “adequate level” of trust, which formed a “pre-requisite for business exchange to occur”.

Doney and Cannon (1997) pointed out that the literature suggested that trusting parties must be vulnerable to some extent for trust to become operational. In other words, decision outcomes must be uncertain and important to the trustor (Deutsch, 1960; Moorman, Zaltman and Deshpandé, 1992; Schlenker, Helen and Tedeschi, 1973).

Doney and Cannon (1997), outlined five cognitive processes by which trust can be developed:

**Calculative Process** - yielded by the economics literature (Dasgupta, 1988, Williamson, 1991) suggested that trust is primarily yielded by a calculative process - when an individual or organisation calculates the costs and/or rewards of another party cheating or staying in the relationship.

**Prediction Process** - relies upon one party’s ability to forecast another party’s behaviour. Since trust required an assessment of the other party’s credibility and benevolence, one party must have had information about the other party’s past behaviour and promises. For example, through repeatedly making promises and delivering on them, a salesperson develops the confidence of a buying firm (Doyle and Roth, 1992; Swan and Nolan, 1985).

**Capability Process** - involved determining another party’s ability to meet its obligations, thereby focusing on the credibility component of trust (Doney and Cannon, 1997).

**Intentionality Process** - the ‘trustor’ interprets the targets, words and behaviour and attempts to determine the intentions in exchange (Lindsfold, 1978).

**Transference Process** - Strub and Priest (1976) described the ‘extension pattern’ of gaining trust as using a “third party’s definition of another as a basis for defining that other as trustworthy”. This suggested that trust could be transferred from one trusted ‘proof source’ to another person or group where the trustor has had little or no direct experience (Milliman and Fugate, 1988; Strub and Priest, 1976).

It was argued that in situations with frequent contact, the Prediction Process, Capability and Intentionality processes could all be informed and developed.

McAllister (1995) noted that trust enabled people to take risks:

“where there is trust, there is the feeling that others will not take advantage of me”  
(Porter, et al., 1975).

McAllister debated the notion of trust using some of the early authors on the subject, and noted that the amount of knowledge required for trust was “somewhere between ignorance and total knowledge” (Simel, 1964). It was argued that in a situation of total ignorance, there



was no basis upon which to rationally trust, and given a situation of total knowledge there was no need for trust.

Many authors have considered the factors which determine trust in a range of different settings, but few have sought to map out different stages of a trust relationship.

Lewicki and Bunker (1995, 1996), however, proposed a typology of trust development in professional relationships, which contextualized individuals' familiarity with each other. They argued trust development to be an iterative process that "takes on a different character in the early, developing and mature stages of a relationship" (1996, p 118), as knowledge of the other person grows. Three categories of situational trust, Calculus-Based trust, Knowledge-Based trust and Identification-Based trust' were linked in a sequential iteration in which the achievement of trust at one level enabled the development of trust at the next level'. 'Calculus-Based Trust' (CBT) was trust between individuals in the early stages of a relationship, an economic calculation where the outcome of creating and sustaining the relationship were compared to the costs of maintaining or severing it. 'Knowledge Based Trust' (KBT) was based on a history of interaction between two individuals, which allowed each to make predictions about the other. 'Identification Based Trust' (IBT) arose when the parties understood and appreciated each other's wants to such an extent that each could act and substitute for the other in interpersonal interactions. This model therefore accounted for the development of trust over time, and provided 'trust identifiers' - perceived similarities and differences in professional knowledge and individual character.

Czepiel (1990) suggested that relationships tended to evolve and change over time, with parties developing greater trust and dependence as the relationship progressed. His proposed stages included:

1. accumulation of satisfactory encounters and the expectation of future purchase;
2. active participation based on mutual disclosure and trust;
3. creation of a double bond (personal and economic); and
4. psychological loyalty to the relationship.

Palmer and Bejou (1994) considered the origins of trust, and sought to test prior hypotheses about the development stages of trust in a consumer - financial adviser context. Palmer and Bejou referred to the work of Swan and Nolan (1985), who,

"In their analysis of the development of trust, conceptualize three stages. In the first stage, there has been no opportunity for exploration of each parties' credentials, therefore the level of trust between buyer and seller is at a minimum until a minor exchange occurs. Once exchanges have occurred, trust development moves into the second stage in which the buyer has the opportunity to check actual delivery of a



service against the promises that the seller has made. Trust is established where the perceived performance matches the promised performance. Finally, trust established through interaction is combined with other external factors (e.g. word of mouth opinions and media reports about the seller) to form an overall perception of trust in the seller. Trust may, in fact, occur without prior interaction between buyer and seller, being based on the recommendation of trusted others.”

### **2.5 Consequences of Trust**

Among the consequences of trust, many variables have also been discovered: commitment, in the sense of the lasting effort that individuals make to maintain a relationship (Moorman, Zaltman and Deshpande 1992; Morgan and Hunt, 1994; Ganesan, 1994; Geyskens, et al., 1996; Nielson 1998); reduced level of conflict (Anderson and Narus, 1990; Morgan and Hunt, 1994); non-coercive power (Morgan and Hunt, 1994); greater probability of allocating the resources in the direction of the subjects who are trusted (Anderson, Lodish and Weitz, 1987; Nielson, 1998); reduction of transaction costs (Zaheer and Venkatraman 1995; Cummings and Bromiley, 1996); greater ease or influence in persuading the partner (Swan and Nolan 1995; Swan, Trwick and Silva 1985) and consequently greater sales (Crosby, Evans and Cowles 1990; Dion, Easterling and Miller 1995; Dahlstrom and Nygaard 1995; Kumar 1996; Doney and Cannon 1997); facilitation of collaborative behaviour and continuity of the relationship (Anderson and Weitz 1989; Crosby, Evans and Cowles 1990; Ganesan 1994; Mohr and Speckman 1994; Kumar 1996); and improved levels of communication (Mohr and Nevin, 1990).

### **2.6 Trust - is it a Uni-Dimensional or Multi-Dimensional Concept?**

This section of the literature review provides broad, though not unanimous, support for the hypothesis that trust is a multidimensional concept. There was however, a lack of agreement and definitive research to support any specific multidimensional model of trust. It can be seen from the ‘Models of Trust’ Table below that none of the ‘models’ of trust have been drawn from the consumer-brand context. Some of the earliest multi-dimensional conceptualisations of trust date back about twenty years and relate to the interpersonal relations and social psychology fields of research. Johnson-George and Swap (1982) identified two dimensions of trust they labelled ‘reliableness’ and ‘emotional trust’. Similarly Rempel, et al., (1985) distinguished between ‘dependability’ and ‘faith’ (emotional security) as unique forms of trust.

It was also stated that (interpersonal) trust had cognitive and affective foundations (Lewis and Wiegert, 1985). Trust was felt to be cognition-based in that ‘we choose who we will trust, in which respects, and under what circumstances, and we base the choice on what we take to be good reasons, constituting evidence of trustworthiness’.



Affective foundations were also claimed to exist, believed to consist of the emotional bonds between individuals (Lewis and Wiegert, 1985). Emotional investments were felt to be made in trust relationships, with genuine care and concern for a partner expressed in the belief that these would be reciprocated.

Morgan and Hunt (1994) introduced conceptualisations of trust which emphasised both the behavioural aspects (confidence in the probity and equity) and the cognitive elements (confidence in the reliability and performance satisfaction) of exchange partnerships (Johnson, et al., 1997). Ganesan (1994) proposed 'Benevolence' (motives/intentions) and 'Credibility' (expertise) dimensions, and following this, Kumar, Scheer and Steenkamp (1995), Geyskens, et al., (1996), and Doney and Cannon (1997) also argued that trust was multidimensional, being evaluated by 'perceived credibility' and 'benevolence'.

#### Models of Trust

Author, Model and Components	Context
Johnson-George and Swap (1982) identified two dimensions of trust they labelled 'reliableness' and 'emotional trust'	Social Psychology
Rempel, et al., (1985) distinguished between 'dependability' and 'faith' as unique forms of trust	Social Psychology
Lewis and Wiegert (1985) stated that interpersonal trust had 'cognitive' and 'affective' foundations	Interpersonal Communications
Morgan and Hunt (1994) emphasised behavioural aspects and cognitive elements of trust	Business to business/RM
Ganesan (1994) suggested benevolent (motives/intentions) and credibility (expertise) dimensions	Business to business/RM
McAllister (1995) suggested a two-dimensional conceptualisation using 'affect' based trust and 'cognition' based trust. Affect based trust was grounded in reciprocal interpersonal care and concern and cognition based trust was grounded in beliefs about peer reliability and dependability	Business to business/RM
Smith and Barclay (1997) suggested a tripartite conceptualisation of trust with dimensions of 'character motives', 'role competence' and 'judgement'	Business to business/RM
Doney and Cannon (1997) argued that trust was multidimensional built around 'perceived credibility' and 'benevolence'.	Business to business/RM
Fletcher and Peters (1997) established two dimensions of trust, an 'ability dimension' (competence, equity and fairness, promise fulfilment) and a 'motive/intent' dimension (discreteness, integrity, receptivity and loyalty)	Business to business/RM
Sirdeshmukh, Singh, and Sabol, (2002) Established two dimensions of Consumer trust: trust in 'front-line employees', and trust in 'management practices and policies'. Trustworthiness was felt to be an antecedent to consumer trust, itself having three dimensions, 'operational competence', 'operational benevolence', and 'problem solving orientation'.	Consumer – Retail Clothing and Airline

**Table 2.2 : Models of Trust 1982-2002**

McAllister (1995) reported finding strong support for the distinction between cognitive-based and affect-based trust. He found that the beliefs of managers about the trustworthiness of



their peers could be measured along two dimensions, the extent of 'affect based trust' and extent of 'cognition based trust'. In general, levels of cognition based trust were higher than levels of affect based trust, a finding consistent with the understanding that some level of cognition based trust would be necessary for affective based trust to develop. The authors viewed these as different types of trust: cognition based trust - grounded in individual beliefs about peer reliability and dependability; and, affect based trust - grounded in reciprocal interpersonal care and concern. McAllister provided academic underpinning for the assertion of two different types of trust, based upon the earlier work of Johnson-George and Swap (1982), Lewis and Wiegert (1985) and Rempel, et al., (1985). He noted that empirical evidence from the social psychological literature on trust in close relationships supported a distinction between the two forms of trust. More recent work on the conceptualisation of trust has also focussed on the distinction between the 'cognitive' and 'affective' dimensions of trust (Fenneteau and Guibert, 1997).

Fletcher and Peters (1997), building upon the work of Andaleeb (1992), described trust as a "complex and multi-faceted construct", and used an adapted multi-items 'conditions of trust inventory' (Butler, 1991) in order to capture the essence of trust. Two dimensions of trust were established on 'ability dimension of trust' (competence, equity and fairness, promise fulfilment) (Doucette, 1995) and motive/intent dimension of trust' (discreteness, integrity, receptivity and loyalty). Both dimensions were found to have Cronbach's Alpha's (Cronbach, 1951) in excess of .80 and both were found to be significantly related to receptiveness towards direct mail strategies. These dimensions were very similar to the 'motives' and 'ability' dimensions proposed by Andaleeb in 1992.

Smith and Barclay's (1997) study, with a tripartite conceptualisation of trust, supported the dimensionalisation of the concept. The authors used confirmatory factor analysis to establish dimensions of 'character motives'; 'role competence' (e.g. Ganesan, 1994) and 'judgement' (e.g. Gabarro, 1978). Smith and Barclay stated that the dimensionalisation of trust would assist with studying the proposition that the very nature of trust varied depending on "the type of social, relationship, situation and system under consideration" (Lewis and Weigert, 1985).

Kumar (1996) measured trust amongst retailers and manufacturers via multi-item scales, which were then averaged to provide a single trust score. Items within the scales included "we can rely on the manufacturers to keep the promises it makes", and "we can count on the manufacturer to act sincerely in its dealings with us". Whilst Kumar utilised multiple items to capture the trust concept, no explicit claims are made concerning dimensionality.

Grossman (1998) defined trust as 'the degree of confidence one feels in a relationship' and added, that trust had three elements: predictability, dependability and faith.



Michell, Reast and Lynch (1998), studying the consumer context, found support for the multidimensional model of brand trust. A four dimensional model of Probity and Equity (Affective), and Reliability and Satisfaction (cognitive) found support within exploratory research.

Whilst many authors have been shown to be supportive of the multi-dimensional conceptualisation of trust, several authors, typically representative of the late 1980s and early 1990s period, have viewed trust as unidimensional. The unidimensional conceptualisations have tended to emphasise either the 'motivation' of the trusted party (Anderson and Weitz 1989; Anderson and Narus 1990; Crosby, Evans and Cowles 1990; Zaheer and Venkatraman 1995), or the 'reliability' of the trusted party (Mohr and Spekman 1994; Selnes 1998) within the 'trust measure question'.

Selnes (1998) indicated that the variables 'trust', 'satisfaction', 'relationship enhancement', and 'relationship continuity' were assessed by single items. Selnes argued that whilst the preference in marketing seemed to be multi-item scales (Churchill, 1979), these four constructs were uni-dimensional and directly accessible for the informant and thus multi-item scales did not make sense. Selnes argued that multi-item scales of trust, such as that used by Morgan and Hunt (1994), included sources of trust as a measure of trust. That is, they used reliability, integrity and confidence as a measure of trust, whereas the authors argued that these are sources or antecedents and by themselves, not part of the construct. Thus the authors used the scales 'to what degree they trusted the supplier'. Whilst the authors used a single item for trust, they used multidimensional approaches for measuring the 'less accessible' competence, communication, commitment and conflict handling.

Taylor (2001) referred to Johnson and Grayson (2000) in stating that customer trust judgements were generally accepted to be multidimensional in nature, and Raimondo (2000), having completed a review of prior publications concerning the trust concept, concluded that a single item should not be used to measure trust. She indicated that such an approach did not cover the domain of trust adequately, and that the multi-item scale should always be preferred. Such a scale allowed the researcher to capture the meaning of the construct as a whole, to take account of the subjects' variability and to reduce random errors, thus increasing scale reliability (Churchill, 1979).

It can be seen that whilst there was some healthy debate within the literature, the majority of academic research appeared to come down in favour of trust being a multi-dimensional concept.

### **2.7 Trust and the various contexts in which it has been emphasised**

Grossman (1988) asserted that trust is considered to be a crucial element in all human interaction (Butler, 1986). Gupta (1983) concluded that stable, friendly relationships were



characterised by communication, trust, liking, respect, reciprocation, affection, influence and understanding. Specifically within a business to business manufacturer - supplier context, Spekman (1988), amongst others, noted the shift away from a competitive approach to a co-operative approach within the value chain:

“It has become obvious to many manufacturers that their ability to become world-class competitors is based to a great degree on their ability to establish high levels of trust and co-operation, ... and since collaboration is built on a win-win model ... open and honest communication is needed”.

Kumar (1996) reinforced this move from firm “power” towards a firm “trust” based perspective, in relationship building and maintenance, and according to Gronroos (1996) ‘the relationship philosophy relies on a trusting relationship with customers instead of an adversarial approach to customers’. Barnes (1994) reinforced the importance of trust, and quoting the work of Duck (1991), identified several essential elements of a relationship which included caring, support, loyalty, placing priority on the others interests, honesty, trustworthiness, trust in the other, giving help when needed, and working through disagreements.

Doney and Cannon (1997) studied trust in the industrial buyer - supplier context, and looked at the process of building trust and possible antecedents. The paper cited Anderson and Narus (1990) in stating that the nature of trust would vary by situation. The review of the literature undertaken revealed that people could build trust in public institutions (Lewis and Weigert, 1985) or organisations (Morgan and Hunt, 1994) as well as individuals.

Anderson and Narus (1990) found evidence of a positive relationship between trust and satisfaction. Hocutt’s (1998) relationship dissolution model proposed that trust directly influences commitment.

Nicholson, Compeau and Sethi (2001) confirmed the role of trust in relationship development within a buyer-sales representative context, and found that ‘similarity of business values’, ‘liking’ and ‘frequency of interaction’ were all antecedents of trust. Nicholson, et al. found that liking was the stronger antecedent, with the association gaining in strength with the age of the relationship. Similarly, Beatty, Mayer, et al., (1996) reported the importance of trust in developing, maintaining and enhancing relationships in a consumer-retailer service context.

Palmer (2002) asserted that “the principles and practices of relationship marketing dated back many centuries, yet as a topic of academic and applied interest, it had achieved pre-eminence as a paradigm only during the past two decades”, and trust between buyer and seller was felt by many to be a key component of relationship marketing (e.g. Morgan and Hunt, 1994).



Gronroos (1994) noted that the term 'Relationship Marketing' was first used by Berry (1983) in a services marketing context. Berry also commented (1995, p242) that "Relationship marketing is built on a foundation of trust", but according to Gronroos (1996) "building and maintaining relationships had become a philosophical cornerstone of the Nordic School of Service and the IMP Group since the late 1970s.

"Marketing is to establish, maintain and enhance relationships with customers and other partners, at a profit, so that the objectives of both parties are met. This is achieved by a mutual exchange and fulfilment of promises". Gronroos, 1994

Berry (2002) in updating and reviewing his ground-breaking 1983 article 'Relationship Marketing', noted some significant developments within the literature.

"In my 1983 paper ... I did not discuss the role of trust. Today I would position core service(s), service quality and trust at the center of relationship marketing. All else revolves around these constructs... Low trust organizations are barred from relationship marketing."

Chaudhuri and Holbrook (2001), in a US based study using 107 brands across 41 product categories, sought to explore the relationship among brand trust, brand affect and brand performance outcomes (market share and relative price). The findings of Chaudhuri and Holbrook's research, suggested that brand trust and brand affect were separate constructs that combined to determine two different types of brand loyalty (purchase loyalty and attitudinal loyalty), which in turn influenced outcome related aspects of brand equity, such as market share and relative price.

The Relationship Marketing (RM) concept places heavy emphasis on the importance of communications between the customer and supplier as well as emphasising mutual satisfaction of objectives. Much research has been undertaken on the profit impact of relationship marketing strategies, with commitment and retention being particularly emphasised as benefits of RM approaches. (Reicheld and Sasser, 1990):

"as a customer's relationship with the company lengthens, profits rise. And not just a little. Companies can boost profits by almost 100% by retaining just 5% more of their customers".

Clearly from the literature within the next sections, trust has been heavily implicated within most RM models, relating to commitment, relationship continuity and relationship development or enhancement.

Gilliland and Bello (2002), similarly, noted the impact of trust on commitment within distribution channel relationships. Siguaw, Simpson and Baker (1998) also found that trust



led to improved co-operative relationships and commitment within distribution channels (Fontenot and Wilson, 1997; Lewin and Johnston, 1997; Kozak and Cohen, 1997; Kumar, Scheer and Steenkamp, 1995). Dorsch, Swanson and Kelley (1998), who considered a business to business context, found trust, satisfaction and commitment to be significantly related to vendor stratification (and hence preferred supplier status), from best through to worst vendors faced by purchasing executives in the US.

Morgan and Hunt's (1994) Key Mediating Variable (KMV) Model of relationship marketing placed **trust** along with **commitment** as being fundamentally important to relationship development and maintenance, and noted various antecedents to trust and hypothesised consequences .

Research by Selnes (1998) was to 'address the complementary role of satisfaction and trust in maintaining and enhancing the relationship between a supplier and a buyer'. Selnes (1998) promoted the importance of trust, and satisfaction as key antecedents to trust, in organisational decisions to enhance relationships with exchange partners. The context of the research was the business to business Norwegian catering industry. Selnes used five antecedents in predicting trust, four of which were significant (communication, commitment, conflict handling and satisfaction), and served to explain 54% of the variance in trust, and 35% of the variance in relationship enhancement (p 316).

The buyer-seller relationship has been compared to a "marriage" (Beaton and Beaton, 1995), where commitment was the key to success, from which the level applied by participants was likely to represent the continued stability of the relationship. In order for RM to proceed, it has therefore been suggested that, a long-term commitment is a basic objective in order to increase loyalty and achieve growth by cross selling, which may only take place in the long-term (Moriarty, et al., 1983). Czepiel (1990), highlighted that relationships tended to evolve and change over time with parties developing greater trust and confidence within the relationship programme. Crosby, et al. (1990) somewhat confirmed that trust and satisfaction were two major factors in a relationship which had both been previously empirically tested.

Boles, et al. (1996), placed honesty among the most important factors in determining success in sales relationships. Cowles (1996), supported this, suggesting that trust should be two way and may vary depending upon certain situations. She also specifically highlighted that firms could create added value by nurturing a trusting environment through their company policies and employees. Further supporting the importance of trust within relationships, Naude and Buttle (2000) established five attributes to business relationships: trust, needs fulfilment, supply chain, integration, power and profit.



Moorman, Deshpandé and Zaltman (1992) in their research into US marketing research agencies and their respective customers, sought to find a link between trust level and agency service usage, but failed to find a significant link.

Building on the research of Moorman, et al. (1992), Grayson and Ambler (1999) considered the UK advertising agency buyer-supplier context, to examine the hypothesised relationship between trust and continuity of service usage. Grayson and Ambler (1999) hypothesised, based upon Moorman, et al., that 'dark side' factors were associated with longer-term relationships, which may suppress the relational link between trust and outcomes such as service use. The research found that trust was a significant predictor of marketing services use in the short-term, but not in the longer-term. In the longer term neither trust nor commitment was found to have a significant direct effect on the use of services. The authors stated that this seemed to run counter to the principles of marketing theory, and warned practitioners not to assume a simple direct effect. Grayson and Ambler indicated that the short-term influence of trust on service usage was interesting for two reasons: **firstly**, it supported Dwyer, Schurr and Oh's (1987) claim that trust was an important factor early in a relationship and an essential precondition for the relationship to move to more committed stages of development. Trust is often highlighted as important in long term relationships, but the Grayson and Ambler finding emphasised its importance in early stages of relationships. **Secondly**, since because a relationship between trust and long-term relationships was not found to be significant, the proposition that long term relationships have a 'dark side' was supported. The exact nature of these 'dark side' factors was elusive.

But differing views abound, Peppers and Rogers (1999, p 30) asserted that 'relationships founded on trust provided the basis for the only genuinely sustainable competitive advantage', and asserted that underpinning relationship marketing was a paradigm shift from the more traditional measures of success - in terms of market share increase, to a long-term gauge of success in terms of gain in the share of a customer's business.

Labahn and Kohli (1997) stated that trust was widely believed to be a key construct in exchange relationships. The authors undertook research within the US advertising agency-client context. The research, amongst other things, sought to establish the influence of the working relationship (in terms of productive interaction and conflict) and agency performance (creative quality and implementation) on client disposition (client trust and commitment). Results indicated that agency performance increased client trust and commitment, presumably by lowering the relative attractiveness of alternative advertising agencies. It appeared to the authors from their results, that 'while client commitment depends on agency performance, client perceptions of trust are based on the outcomes the agency achieves rather than on the nature of the working relationship'. Clients only appeared to be



using the following heuristic: 'we will only trust our agency if it delivers'. Seemingly, outcomes, rather than relationship process, were emphasised here as drivers of trust and commitment. Trust was found by LaBahn and Kohli to influence client commitment.

Kumar (1996) emphasised the important role of trust within the relationships of US and European manufacturer and retailers. Kumar reported that trust appeared to be stronger than fear in relationships, with partners that trusted each other generating greater profits, serving customers better, and proving to be more adaptable. Kumar (1997) posed the question as to whether trust was just a 'feel good' phenomena, the results of the study seemed to confirm this. The retailers who trusted the manufacturers, were 12% more committed to the relationship (as measured by their intent to carry the manufacturer's products in the future), were 22% less likely to have developed alternative sources of supply, and performed at higher levels for the manufacturers than the retailers who did not trust them. Results also showed that retailers with a high level of trust in the manufacturer generated 78% more sales than those with a lower level.

Jap (1999) reasserted the importance of trust within exchange relationships, finding that when individuals across organizations trusted each other they were more willing to work together jointly and adopt a more flexible approach to collaboration. Jap supported these findings with various literature emphasising the role of trust.

Ring and Van de Ven (1992, 1994) pointed to the role of interpersonal trust as a critical aspect in shaping and modifying evolving structures of co-operative inter-organisational relationships and a necessary antecedent to market exchange. In economics, Goldberg (1979) was one of the first to recommend the consideration of 'trust' to economists. More recently, Sako and Helper (1997) exemplified economists who were trying to grapple with the nature of trust in economic relations.

Despite the seemingly obvious benefits of trust, debate on its value in organizational exchange has persisted. Williamson (1993) contended that exchange relations are calculative and explains trust in terms of efficiency and credibility. Some others concurred that trust is ephemeral and may have little bearing on economic exchange (Barney and Hansen 1994; Ogilvy, 1995).

Hocutt (1998) investigated antecedents of relationship dissolution, and cited Morgan and Hunt's research (1994) which showed a strong negative correlation between relationship commitment and likelihood of relationship dissolution. It is noted that trust was a pre-condition for increased commitment (Miettila and Moler, 1990), and was a fundamental relationship building block and was included in most relationship models (Wilson, 1995).

Wilson and Jantrania (1994) found trust to be one of seven factors affecting relationship success within the field of business to business. Abratt (1989) stated that organisations



needed to make a concerted effort to manage their corporate images since, according to Gray (1986) managing corporate image is the key to security and maintaining public trust.

### **2.8 Trust, Relationship Marketing and Consumers.**

It was almost 15 years ago when Dwyer, et al.(1987) proposed that “consumer markets could also benefit from attention to conditions that foster relational bonds leading to reliable repeat business”, and whilst it is still a select set of literature relative to the other contexts in which RM has been considered, the relationship marketing paradigm has gained an increasing but measured credence in consumer markets (O’Malley, Patterson and Evans, 1997; Gruen, 1995; Gurviez, 1995). Lexus, the luxury car division of Toyota, perhaps provided an excellent example of consumer relationship marketing in action (Illingworth, 1991). Ramsey and Sohi (1997) supported the relevance of relationships within the consumer - car retail context, finding that perceived listening skills of sales representatives enhanced trust in the sales person and in turn that increased trust led to a desire to deal with the person again (psychological loyalty). Also Beatty, Mayer, et al. (1996) supported the notion of ‘relationships’ in a consumer-retailer service context, and particularly emphasised the role of trust.

A key facet of RM is ‘getting close to customers’, in order to establish exchange relationships, but a number of potential issues arise in the consumer context. Consumers may not want a ‘relationship’ (Szmigin and Bourne,1998) and policies and strategies which marketers might define as ‘intimacy’ measures, might also be seen by consumers as ‘intrusive’. Clearly marketers need to research well and tread carefully in considering the relevance and implementation of relationship marketing in consumer markets. O’Malley, Pallerson and Evans (1997) conducted exploratory focus groups within the UK to try to understand the issues at play in the consumer context. The authors noted that the implementation of RM in consumer market relied upon the use of database marketing (Goldberg, 1988; Copulsky and Wolf, 1990; Petrison and Wang, 1993), and integrated marketing communications (Copulsky and Wolf, 1990). In the use and integration of these approaches marketers have been able to identify and track buying behaviour at an individual level, calculate lifetime value (e.g.Reicheld, 1996) and generate individualised marketing communication and even mass-customised products or services.

Academics and practitioners appear to agree that dialogue is an important element of relationship marketing, but perhaps unsurprisingly in a consumer context this is difficult to achieve. Some authors have advocated that marketers need not worry about mutual relationships (Schultz, 1993), providing the following potentially dangerous advice to industry:



“Relationship marketing ... requires a two-way flow of information. This does not mean that the customer has to give you the information willingly, or even knowingly”.

Such an approach could lead to major concerns and potentially even consumer backlash over privacy and citizens' civic rights (Edelman and Solverstin, 1993, p 25; Berry, et al., 1994 in Grossman, 1998). Since, seemingly, so much of relationship marketing has been founded on trust, and trust seems to be closely related to honesty, the application of relationship marketing to the consumer context needs to be treated sensitively.

Authors such as Barnes (1994) have questioned what relationship marketing means in the context of consumers, and even questioned the legitimacy of the term to refer to the interaction between an end-consumer and a large company or organisation (Sheaves and Barnes, 1996). Barnes (1994) described the application of most relationship marketing strategies to the consumer context in terms of three typical strategies: marketing as customer retention; relationship marketing as ‘locking in’ the customer, and relationship marketing as data-base marketing.

On the subject of customer retention (for example, Reicheld and Sasser, 1991), which emphasised the beneficial profit impacts of keeping customers in the long-term, the author questioned the focus on the nature of the relationship.

While most have seen the establishment of a relationship as a key element in the retention of customers, few have raised issues relating to which customers should be retained or how such a retention-oriented relationship should be established and maintained (Barnes and Cumby, 1993). According to Barnes, (1994), the acceptance of relationship marketing as a good thing because it led to long-term profitability was simplistic, and begged the question of how and with whom such relationships were to be established and what form they were to take.

Turning his attention to the ‘locking in’ of consumers, Barnes referred to the work of Jackson (1985). Jackson drew a clear distinction between a situation where an industrial marketer had the potential to establish a long-term relationship with a customer, and another where the customer was interested primarily in the transaction and in getting the highest level of satisfaction from the immediate sale. Implicitly, Jackson was suggesting that interactions between buyers and sellers take place on a continuum, ranging from transaction to relationship; the issue being one of determining at what point on the continuum it was possible to interest buyers in establishing a relationship.

Barnes used the work of Jackson, and others, and emphasised the limited potential for ‘true relationship marketing’ in a consumer context, with many companies such as the banks (Perrien, et al., 1992; Dibb and Meadows, 2001) having merely applied RM as a process of ‘locking in’ consumers via exit barriers related to cost. Han, et al. (1993) presented close



relationships not in terms of 'locking in', but in terms of mutually beneficial partnering' - with buyers and sellers as willing partners in a relationship which rewarded both. Christy, et al. (1996) referred to the work of the more optimistic Axson (1992), who argued that a successful application of relationship marketing in banking would help to re-create, in a more efficient way, the former relationship between the traditional branch manager and the bank's local customers.

Barnes (1994) referred to the area of database marketing as RM, with Petrison and Wang (1993) linking the establishment of a relationship with customers directly to the availability of database technology, suggesting that the roots of relationship marketing lay in the ability of companies to know their customers, their likes and dislikes on an individual basis, thereby enabling them to "target" the customers more effectively.

Overall Barnes questioned the extent to which consumers could be said to have a relationship with a bank or an airline, citing Hogg, et al. (1993) who questioned the authenticity of relationships. In an insightful article devoted to an examination of the meaning of relationship marketing, these authors observed that the decision to initiate what was considered to be a 'customer relationship' was usually one-sided, in that, the company decided unilaterally to build a relationship with its customers.

Christy, et al. (1996) usefully (and uniquely within the literature) defined relationship marketing in the consumer context. A "marketing relationship" is defined as being a managed context within which formal transactions between a consumer and a supplier (in the form of a manufacturer, retailer or service provider) to that consumer are supplemented by voluntary and reciprocated actions by both parties, the effect of which is that **the probability of future transactions between the two parties is increased**. Consumers (and suppliers) were assumed voluntarily to enter into and remain in relationships of this type because they perceived that they would in some way be better off as a result of doing so.

Christy, et al. (1996) debated the different types of relationship, which could exist in a consumer context. A range of different types of extended relationship could be imagined. At one end of the range, the formally specified transactions between the parties might dominate the relationship, with any supplementary voluntary actions playing a minor role, as may be the case in a book club, for example. At the opposite end of the scale, a different type of extended relationship could depend much more significantly on trust between the parties: a regular diner, for example, may have no specific contractual right to a good table in his favourite restaurant, but would nonetheless be disappointed not to be treated specially. These two ends of the spectrum might be called "closed" and "open" marketing relationships respectively, the definition proposed above referred principally to the latter.



Christy, et al. (1996) suggested the types of consumer markets where relationship marketing might be more likely to flourish: high involvement categories; categories with a customer uncertainty; the consumer ability and willingness to pay for differentiated products; the ability to customize the product or service; high purchase frequency; the existence of high switching or termination costs; and, categories which required training for customers.

Also on the subject of legitimacy of the application of relationship marketing to the consumer context, Jacqueline Pels (1999) usefully reviewed the underlying 'interaction and network assumptions' of the IMP group (e.g. Hakansson, 1982), updating them and applying to the consumer situation. Pels concluded that both business to business and consumer-company exchanges could vary considerably from situation to situation, and that the full range of transactional to relationship marketing could be usefully applied to both. Pels noted that Dwyer, et al. (1987) took a different position to Hakansson (1982). They stated "Arndt correctly emphasized the prominence of exchange relationships in industrial and institutional markets, but the notion of relationship management may also apply to consumer markets"; and later on "we attempt to offer a model that has sufficient generality to cover both interfirm and consumer relationships". Grönroos (1996) also stressed the importance of developing "trustworthy relationships with customers, supplier, distributors, etc."

Whilst Barnes (1995) stated that "You can't have a relationship with someone you don't know", others, such as, Sheth and Parvatiyar (1995) have shown that some consumers might wish to establish a direct relationship with a supplier, and it is in these cases that the producer should use all the new technologies (IT, Internet, etc) which enhance this type of exchange.

Pels (1999) used various examples from the literature to support the proposition that relationship marketing could legitimately be applied to consumer markets, but more likely where a direct relationship could be established between company and consumer.

Godin (1999) asserted the importance of building consumer-trust within direct mail and marketing communications, and pointed to the critical role of trust building within 'permission marketing'.

Also in the consumer domain, Fletcher and Peters (1997) considered the effects of commitment, trust and privacy concerns upon consumers receptivity to direct marketing techniques. Fletcher and Peters utilised an adapted multi-item 'conditions of trust inventory' originally developed and validated by Butler (1991), in which ten conditions (or antecedents) of trust were stated: competence, integrity; consistency; availability; loyalty; openness; fairness; receptivity; promise fulfilment, and discreteness. The authors, following in the footsteps of others (Doucette, 1995), produced an 'ability dimension of trust' (competence, fairness, promise fulfilment), a 'motive/intention dimension' (discreteness, integrity, receptivity and loyalty), and a four item overall trust scale.



The authors found that both the 'ability dimension' and the 'motive/intent dimensions of trust were necessary to encourage commitment and offer receptivity - and thus encouraged marketers to develop strategies to address both areas. The authors also found that the level of trust and commitment felt by the consumer had a direct and significant effect upon their willingness to share personal information and their openness to product and service offerings by firms in direct marketing environments.

Further to the questions raised by Barnes (1994), Szmigin and Bourne(1998) questioned the application of relationship marketing to the consumer context, considering the consumer services marketing context.

Further support was found for the proposition that both transactional and relationship exchange can be found in a consumer context. 'Relationships' seemed to be more likely where distance between buyer and seller is shorter, and it was also noted that not all consumers were likely to want to get involved with all or the same brands.

Cumby and Barnes (1996) warned that "the probability of a relationship evolving from a series of transactions depends on the customer's view of the interaction". Garbarino and Johnson (1996) gave evidence that both long-term relationships and transaction exchanges might coexist in a consumer service setting. Liljander and Strandvik (1995) presented an interesting classification of different types of relationship dyads based on the level of commitment of the two parties (service firm and end customer). Sheth and Parvatiyar (1995) stated that: "it is estimated that as often as 90 percent of the time, consumers go to the same supermarket or the same shopping mall to purchase products and services".

O'Malley and Tynan (2000) also reviewed the relevance of relationship marketing for the consumer domain, concluding that its application would be limited and that "it is neither possible nor profitable to create close, personal and long-term relationships with all consumers, in all product markets". A number of authors have challenged assumptions that business to consumer relationships actually existed (Möller and Hahnen, 1998; O'Malley and Tynan, 1998).

O'Malley and Tynan (2000) proposed that "not all consumers want or gain from, long-term relationships", that "consumers may differ in their personalities, needs and situations; they may not want or need a relationship". They additionally argued that "the value of relationships would be dependent on the nature of the service, the nature of the consumer and the nature of the situation". Fournier, Dobscha and Mick (1998) noted the importance of trust in a consumer relationship marketing context, but noted the poor understanding and implementation of relationship marketing by many businesses. The authors argued that many brand owners have bombarded, and hunted down customers trying to form 'special relationships', but without real reciprocation on the part of the brands. It was claimed that



many brands have forfeited consumers' trust, lost the chance to build intimacy and may even have created enemies rather than advocates.

The benefits to be gained from relationships with consumers were well documented for the 'supplier' (e.g. Reicheld and Sasser, 1990), but less work has been undertaken on the benefits of relationships for consumers, given that presumably there would be an opportunity cost of fidelity (Szmigin and Bourne, 1998).

Research by Gwinner, et al. (1998) showed that benefits gained by customers from relational exchanges could be categorised into three types: 'confidence', 'social', and 'special benefits'; and that 'confidence benefits were received more and rated as more important than other relational benefits by consumers'. Confidence benefits related to 'reduced anxiety, faith in the trustworthiness of the provider'. Social benefits, the second most important, were associated with 'personal recognition by employees, customer familiarity with employees, and the development of friendship'. Finally, special treatment benefits, the least important, related to economic and customisation benefits.

Many authors stressed the functional or economic perspectives in describing the benefits for customers in staying in relationships: Peterson (1995) argued that money saving was the primary motive for engaging in relational exchanges; Rosenblatt, (1977), noted the time and energy savings of not having to search to choose suppliers; Sheth and Parvatiyar (1995) argued that consumers liked to reduce choices. Goal achievement in terms of securing satisfying products and services (Bagozzi, 1995), risk reduction was suggested by Berry (1995) to be a motivator for customers, and several authors have alluded to psychological benefits, such as the notion that trust reduced anxiety, and confidence in the service provider, or the keeping of promises by the provider were particularly important dimensions in the relationship from the customers perspective (Barnes, 1994; Berry, 1995; Bitner, 1995; Grönroos, 1990; Morgan and Hunt, 1994).

Whilst there were researchers who questioned the applicability of relationship marketing to the consumer context, few disputed the importance of customers having trust in their product or service providers. Crutchfield (2001) provided a strong case for the importance of trust to patient retention within the patient - obstetrician professional services context. Trust was found to play a powerful role within this high risk, high uncertainty service context. Also in support of the important role of trust within 'consumer relationships with brands', Chaudhuri and Holbrook (2001) found that brand trust and brand affect combined to determine brand loyalty (behavioural and psychological), which in turn had an influence on market share and relative price. This research was based on a sample of 107 US brands across 41 categories, and clearly showed the importance of brand trust within elements of brand equity.



Also in a consumer context, Garbarino and Johnson (1999) built on the idea that within relationship marketing, customer relationships could range from transactional to relational orientations (Dwyer, Schurr and Oh, 1987; Jackson, 1985), and considered segmentation of the audience of a US theatre to evaluate the impact of the different consumer orientations. The authors found that for 'low relational customers', overall satisfaction was the primary mediating construct, whilst for 'high relational customers', trust and commitment were used as mediators between attitudes and future intentions. Importantly, the authors found that some consumers were relationship receptive, and that this was likely to have an influence on their behaviour.

Hart and Johnson (1999) also reinforced the importance of trust within the consumer-financial service advisor context, quoting one agent "I've worked with their families too long and my reputation in the community is too important to sell anything with the objective of putting money in my pocket. Developing trust is really my business. If I do that, the rest takes care of itself". The authors noted that for some companies, to adopt a trust-based approach required a culture change and much re-training and changes to recruitment methods.

De Wulf, Odekerken-Schroder and Iacobucci (2001) found support for the notion that perceived relationship investments (by European and US retailers) impacted on perceptions of relationship quality and behavioural loyalty. These results supported the findings of Bagozzi (1995) and Kang and Ridgway (1996) who argued that consumers felt obligated to reciprocate a retailer's investments in the retailer-consumer relationship by increasing their loyalty to the retailer. This finding implied that it would pay off for retailers to invest in consumer relationships, because it would be likely to result in loyalty. The research also found mild support for the notion that appreciation of retailers relationship investment efforts may be moderated by the individual consumer's category involvement level. Kang and Ridgways' (1996) research into elderly shoppers suggested that a relationship with retailers and service providers was not unusual as part of social support and interaction behaviour. In this case, both parties were benefiting from the 'bonds'.

Bitner (1995) emphasised the importance of promise fulfilment in the consumer service sector, quoting the example of Marriott Hotels, who having conducted extensive research, established that four out of five loyalty determining events occurred in the first ten minutes of a guest visit. As such, Marriott introduced a "First 10" strategy to build consumer trust and satisfaction early in the experience.

Taylor (2001) supported the importance of trust, and asserted that it was believed to play an influential role in the formation of customer perceptions of their relationships with service firms (Bredberg, 2000; Harrington, 1997; Hart and Johnson, 1999), and was an indicator of higher customer retention levels (Anderson and Mittal, 2000). Taylor made initial steps in



showing the relevance of trust within service recovery models for the customer insurance services industry.

Knight and Pretty (2000) surveyed senior managers of some of the world's largest quoted companies, and found 'trust' elements to be one of the key 'core qualities of brands', alongside 'expertise' and 'responsiveness'. This appeared to support the work of Chaudhuri and Holbrook (2001) in the claim that brand trust was influential in the development of key elements of brand equity.

It must be noted however, that several authors (e.g. Palmer, 1996) have questioned the universal applicability and definition of relationship marketing. Barnes (1994) emphasised that not all ongoing exchanges revolve around trust and commitment, but rather that some represented "pseudo-relationships", where there was an imbalance of power between the partners and possibly little or no choice on the part of the buyer, the buyer may be locked in against their will. This situation might arguably be related to the consumer context of monopoly utility suppliers, who when deregulation occurred lost large swathes of formerly 'tied in' customers.

Palmer and Bejou (1994) found support for relationship development phases in a consumer-financial adviser context, and specifically focussed on the variables of empathy, ethics and sales pressure and sales orientation. Whilst trust specifically was not measured, it is felt that 'empathy' was closely related to the more 'affective' measures of trust.

Szmigin and Boune (1998) proposed that "not all customers want, or gain from, long-term relationships", that "customers may differ in their personalities, needs and situations, they may not all want or need a relationship". They additionally argued that "the value of relationships will be dependent on the nature of the service, the nature of the consumer and the nature of the situation", (e.g. potentially differing between different product or service categories).

Webster (1994) gave many examples of consumer markets where the "relationship is characterised by a strong connection, that is ongoing and has multiple dimensions ... implies a degree of interdependence and trust ... entails mutual expectations and obligations ... and are of sufficient duration to be referred to as long-term relationships". Dwyer, et al. (1987) concluded that, "both business and consumer marketing benefit from attention to conditions that foster relational bonds leading to reliable repeat business".

## **2.9 Trust and New Channels of Communication and Distribution?**

Given the apparent importance of trust in building relationships and gaining customer commitment, research attention turned to how trust could be built in new channels of communication and distribution such as the Internet (Dayal, Landesberg and Zeisser, 1999), where high uncertainty, lack of legal protection, lack of trust and concerns over privacy had



dampened on-line purchasing (Luo, 2001). Given the unique characteristics of the Internet, its interactivity, capacity to individually tailor, constant availability of information (Bauer, et al., 2001), it in many ways appeared to be an ideal support mechanism for many relationship marketing strategies. Bauer, et al. (2001) found that the internet could have a positive impact on satisfaction levels and thus consumer trust and commitment with the 'supplier'. However, recent reports revealed that many consumers in the UK and Europe did not trust on-line banking (Marketing Week, 2000), which may be related to concerns over security.

### **2.10 Trust, Relationship Marketing and Culture?**

Wong and Chan (1999) studied parallels between largely western literature on relationship marketing and Chinese culture Guanxi (relationship), and found that 'adaptation' and 'trust' were positively correlated with sales stability and quality. On a related theme, Armstrong and Yee (2001) confirmed that the presence of trust enhanced buyer-seller relationships amongst ethnic Chinese business people in Malaysia, where cultural similarity appeared to influence the level of trust in a relationship (Anderson and Weitz, 1989). Yau, et al. (2000) incorporated 'trust' as a dimension of 'relationship marketing orientation' (RMO), and found that in Hong Kong, RMO was relevant to most business sectors, but particularly to manufacturing industry.

Andaleeb and Anwar (1996) reaffirmed the importance of trust within the retail-customer context within developing countries (Dhaka in Bangladesh), building on the works of Dwivedi (1985) in India, who showed how increased trust led to the integration of individual group and organisational goals in manufacturing organizations.

Harris and Dibben (1999) utilised the Lewicki and Bunker (1995, 1996) typology of trust development framework outlined earlier, to explore whether differing national values affected the development of business relationships in different countries. The authors based on a limited data set, concluded that trust development may well be influenced by national values, with some processes affirming the Lewicki and Bunker process and others not.

### **2.11 Trust and related variables**

A comprehensive review of the literature has been undertaken related to variables associated with trust. The next section of the literature chapter will provide support for the variables found to be associated with trust. Support for the potential groupings of variables is drawn from section three above regarding the dimensionality of trust, and the opening section of each of the Probity, Equity, Reliability, Satisfaction, Communication and Process 'dimensions' listed below.

### **2.11.1 Probity Variables:**

Kumar (1996) found honesty to be an important component of trust for manufacturers dealing with retailers in the US. Christy, et al. (1996) argued that, given the importance of establishing and maintaining trust (Morgan and Hunt, 1994), those firms with a strong and well communicated reputation would be much more likely to succeed.

#### **Reputation**

In sustained co-operative exchange, concern for reputation would be likely to be an important aspect of trust (Jarillo (1988). Selnes (1993) predicted that brand reputation (which is felt to be a related construct to trust) was driving loyalty. Christy, Oliver and Penn (1996) discussed reputation in the context of RM in a consumer context. Abratt (1989) and Gray (1986) noted the importance of corporate image to maintaining public trust, reputation was felt to be a key component of corporate identity (Balmer and Soenen, 1999; de Chernatory, 1999).

#### **Truthfulness**

This has been related to character in general and specifically to communications (Schlenker, Helm and Tedeschi (1973); Gahagan and Tedeschi (1968)). Selnes (1998) utilised promise fulfilment as part of the 'communication' construct within his model. Barnes (1994) cited Duck (1991) who regarded honesty as a key essential element of a relationship. Grossman (1998) quoting Francis (1994), stated that whilst consumers may be comfortable with smaller firms, they tended not to believe that multinational firms could be trusted to be honest and fair. Lewin and Johnston (1997) noted the importance of honesty for trusted suppliers.

#### **Confidence in**

Trust was defined as a "willingness to rely on an exchange partner in whom we have confidence". (Moorman, Deshpandé and Zaltman (1993)), echoing many other authors, including Anderson and Narus (1990) and Larzelare and Huston (1980). McAllister (1995) defined trust in terms of the level of confidence, one party has in another. Czepiel (1990) noted that over time relationships could develop more trust and confidence.

#### **Integrity**

Brand trustworthy parties have been associated with high integrity by Butler and Cantrell (1984) and Hunt, Chunko and Wilcox (1984). Fletcher and Peters (1997) used Butler's (1991) multi-item conditions of trust inventory - which featured integrity as part of a measure of 'overall trust'.

### **2.11.2 Equity Variables**

Kumar (1996) emphasised the importance of equity in long-term relationships 'the more powerful party deals with channel partners equitably - this is felt to be part of 'procedural justice'. Palmer and Bejou (1994), focussed on the exchange relationships between US consumers and their financial advisers, noted the importance of empathy as relations develop.



Empathy is felt to relate to the affective equity variables, since it relates to developing and understanding of the exchange partner.

#### **Fair-Mindedness**

To help to elicit trust, firms needed to develop a respect for 'fairness' (Anderson and Weitz, 1992). Smith and Barclay (1997) expressed one of the dimensions of trustworthiness as 'judgement', described as 'the ability to decide and act in an appropriate manner'. Kumar (1996) 'neither party will act without first considering the actions' impact on the other'. Kumar (1996) specifically considered 'fairness' within trusting relationships, fairness in terms of outcomes and fairness in the way the relationship process is managed. Fairness is described as being part of the 'modus operandi' of trust based relationships. Fletcher and Peters (1997) used Butler's Conditions of Trust inventory which included 'fairness' as part of an 'Ability Dimension' of trust. Grossman (1998) referred to Francis (1994) in stating that consumers tended not to believe that multinational firms could be trusted to be honest and 'fair'.

#### **Sincerity**

Similarly, a company's perceived sincerity could constitute a basis for trust by providing a framework for decision-making (Crosby, Evans and Cowles, 1990). Kumar (1996) emphasised sincerity in the measurement of trust via a multi-item scale. "... we can count on the manufacturer to act sincerely in its dealing with us". Lewin and Johnston (1997) noted the lack of sincerity amongst dis-trusted suppliers within the timber industry.

#### **Similar Values**

This variable related to the firm having similarity of values to the intending purchasers, with the firm relating to its social context (Bidault and Jarillo, 1997). Kumar (1996) emphasised the importance of 'similar values' in partner selection decisions, where companies valued the benefits of developing mutually trusting relationships. Nicholson, Compeau and Sethi (2001) noted the importance of similarity of values as indicated by liking of sales representatives, in generating trust.

#### **Concern for Customers**

A caring attitude may assist partners in choosing the necessary behaviour for a new situation (Arrow, 1974). Smith and Barclay (1997) expressed one of the dimensions of trustworthiness as 'Motives and Intentions', described as benevolent (or benign agenda/motivations). Kumar (1996) emphasised that manufacturers who trusted retailers, tended to think that 'each is interested in the other's welfare and that neither will act without first considering the action's impact on the other'. McAllister (1995) was concerned with the affective dimension of trust, 'do they consider my interests and welfare'. Barnes (1994) cited Duck (1991), and described 'caring' as an essential feature of relationships, also placed priority on the other partner's

interests. Simpson and Mayo (1977) found that non-coercive behaviours, i.e. showing some concern for the other party, tended to be related to higher levels of trust within manufacturer distributor relationships. Lewin and Johnston (1997) noted that showing concern for their customers was a feature of trusted suppliers in the timber industry.

### **Benevolence**

This variable focussed on the motives and intentions of the exchange partner (Rempel, Holmes and Zanna, 1985). Ganesan (1994) claimed that 'benevolence' was a key dimension of trust alongside 'credibility'.

### **Value for Money**

Dyson, Farr and Hollis (1996) used price/value comparisons with the 'Brand Builder' brand equity questionnaire for Millward Brown International.

High volumes and high prices can be sustained up to a point by communication strategies, but once trust goes, so do the volumes (Biel, 1990; King, 1991).

### **2.11.3 Reliability Variables**

Ganesan (1994) defined trust 'a future expectation about an exchange partner resulting from the partner's current level of 'reliability', whilst LaBahn and Kohli (1997) indicated that 'performance' was a key influencer of client trust and commitment to advertising agencies. Performance was felt to fall within the same area as the 'reliability' construct for the hypothesised model of trust. Kumar (1996) stated that 'Reliability' was a major element in the way manufacturers described trusted business customers. Lewin and Johnston (1997) noted the importance of supplier 'reliability' to trust levels.

### **Delivery**

This variable was concerned with delivery satisfaction as a foundation of trust (Ganesan, 1994). LaBahm and Kohli (1997) specifically mentioned the notion of 'delivery rating' to trust. Clients were adjudged to have used the heuristic : 'we will only trust our agency if it delivers'.

### **Brand Name is a Guarantee**

A strong corporate (brand) name is felt to be another implicit stimulant of trust (Schurr and Ozanne, 1985). Szmigin and Bourne (1998) noted that a brand was often perceived by consumers as a representation of what the whole company stands for (de Chernatory and Mcdonald, 1992).

### **Predictable**

Predictability has been suggested as a source of trust, requiring not only a relationship but also courtship by a partner (Lewicki and Bunker, 1995). Grossman (1998) stated that trust referred to the degree of confidence one felt in a relationship, and comprised of three elements, including 'predictability'.



### **Quality Standing**

Product quality, as a key influence in source credibility, was felt to give tangibility to building confidence about an exchange partner (Dwyer, Schurr and Oh, 1987). Peppers and Rogers (1995) supported the importance of 'quality' in relationship building. Lewin and Johnston (1997) supported the importance of quality regarding trusted suppliers within the timber industry.

### **Consistent Quality**

Confidence on the part of the trusting party, was felt to result from a belief that the trustworthy partner was associated with consistent quality (Altman and Taylor, 1973). Fletcher and Peters (1997) utilised Butler's (1991) conditions of trust inventory, which included an item called 'consistency', whilst not relating specifically to quality, it was felt to be supportive. Grossman (1998) asserted that one way to build trust was by offering a consistent product that consumers expected (e.g. McDonalds's French fries). Peppers and Rogers (1995) supported the importance of 'quality' within relationship building.

### **Dependability**

An image of dependability implied an intention to provide similar levels of service quality (Rempel and Homes, 1986). Kumar (1996) found dependability to be an important element of trust for suppliers to retailer exchange partners. McAllister noted the relevance of reliability and dependability as measures of trust in close relations (Johnson-George and Swap, 1982; Rempel, et al. 1985). Furthermore, McAllister indicated that reliability and dependability expectations must usually be met for trust relationships to exist and develop (Zucker, 1986) and evidence to the contrary provided a rationale basis for withholding trust (Luhmann, 1979; Shapiro, 1987, 1990). Grossman (1998) stated that trust referred to the degree of confidence one felt in a relationship and comprised of three elements, including 'dependability'. Lewin and Johnston (1997) noted the importance of dependability amongst trusted suppliers in the timber industry.

### **Competence**

Morgan and Hunt, 1994 supported the importance of supplier 'competence', Smith and Barclay (1997) argued that 'competence' was one of four components useful in measuring 'trustworthiness'. Selnes (1998) defined competence as a key antecedent to trust within his model of the antecedents and consequences of trust and satisfaction, interestingly no significant association was found between competence, as measured, and trust. McAllister (1995) indicated that competence and responsibility were central to understandings of trust (Barber, 1983; Cook and Wall, 1980; Shapiro, 1990). Fletcher and Peters (1997) utilised an adapted Butler (1991) conditions of trust inventory, which included 'competence' as part of the 'ability dimension of trust'.

### **Warranties**

Schurr and Ozanne, (1985) stated that an explicit guarantee could act as a proxy for trust, and operate as an order winner..

### **Expert Standing**

Crosby, Evans and Cowles (1990), Moorman Deshpandé and Zaltman (1993), and Ganesan (1994) all supported the notion of expert status in building trust. Trust included a number of expectations concerning standards of behaviour and perceived obligations (Madhok (1995), Bradach and Eccles (1989)). Kumar (1996) noted that ‘expertise’ was an important plank in the shift to relationships based upon trust building.

#### **2.11.4 Satisfaction Variable:**

Ganesan (1994) defined brand trust as ‘a future expectation about an exchange partner resulting from the partner’s current level of reliability and degree of **satisfactory experience** of a partner’. Selnes (1998) defined ‘satisfaction’ as being an influencer of trust within the model of the antecedents and consequences of trust and satisfaction, this relationship was found to be significant within the research. Bauer, et al. (2001) found that ‘satisfaction’ with a brand’s products and services will lead to increases in trust and commitment levels.

### **Personal Experience**

Scanzoni, (1979) stated that experiences could play a role in trust, by making it possible to test and recheck the realities of the firm related to preconceived expectations.

Ganesan (1994) stated that trust related to “partners’ current level of reliability and degree of ‘satisfactory experience’ of a partner”.

### **Experience of Peers**

It has been suggested that the mechanisms of trust production needed to be socially legitimised before real trust could emerge (Zucker, 1985). Thus, the experience of others was a predictor of individual trust. Swan and Nolan (1985) supported the notion that trusted peers could lead to the development of trust within a third party prior to direct experience. Doney and Cannon (1997) proposed five cognitive processes by which trust could be developed, one of which is a ‘Transference Process’, where a trusted ‘proof source’ was used to transfer trust without direct experience (Strub and Priest (1976); Milliman and Fugate (1988)).

### **Brand Purchase Duration**

This factor related to the history of purchase behaviour with a firm, and correlated trust with a long-term orientation to purchase (Ganesan, 1994). Czepiel (1990) highlighted that relationships tended to evolve and change over time, with parties developing greater trust and confidence within the relationship. Moriarty, et al. (1983) noted that increased loyalty and cross-selling may only take place in the longer term. Lewicki and Bunker (1996) suggested that trust developed through different stages over time.



### **Opinion of others**

This variable related to the satisfactory worth of word of mouth related to the reputation of a firm (Jarillo, 1988). This also related into the 'Transference Process' outlined by Doney and Cannon (1997), as a method of trust development.

### **Fulfils Expectations**

Blau (1964), Rotter (1967), Dwyer Schurr and Oh (1987), Selnes (1998) and Oliver (1980) all provided support for the importance of 'expectation fulfilment' within trust relationships. Fletcher and Peters (1997) utilised an adapted Butler (1991) Conditions of Trust inventory which included 'promise fulfilment' as part of the 'Ability Dimension of trust'.

#### **2.11.5 Brand Communication Variable:**

Christy, et al. (1996) emphasised the importance of a strong and **well communicated** reputation for firms who wished to build and maintain trust in relationships.

### **Innovations**

Dyson, Farr and Hollis, (1996) utilised a measure 'keep up with changing needs', a measure of how innovative a brand was perceived to be, within the Brand-Builder brand equity inventory at Millward Brown International.

### **Popular Brand**

Dyson, Farr and Hollis, (1996) utilised a measure 'popular brand', within the Brand-Builder brand equity inventory at Millward Brown International.

### **Brand Differentiation**

Dyson, Farr and Hollis, (1996) utilised a measure 'different to other brands', within the Brand-Builder brand equity inventory at Millward Brown International

### **Brand Visibility**

Dyson, Farr and Hollis, (1996) used a measure 'brand is highly visible', within the Brand-Builder brand equity inventory at Millward Brown International.

### **Brand Image**

Selnes (1998) provided support for the importance of brand image within the development of trust.

### **Customer Communication**

Implicit stimulants of trust, such as advertising, could also form the basis for judging trustworthiness (Swan and Nolan, 1985). Selnes (1998) defined 'communication' as being an antecedent of both trust directly and indirectly via satisfaction. Communication was defined as the ability of the supplier to provide timely and trustworthy information, similar to the definition and operationalization employed by Anderson and Narus (1990). Kumar (1996) cited good communication as being a facet of trust-based relationships. Tuttle (2002) referred to the work of the IPG (Industrial Performance Group) in stating that many of the reasons for

poor performance in business relationships were related to expensive mis-trust and communication breakdowns. Lewin and Johnston (1997) noted the importance of good communication to gain trust and commitment within business relationships. It was noted, however, that much of the research above related to business to business relationships and hence 'communication' would primarily entail 'face to face' contacts.

#### **2.11.6 Process Variable:**

##### **Skilled Personnel**

Moorman, Deshpandé and Zaltman (1993) noted the importance of 'skills' within trust development. 'Perceived skill', was viewed as part of Role Competence, by Smith and Barclay (1997).

##### **Customer Service**

Selnes (1998) noted the importance of good customer service within trust development within the Norwegian catering industry, and LaBahn and Kohli's (1997) results showed that service oriented agency behaviours had a strong influence on the working relationship and agency performance measures. Good service behaviour influenced client trust and commitment only as a result of improved working relationships and creative quality implementation. Grossman (1998) asserted that customer service played a strong role in building trust.

##### **Issue Handling**

Selnes (1998) indicated 'conflict handling' as an antecedent of satisfaction (and indirectly trust). Conflict handling was defined as the supplier's ability to minimise the negative consequences of manifested and potential conflicts. LaBahn and Kohli (1997) found that increased levels of conflict led to reduced levels of client commitment. Kumar (1996) cited the method of conflict resolution as being a differentiation between power-based and trust-based relationships. Barnes (1994) cited Duck (1991), stating that working through disagreements was an essential part of a relationship. Bauer, et al. (2001) stated that trust required constructive handling of conflicts. Tax, Brown and Chandrashekeran (1998) found that satisfactory complaint handling led to higher levels of trust and commitment. Sirdeshmukh, Singh and Sabol (2002) also found 'problem solving orientation' to be a dimension of brand trustworthiness.

#### **2.12 Brand Extension and Brand Trust – Assessing Possible Linkages**

The literature in the area of brand extension which will be outlined within the next section of this chapter, will make relatively minor mention of the possible influence of **brand trust** in consumer brand extension evaluation and purchase behaviour. Intuitively, brand trust seems a logical influence on the evaluation and usage of brand extension activities - particularly where an increased level of perceived risk is associated with a purchase decision (Jacoby and



Kaplan, 1972; Bettman, 1973). A notable exception is the work of Keller and Aaker (1992) who have measured the impact of ‘company credibility’ on proposed brand extension evaluation, finding a significant company via its ‘expertise’ and its ‘trustworthiness’, but noted the limitations of their study and invited further research within the area of credibility. Aaker (1990) identified four dimensions on which brand names could add value to extensions: brand awareness, brand associations, quality associations and credibility of the parent brand. Aaker then used ‘brand trustworthiness’ as a partial measure of brand credibility in his later research with Keller (Keller and Aaker, 1992), hence it appears that there were some implied linkages between brand trust and brand equity within the literature. The work of Selnes (1998) also provided some support for the notion of a link between brand trust and brand extension acceptance, noting the importance of trust in gaining ‘relationship enhancement’ in buyer-seller interactions. The purchase of a brand extension by a current brand user could be seen as ‘relationship enhancement’, brand trust being present to reduce perceived risk in making the purchase.

Additionally, McWilliam (1993) stated a very supportive view of a role for ‘brand trust’ within brand extension, as a result of research amongst marketing practitioners. McWilliam found that practitioners viewed consumers to be quite flexible with regard to brand extensions, possibly even seeking to rationalise the extensions, “I guess Mars introduced Mars Ice Cream because they discovered that lots of people like me were keeping Mars Bars in their refrigerators”. The practitioners felt that as long as the parent brand was sufficiently highly regarded and trusted, and the explanation was sufficiently plausible, consumers would be willing to try the brand extension. Once it had been tried, it was felt, it would be judged in its own right, and perhaps with little reference back to the parent brand for positioning support. McWilliam argued that this view represented brand extension decisions as ‘low involvement’, reflecting the Ehrenberg’s (1974) Awareness - Trial - Reinforcement model. She disputed whether all extensions would follow this decision path.

### **2.13 The Consequences of Trust and a Rationale for Linkages to Brand Extension Evaluation and Acceptance**

One of the predicted results of Relationship Marketing (part of which is a trust-bond between supplier and customer), stated earlier in this chapter, was increased revenues and profitability. One of the revenue flows from RM was via increasing purchases from the range of products and services offered by the provider (Reichheld and Sasser, 1990; Reichheld, 1996), part of this flow could come from increased acceptance of brand extensions which have, after all, represented the lions share of new product launch activities over the last few years.

There were, nevertheless, those who were highly sceptical about the role of trust in long-term



relationships. Grayson and Ambler, (1999) followed up the proposition that long-term relationships reduced the impact of trust (Moorman, Zaltman and Deshpandé, 1992), and produced study results which reported that “neither trust nor commitment has a significant effect on (long-term) use of marketing services”. They supported Dwyer, Schurr and Oh’s (1987) claim that it was in the early stages of a relationship that trust was most important, in that trust was necessary if a relationship was to move to more committed stages of development’.

The KMV (key mediating variable) model of Relationship Marketing (Morgan & Hunt, 1994) showed a pivotal role of trust (with antecedents) and the hypothesised consequences of trusting behaviour (co-operation, reduced conflict, reduced uncertainty). The model also indicated trust’s impact on commitment, which in turn has its own outcomes (increased acquiescence, reduced propensity to leave, increased co-operation). The model confirmed that ‘trust’ was a powerful variable, and various outcomes of trust represented within the model (co-operation, reduced uncertainty) could be interpreted as being helpful to a highly trusted brand offering brand extensions. Schurr and Ozanne (1985) related trust to loyalty levels, and loyalty behaviour could impact upon acceptance of extensions. Pruitt (1981) related trust to co-operation, whilst Argyris (1970) related trust to acceptance of change. Brand extensions represent change.

Turnhill’s (1997) global loyalty study used attitudinal statements including ‘manufacturer 1 trust’ as part of a modelling exercise to predict loyalty behaviour. Doney and Cannon (1997) reported findings that trust of the salesperson and supplier firm were not related to current supplier choice, these were contrary to predictions and prior research (Milliman and Fugate, 1988). They reported that although trust was higher for selected suppliers than for those not selected, results suggested that the aspects of the marketing mix, price and reliable delivery, actually made the sale. These findings could reflect the fact that professional buyers were trained to focus on objective evidence that demonstrated the superiority of the product offering, rather than subjective assessments of trust.

Doney and Cannon (1997) concluded that it appeared that trust operates as an ‘order qualifier’ not an ‘order winner’. Order qualifiers were those criteria that a company must meet for a customer to even consider it as a possible supplier’ whereas order winners were those criteria that win the order” (Hill, 1994, p 33), “... results suggest that like quality, trust could be required just to enter into a customer’s consideration set”. One of the key findings of the research was that trust of a supplier firm was positively related to the likelihood that buyers plan to do business with suppliers in the future.

Selnes (1998) argued that the roles of trust and satisfaction were likely to be quite different in decisions related to relationship continuity and decisions related to relationship enhancement



or relationship development decisions. He related satisfaction and trust to different types of purchase decisions - new task, modified rebuy, straight rebuy (Robinson, et al., 1967). A new task decision to purchase a product or service would involve higher levels of perceived risk, particularly where complex, high cost products were involved (with high switching costs) or where a buyer was unable to infer intrinsic qualities of a product or service, e.g. Market Research Consultancy (Moorman, et al., 1993). Trust was felt to be associated with reduction of perceived risks. Selnes argued that competence, communication, commitment and conflict handling were antecedents of trust and satisfaction, with outcomes of trust and satisfaction being enhancement and continuity in relationships (Anderson and Weitz, 1989; Crosby, Evans and Cowles, 1990; Ganesan, 1994; Mohr and Speckman, 1994; Kumar, 1996).

Selnes, (1998) found that trust had a significant impact on intention of future enhancement, and that enhancement drove continuity. Trust was not significantly related to continuity decisions as predicted. Satisfaction was also confirmed as having a significant effect on trust, but also enhancement (not predicted) and continuity (predicted). The conclusion drawn was that trust was a strong antecedent of motivation to 'enhance the scope of the relationship'. In support of this conclusion, Anderson, Lodish and Weitz (1987), and Nielson (1998) found a greater probability of allocating future resources in the direction of subjects who were trusted. It could be argued that brand owners are trying to encourage (existing) consumers to 'extend the scope of their relationship' with brand extension offerings, hence trust may be considered to be of relevance.

It has already been noted that trust was implicated in the development of commitment, and Moriarty, et al. (1983) indicated that long-term commitment was important in increasing loyalty and cross-selling. Arguably line and brand extension activity is encouraging 'cross-purchase' by consumers. Christy, et al. (1996) reported the benefits of profitable marketing relationships as including increases in brand usage, and opportunities to cross-sell other group products (and presumably extension concepts). Smith (2000) in the UK practitioner magazine *Marketing* noted that Virgin's move into on-line auction sites would see it benefit from its brand recognition and brand trust developed in other category areas.

De Wulf, Odekerken-Schroder and Iacobucci (2001) found support for the notion that relationship quality in the consumer-retailer context, and perceptions of retailer investments in a relationship were reciprocated with increased behavioural loyalty levels (though data captured via single self-report questionnaire rather than longitudinal purchase pattern research). Holdern (1990) found that higher trust in sales staff was associated with more co-operative negotiations and open communications, Kennedy (1994) found that trust in a salesperson led to a desire to interact with that particular salesperson again, and Armstrong and Yee (2001) made strong case for the importance of trust in relationship outcomes.



Delgado-Ballester and Manuera-Aleman (2001) suggested the key role of brand trust as a variable which generated consumer commitment, which in turn affected the customers' price tolerance. The authors found the effect of brand trust to be particularly strong in the case of high involvement, in which brand trust proved to be a stronger predictor than "overall satisfaction". Also, Chaudhuri and Holbrook (2001) found 'brand trust' to be a separate construct to 'brand affect', with both variables combining to influence both behavioural and psychological loyalty. Brand trust has therefore been shown to have an influence on a key element of brand equity, which in turn has an influence on market share and price sensitivity. It is inferred from these recent and powerful findings that brand trust could well have a related influence on brand extension acceptance.

## 2.14 Brand extension literature

### 2.14.1 Foundations of the literature and the importance of the area of brand extension to brand owners

Smith and Park (1992) found in their study that brand extensions tended to be more efficient and capture greater market share than individual brands, although, Sullivan (1992) found that brand extensions tended to enter later than new name brands, and on average, brand extensions fared slightly worse in terms of market share (Reddy, Holak and Bhat, 1994).

The most commonly accepted and referenced definition of brand extensions is 'the stretch of an established franchise to a different product class' (Aaker and Keller, 1990). A range of 'brand leverage strategies exists', varying from 'line extension' to brand extension (Nijssen, 1999). Line extensions involve the launch of new products from the same product category or class under the familiar brand name, whilst brand extensions stretch the brand franchise beyond the current product class (Tauber, 1981; Aaker and Keller, 1990). Discussed by Springen and Miller (1990) and Loken and Roedder-John (1993) as an increasingly popular way of gaining growth, and reported in Bragg (1986, p 61) that "line extension products now outnumber new product launches four to one".

Study	Percentage of Failure
Booz, Allen and Hamilton	37 (Consumer), 38 (Industrial)
Buzzell	27 (Food)
Cochran	30 (Various)
Gallagher	41 (Various)
Graf/Nielsen	42 (Food)
Hopkins and Bailey	40 (Consumer)
	20 (Industrial)
Mansfield and Wagner	27 (Industrial)

Source: Barclay and Benson (1990)

### Figure 2.1 New Product Failure Rates

Barclay and Benson (1990) studies of new product failure cited within Wilson, Gilligan, Pearson (1992) recorded failure rates (depending upon the product category) of between 20%



(industrial) and 42% (consumer foods), it is against this kind of harsh business climate that the rapid growth in brand extension launches can be understood.

The literature on brand extension stretches back to the 1960s with Gamble (1967) and Adler (1967), but the majority of research has taken place over the last twenty years.

Dacin and Smith (1994) talked about the growing number of multiple product category brands which were born out of the attempts to leverage one of a firm's key assets, its brands. The considerable positive impact of brand extensions on market share and advertising efficiency of new products (Smith and Park, 1992), led to many firms developing explicit strategic plans for extending their brands (Farquar, et al., 1993; Zangwill, 1990). Some of the 'multiple category brands' mentioned by Dacin and Smith were: Panasonic, associated with consumer electronics, bicycles and small home appliances; and Yamaha, whose name appears upon as diverse a range of products as motorcycles, acoustic musical instruments, sporting equipment and consumer electronics. A selection of other major 'multiple category brands' can be added to the list developed by Dacin and Smith, including Daewoo, a 'Korean brand', including telephones, consumer electronics, steel, shipping; Tata, an 'Indian brand', including cars, hotels, steel, shipping; Virgin, a 'UK brand', including music, airlines, trains, bridal shops.

McWilliam (1993) conducting research amongst French and British marketing practitioners with recent brand extension experience, found that "brand extensions, according to the interviewees, were frequently a quicker, and less risky alternative to launching a new brand in a new product category." She found that several practitioners implied that they had a model in their minds about brand extensions, which approximated to: "the consumer will let you/your brand extend into virtually whichever product categories you want, as long as you do it sensitively/properly". McWilliam perceived that many practitioners were viewing all brand extensions the same, essentially as low involvement Awareness - Trial - Reinforcement (Ehrenberg, 1974) process decisions. McWilliam questioned whether this was in fact the case, and cited research by Boush and Loken (1991) which found that decision times for extensions in grocery products and electronics were markedly different. This, suggested McWilliam, was indicating different cognitive processes for extensions in low and high involvement categories, and reflected the different perceived risks and complexity.

Morrin (1999) noted that whilst brand names were rarely represented on companies' balance sheets, they were valuable corporate assets, with a median value of a corporate brand recently estimated as \$683 million (Badenhausen, 1996). As stated, existing brands have been increasingly relied upon to launch new products, with as many as eight out of ten new products estimated to have been launched via brand extension activities (Ourusoff, et al., 1992).



Aaker and Joachimsthaler (2000) noted that there is pressure to leverage brand assets, in part, because of the prohibitive cost of creating new brands, and stated that, as part of a planned approach to 'brand architecture', a brand extension or brand endorsement should be a vehicle to support and enhance the key master brand associations.

#### **2.14.2 Brand and line extension - popularity**

Brand extensions, *the stretch of the established franchise to a different product class* (Aaker and Keller, 1990) have become increasingly popular way of gaining growth (Springen & Miller 1990), with one survey of leading consumer product companies finding that 89% of new product introductions were line extensions, 6% were brand extensions and only 5% were new brands (Aaker 1991). Such strategies were perhaps prompted by harsh economic conditions, and the need to minimise the risk and cost of new launch failure (Aaker 1991). More recent estimates noted that line extensions may account for more than 75% of new product introductions (Shapiro 1994). The area of line and brand extension has been the subject of much controversy in the past, with concerns that extensions may cannibalise sales of existing products and dilute the image of the parent brand over time (Economist, 1990). Ries and Trout (1986) contended that extensions were potentially ruinous because they diluted a brand's position in the consumers' mind. Line and brand extensions, are however, just as popular as ever, and Reddy, Holat and Bhat (1994) provided some reassurance for brand owners when they discovered that over a 20 year period of the US cigarette industry, cannibalisation effects appeared to have been outweighed by incremental sales, and many brands' survival appeared to have been based upon extension activities.

Loken and Roedder John (1993) considered the subject of brand belief dilution via brand extensions, concluding, via experimental investigation, that dilution effects did occur when brand extension attributes were inconsistent with the family brand beliefs. Further to this, research was conducted in the US soft drinks category with real brands by Sheinin (2000), who explored the influence of direct experience with a brand extension, on consumers' knowledge about parent brands that differ in familiarity. The author found that attitudes to unfamiliar parent brands were more likely to be susceptible to change following experience with a brand extension than were attitudes to familiar parent brands. Interestingly, presumably attitudes would be likely to change towards the parent brand with a succession of poor brand extensions, with trust in the parent likely to be undermined.

#### **2.14.3 Brand Extension Success Factors?**

Given the increased trend to leveraging brand values, a large amount of academic research over the last 10-15 years has centred on isolating the key components for successful brand extensions. Various key components can be isolated from the literature as influencing factors upon the likely success of extension projects, an overview of the literature is initially



provided before looking in depth at key themes within the literature, these have been grouped as ‘Consumer Characteristics’, ‘Parent Brand Characteristics’, and ‘Brand Extension Characteristics’. Figure 2.2 on the next page provides a summary of all of the influences on brand extension success gleaned from the literature.

### 2.14.3.1 Factor Summary

**Brand affect**, how much a brand was liked in its original category, with market share often being used as a surrogate measure, has been isolated as a key component by many authors (Fiske and Pavelchak, 1986; Boush and Loken, 1991; Boush. et al., 1987; Bridges, 1992; Smith and Park, 1992). A second highly noted extension success criteria was “**fit**” (Aaker, 1990, Aaker and Keller 1990, Keller and Aaker, 1992; Chakravati, MacInnis and Nakamoto, 1990) or **category similarity** (e.g. Boush & Loken, 1987, 1991; Park, Millberg and Lawson, 1991), the perceived difference between the original and extension categories. This concept was summed up by Aaker (1991) “the customer must feel comfortable with the idea of the brand name being on the extension”. The area of **category similarity** has been further subdivided into ‘product level’ and ‘image level’ to add sophistication to the concept (Bridges, 1990; Park, Millberg and Lawson, 1991), with brands displaying strong ‘product level’ associations likely to be less easily transferred to other category areas than ‘image level’ associated brands. Academics have also considered the impact of functional and prestigious goods on the role of category similarity (Park, Millberg and Lawson, 1991), found that prestigious brands were, in general, more easily transferred between categories.

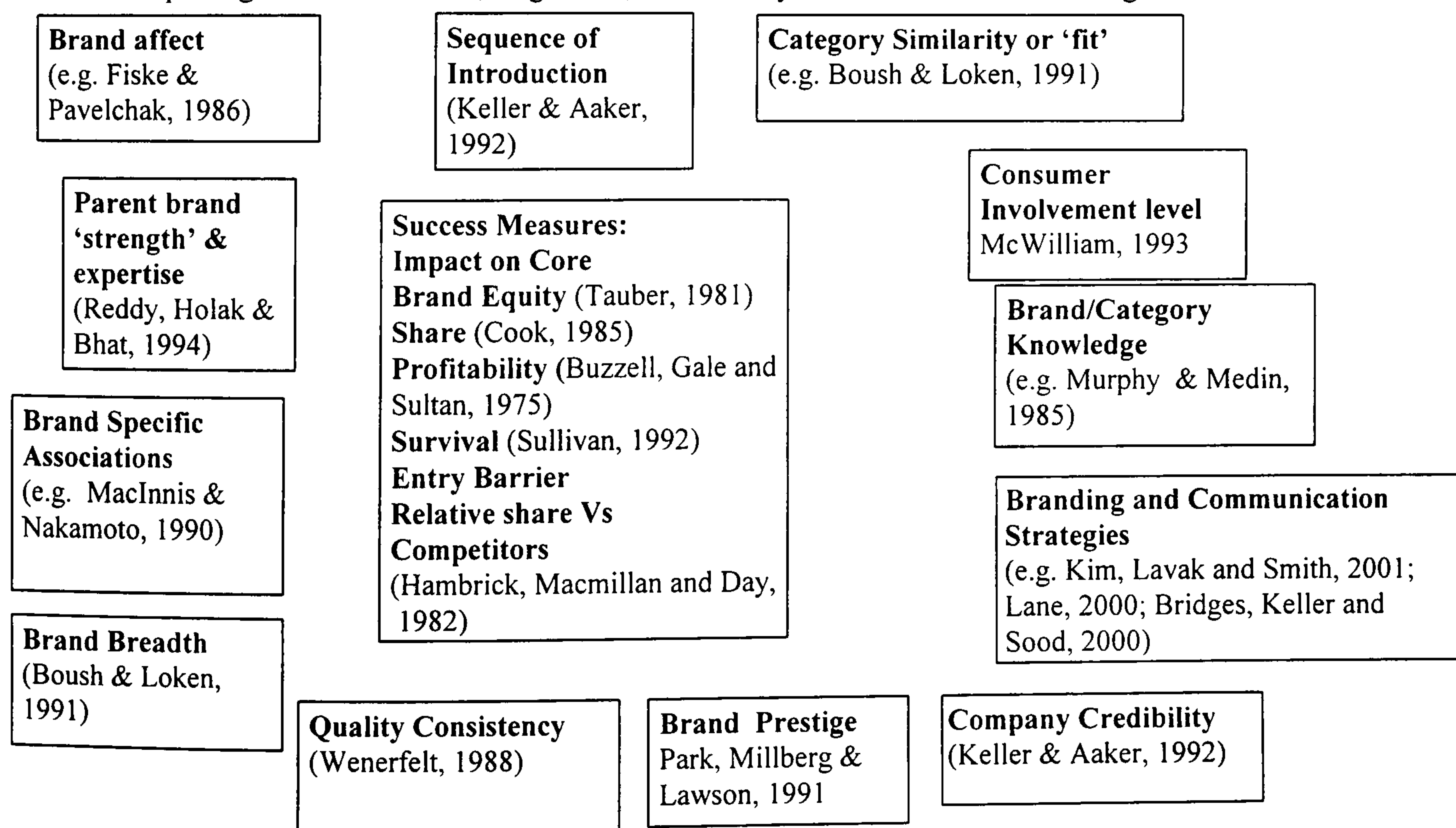


Figure 2.2. Brand Extension – Success Factors and Measures of Success



The key role of **category similarity** has, however, been questioned by some academics (Kardes and Allen, 1991; Dacin and Smith, 1994) who asserted that ‘fit’ becomes considerably less important where a brand already consists of a varied and diverse portfolio, particularly where a consistency of quality level is exhibited. In this instance it was argued, that brands with abstract associations, elicited the consumer response ‘what ever they do, they do well’ (Aaker, 1991), with the consumer perceiving such a company as being capable of entering a variety of new markets.

It was claimed by many authors that **quality consistency** (Wenerfelt, 1988; Rubin, 1990; Sullivan, 1990; Kardes and Allen, 1991; Dacin and Smith, 1994) in a portfolio was of greater significance than ‘fit’, since quality variance confuses consumers, undermines confidence in what level of quality a brand stands for and what they might expect of future products or services from the brand. In short, **quality consistency** or **quality status** (Keller and Aaker, 1992) reflected the extent to which the extension launch met the standards of quality expected of a particular brand or company. Aaker (1991) supported the importance of quality when he talked about the ‘difficulties’ of ‘upscale’ and ‘downscale’ brand extension activities.

A further significant influencer of success was felt to be **brand specific associations**, (Park, Millbert and Lawson, 1990) defined by MacInnis and Nakamoto (1990) as “an attribute or benefit that differentiates a brand from competing brands”. Interestingly, brand specific associations were one of the five key elements which, Aaker (1991) asserted, made up ‘brand equity’: (1) Loyalty (2) Brand Awareness (3) Perceived quality (4) Brand Associations (5) Other Proprietary Brand Assets.

In addition, **generic versus product level associations** (Rangaswamy, Burke and Oliva, 1993) **prior success and sequence of introduction** (Keller and Aaker, 1992); **parent brand strength/expertise** (brand in terms of age, share, advertising share of voice, company in terms of size, assets, marketing competence, brand portfolio profitability levels) and **specific characteristics of the extension** (Reddy, Holak and Bhat 1994) factors, were all added to the brand extension literature. In support of the ‘prior success and sequence of introduction’, the 1995 launch of a Ribena fibre based drink (Smith-Kline-Beecham), had been ruled out by Davidson (1987) when he constructed a ‘brand onion’ with ‘possible’ and ‘dangerous’ brand extensions in his text ten years earlier. Over time, the associations with the brand changed or were manipulated, thus opening opportunities for brand extensions earlier denied. The Ribena brand had been gradually adapted over the almost 10 year period, allowing for new and interesting innovations.

Further, Boush and Loken (1991), indicated that **brand breadth**, the extent to which an extension comes from a narrow or wide portfolio brand, is an influencing factor on consumer



evaluation of brand extensions. Finally, a number of contributors have noted the influence of the specific consumer on extension evaluation and success (McWilliam (1993); Murphy and Medin (1985)).

Nijssen (1999) examined some of the success factors for line extensions of fast moving consumer goods. It must be noted that the research focussed on line extension activity (i.e. very close-in to the parent brand) rather than brand extension activity, but nevertheless it was felt to provide an interesting backdrop to the debate around success factors for brand extension activity. Nijssen, in research amongst marketing practitioners in Holland, found that those line extensions involving new flavours and new packaging/sizes were most successful, whilst those improving product quality (i.e. different level of quality) were found to be least successful. Nijssen added to the literature from the perspective of this thesis, in that he identified ‘market-related factors’, which influenced line extension success, some of which may have been relevant to brand extension success. The market-related factors, which were purported to have a negative impact on line extension success were: level of competition; retailer power; and consumers’ variety seeking behaviour. Nijssen suggested that the failure to attract and retain large numbers of consumers may have been down to lack of innovation or lack of extensions delivered to meet genuine consumer needs (as opposed to company growth targets).

Kirmani, Sood and Bridges (1999) noted that attitudes to extensions may be dependent upon current **usership behaviour** and the potential wish to maintain brand exclusivity. **Brand/category knowledge** (Murphy and Medin, 1985; Alba and Hutchinson, 1987; Muthukrishnan and Weitz, 1991) was shown to influence Brand Specific Associations and thus extension evaluations, and being of **novice or expert status** (Broniarczyk and Alba, 1994) was influential in impacting on the role of brand specific associations of brand extensions. The research on novice or expert status may also be related, partially, to the exploratory discussions on the potential role of **consumer involvement level** (McWilliam, 1993) on brand extension evaluation.

Having provided an overview of what were thought to be the brand extension success factors represented within the literature, each of the variable areas will now be considered in more detail. This review will be structured under the groupings of ‘Parent Brand (or company) Characteristics’, ‘Consumer Characteristics’, and ‘Brand Extension Characteristics’.

#### **2.14.4 Parent Brand or Company Characteristics**

**Brand Affect, Brand Prestige, Brand Breadth, Brand Specific Associations, and Parent Brand Strength and Expertise, Parent Brand Credibility**

Rangaswamy, Burke and Oliva (1993) examined the potential for different brands to extend, and looked at the yoghurt, mouthwash, shampoo and RTE Breakfast cereal markets.



Rangaswamy, et al's. research can be categorised under brand specific associations, since they sought to measure the effects of brand associations related to the product category, and associations of a more general 'intangible' nature. The authors found that brands which were associated with more 'intangible attributes' were more likely to be extendible than those with very strong 'product-based' associations. The type of intangible attributes discussed within the research included things such as 'quality', 'style', 'durability', 'reputation', 'value'. These results supported the intuitive notion of Tauber (1981) that brand names such as Kleenex or Band Aid, that were closely associated with a product class, were more difficult to extend.

The findings of Park and Srinivasan (1994) offered support to Rangaswamy, et al., Park and Srinivasan found that brand equity could be split into 'product attribute' and 'non-product attribute' based components. The authors found that it was primarily the non-attribute based component which played a more dominant role in determining a brand's overall equity. In both categories studies (mouthwash and toothpaste), it was found that brand associations unrelated to product attributes were more important in shaping a brand's equity and potentially the brand's ability to extend.

Reddy, Holak and Bhat (1994) conducted a longitudinal study of the US cigarette market over a 20 year period. The authors examined 75 line extensions from 34 brands, and investigated the relative effects of (parent) brand, extension and firm characteristics on the incremental share of brand line extensions. The role of a brand's symbolic value as a factor in line extension success was also scrutinised. The results of the research revealed that long established brands with good advertising share of voice tended to produce higher share line extensions. Line extensions from symbolic brands (not focused on physical or functional product attributes) tended to enjoy more extension success than those from more functional brands. Early market entry tended to favour stronger (higher market share, long established, high share of voice) brands, but not weaker brands.

Dacin and Smith (1994) conducted two 'laboratory' based experiments and a consumer survey to establish the impact of 'brand breadth' on consumer evaluations of brand extensions. Whilst the experimental results revealed a positive relationship between brand breadth and consumers' confidence in and favourability of their evaluations of extension quality, these findings were not replicated within the survey stage. A consistent finding from the research was, however, that as portfolio quality variance decreased, a positive relationship between the number of products affiliated with a brand and consumer extension evaluations emerged. So, it appeared that portfolio quality consistency offered confidence and reassurance to consumers. The authors also argued that the effect of 'fit' was likely to diminish with brand breadth in multiple categories (e.g. Yamaha, Virgin, etc) which were not



closely related.

Boush and Loken (1991) conducted experimental research within the electrical goods and grocery categories assessing the impact of category similarity and brand breadth on consumer evaluations of brand extensions for fictitious brands. The authors found that there was a direct linear relationship between ‘extension typicality’ or ‘fit’ and attitude ratings for potential brand extensions. Boush and Loken also found that brand breadth appeared to interact with extension typicality. When a brand made a variety of products, an extension which was essentially the same as a current product was perceived as not as typical as when a brand made only one type of product. However, greater brand breadth favoured the evaluation of moderately (though not extremely) discrepant extensions. The authors illustrated their findings with the following:

“a narrow brand such as Campbell’s has an advantage over a broader brand such as Heinz in offering a new soup, but Heinz has an advantage over Campbell’s in offering a moderately different extension such as a new line of frozen vegetables”.

Only Keller and Aaker (1992) have studied the impact of ‘brand credibility’ on brand extension evaluation. The authors found that brand credibility (measured by ‘trustworthiness’ and ‘expertise’) was related to brand extension acceptance. The authors suggested further avenues for research, stating that:

“In our study, credibility was based on information cues about products alone. Given its important relationship with extension evaluations, other aspects of company credibility should be explored. The expertise and trustworthiness dimensions of credibility identified here, though, should be applicable in a broader context, and other antecedent variables affecting credibility should be studied”.

Bhat and Reddy (2001) conducted research with real brands in the watch (Rolex and Timex) and Ice Cream dessert (Haagen Dazs and Sealtest) categories, to assess the impact of ‘brand attribute associations’ and ‘affect’ on brand extension evaluation. Building upon and supporting the research of Broniarczyk and Alba (1994), the research indicated a more prominent role for parent brand attribute associations than for parent brand affect in extension evaluation and attitude formation. The research further suggested that ‘fit’ or ‘category similarity’ between parent and extension was of less relevance than ‘fit’ between the extension and the parent brand image (e.g. ‘quality’ associations), or brand concept consistency (Park, Jaworski, MacInnis, 1986). These findings were supportive of the research by Rangaswamy, Burke and Oliva (1993) regarding the role of ‘intangible attributes’ such as quality or styling. The other finding of significance from Bhat and Reddy (2001) was that parent brand affect influenced extension affect only with extensions of symbolic brands. This finding contradicted the importance of brand affect found by Boush, et al. (1987), but was



broadly supportive of the findings of other researchers (Aaker and Keller, 1990; MacInnis and Nakamoto, 1991) who found limited impact or that the effects were moderated by other factors.

Bridges, Keller and Sood (2000) conducted research to examine the proposition that high perceived fit of a brand extension resulted when consumers could establish explanatory links which connected the parent brand and the extension. Bridges, et al. found that extensions were poorly rated when the parent brand's dominant association was inconsistent with the extension's dominant association. In many ways, building on the findings of Park, Milberg and Lawson (1991), and Rangaswamy, Burke and Oliva (1993), Bridges, et al. found that brands with dominant 'attribute-based associations' received lower evaluations than brands with dominant 'non-attribute based associations' (e.g. fashionability), when extended to a category with no physical attributes in common.

Morrin (1999) looked at some of the reciprocal benefits which could flow from brand extension activities. Morrin found that exposure in the short and longer term to brand extensions facilitated the recall and categorisation of parent brands, although this effect was much stronger in non-dominant brands.

Swaminathan, Fox and Reddy (2001) used US national household scanner data to examine the effects of experience with a parent brand on consumers' trial and repeat purchase of brand extensions. In addition Swaminathan, et al. considered the reciprocal impact of trial of successful and unsuccessful brand extension on parent brand choice.

With regard to the effects of parent brand experience on extension evaluation, it was suggested earlier, that an existing brand name provided an assurance of quality, thereby reducing risks involved in purchasing a new product (Erdem, 1998; Wenerfelt, 1988), and that direct product experience was deemed as more trustworthy than advertising or other communications and resulted in strongly held beliefs (Smith and Swinyard, 1982). Thus, consumers with parent brand experience have greater parent brand knowledge, better recall, and greater confidence in their beliefs about the parent than consumers with no parent brand experience. Swaminathan, et al. reported that parent brand experience had a significant impact on extension trial, though not on repeat purchase. In the case of successful brand extensions, the results showed positive reciprocal effects of extension trial on parent brand choice, particularly among prior non-users of the parent brand, and consequently in market share. These findings were supportive of earlier research by Erdem (1988) who, had examined household purchase data after extensions had been introduced, and demonstrated that quality perceptions transferred between umbrella-branded products in the case of the companion categories of toothpaste and toothbrushes.



### 2.14.5 Consumer Characteristics

#### User status, brand/category knowledge, novice or expert status and consumer involvement level

Kirmani, Sood and Bridges (1999) proposed an ‘ownership effect’, such that owners or users of a brand had more favourable responses than non-owners to a brand’s extensions. The authors conducted a field study (cars) and two laboratory studies (clothes) to confirm that the ‘ownership effect’ occurred for upward and downward stretches of non-prestige brands and for upward stretches of prestige brands. For downward stretches of prestige brands, however, the ownership effect did not occur because of owners’ desire to maintain brand exclusivity. Perhaps the findings were not too surprising since compared to ‘non-owners’, most owners were likely to have greater liking, familiarity, knowledge and involvement with the brand - perhaps as a result of voluntary searching and acquisition, direct experience and ‘physical possession’ of the brand. Taking the theme of the ‘consumer characteristics’ impact on extension evaluation, Broniarczyk and Alba (1994) hypothesised that whilst brand specific associations (BSAs) are clearly important and have been validated within the literature, consumer knowledge level (whether expert or novice) would impact upon these BSAs. The authors went on to show that BSAs could actually override the impact of Brand Affect (i.e. the lesser liked brand gaining higher extension response rating) where the BSA was particularly relevant for one brand, and also the influence of Category Similarity. Finally, the authors provided some support for the assertion that the impact of BSA’s was moderated by consumer knowledge, finding that, within the computer industry, BSA’s were only able to override the impact of brand affect amongst ‘expert’ users (high in brand/category knowledge).

Also on the theme of the impact of ‘consumer characteristics’ on brand extension response, McWilliam (1993) presented a discussion paper which raised the question as to whether the degree of ‘consumer involvement’ (Krugman, 1965) in a category could have an impact on extension evaluation decisions. Based upon a research study amongst French and British marketing practitioners with recent brand extension experience, she found that most practitioners seemed to view the consumer evaluation process for extensions as essentially ‘low involvement’ ‘Awareness - Trial - Reinforcement (Ehrenberg, 1974). This attitude towards extensions amongst practitioners was juxtaposed with most research undertaken on brand extension, which assumed high levels of consumer involvement. McWilliam made the case that a brand in a low involvement category moving to another low involvement category was evaluated in much the same way as low involvement advertising (Krugman, 1965), with consumers not engaging in counter-arguments, or indeed very much cognitive processing, since there were no resistant attitudes to overcome. With exposure to the extension through



advertising or distribution visibility, it was suggested, a reorganisation of the perceptual structure would take place to include the extension. McWilliam argued that conversely, brand extensions from, and/or to, a high involvement product category may induce a higher level of overall involvement, and the evaluation process in consequence would take either a different route or would be based on a high degree of cognitive processing which might involve counter-arguments. To summarise, McWilliam argued that involvement level would impact upon the way extensions were processed. This view of the differential decisions associated with high and low involvement extension decisions appears to be supported by the work of Boush and Loken (1991) who found that decision times for electronic goods were significantly longer than for grocery goods.

Barone, Miniard and Romeo (2000) found support for the importance of brand extension similarity, the perceived competency of the marketer in producing the extension, but also for the mediating role that viewers mood state could have on extension evaluation. Barone, et al.'s results indicated that positive mood primarily enhances evaluations of extensions viewed as 'moderately similar' to a favourably evaluated core brand. The findings may imply the use of advertisements capable of evoking positive mood states (e.g. Burke and Edell, 1989), but also have a bearing on advertising placement decisions.

#### **2.14.6 Brand Extension Characteristics**

##### **Category Similarity or 'fit': Sequence of Extension Introduction; Quality Consistency of Extension, Communication Strategies for Extension**

Tauber (1988) studied 276 actual extensions and concluded that perceptual 'fit' (i.e. whether a 'consumer perceives the new item to be consistent with the parent brand') was a key element in predicting brand extension success.

Aaker and Keller (1990) conducted research using twenty fictitious brand extensions for six well known international brands. The study results revealed attitudes towards the extension, which were operationalised as the average of the perceived quality and likelihood of trying the extension, were higher when there was a perception of 'fit' between the two product classes and a perception of high quality for the original brand, or where the extension was not regarded as too easy to make. The 'fit' concept was essentially split into three dimensions within the research; with 'fit' as:

- (i) **Transfer of Skills** or assets from parent to extension
- (ii) **Complement** - the extent to which the two product classes are complementary
- (iii) **Substitute** - the extent to which the two product classes are substitutes

The results suggested that the 'Transfer' and 'Complement' fit variables were more important in explaining variance in extension attitudes than the 'Substitute' variable.



More than 10 years after the important Aaker and Keller (1990) research on brand extension, which focused on physical goods, Van Riel, Lemminto and Ouwersloot (2001) sought to replicate the Aaker and Keller research findings in a services marketing context. The researchers found that of the three dimensions of 'fit' defined by Aaker and Keller (transfer of skills, complementary and substitute), the 'complementarity' of the extension was the key dimension by which consumers of services evaluated an extension. The research found support for the relevance of 'fit', and it was suggested that

"Brand extension strategies could probably be used most successfully in cases where a significant similarity in service delivery process exists".

Further to this, Bottomley and Holden (2001) used the original dataset from the Aaker and Keller (1990) study, and data from seven replications conducted around the world in order to gain an overview of 'what we know about how consumers evaluate brand extensions' and sought to replicate the hypotheses that: brand extensions are evaluated on the basis of the quality of the original brand; on the basis of the 'fit' between parent and extension categories; and the interaction between the two. The authors found that the results from the eight datasets exhibited "significant sameness", and that the main effects of quality and the three fit variables were shown to be significant, positive determinants of how consumers evaluate brand extensions.

Park, Milberg and Lawson (1991) undertook experimental research using two pre-tested real watch brands Timex and Rolex, and a third fictitious or dummy brand, ABC watch company. The authors were assessing the impact of 'product feature similarity' (goodness of 'fit' at 'product' level) and 'brand concept consistency' ('fit' versus the functional or prestigious positioning of the parent brand) on the evaluation of brand extension concepts.

The results revealed that, in identifying brand extensions, consumers took account not only information about the product-level feature similarity between the new product and the products already associated with the brand, but also the concept consistency between the brand concept and the extension. For both function-oriented and prestige-oriented brand names, the most favourable reactions occurred when brand extensions were made with high brand concept consistency and high product feature similarity. When a brand's concept was consistent with those of its extension products, the prestige brand seemed to have greater extendibility to products with low feature similarity than the functional brand did.

Park, Milberg and Lawson believed prior research to this point had only considered the product level 'fit', or 'product feature similarity' and had not really looked at the second basis of fit, 'brand concept fit' (functional versus prestigious), with 'fit' on both dimensions (good fit) being superior to fit on just one dimension (partial fit). Park, Milberg and Lawson extended the definition of 'fit' beyond category similarity by showing that two brands in the



same category could have extensions that varied in fit. The study showed that evaluations depended on both category similarity and brand concept consistency (functional vs prestigious).

Keller and Aaker (1992) conducted laboratory based experiments with fictitious brands within the potato chip (crisp) category (“Crane’s” and “Medallion”) in order to evaluate the impact of the perceived quality of the core brand, and the number, success and similarity of intervening brand extensions, on the evaluations of proposed new extensions. The researchers also sought to evaluate the impact of brand breadth and credibility of the brand on extension evaluation. Interesting, for the purposes of this PhD research, credibility was operationalised as the average of the ‘perceived expertise’ and the ‘perceived trustworthiness’ of the company/brand providing the extension. Keller and Aaker stated that “in particular, a company will appear more expert and trustworthy if it already has successfully introduced new products or brand extensions”. The findings of the Keller and Aaker study can be summarised as: high quality brands stretched further than average quality brands; successful intervening extensions improved evaluation of a proposed extension for average quality brands; and perceived company credibility (expertise and trustworthy status) and fit appeared to mediate effects of intervening extensions on evaluations of a proposed extension. It is interesting to note that the authors found more support for the ‘company credibility’ dependent variable than ‘fit’ variable within the experimental setting used.

Hem, Gronhaug and Lines (2000), in a small scale study of assurance services, car rental and restaurant services, provided further support for the hypothesis that ‘strong brands’ are in an advantageous position when it comes to extending into product categories perceived high in risk. The authors found that consumer knowledge of and ‘belief in’ these ‘strong brands’ may have compensated for a consumer’s lack of direct product knowledge. ‘Belief in’ these strong brands might be otherwise interpreted as ‘trust’ in the brands, since such language appeared to overlap closely with the many definitions of trust reviewed earlier.

Smith and Andrews (1995) also questioned the previously perceived direct association between ‘fit’ (or category similarity) and brand extension evaluation. Researching within the industrial product area, the authors found that the relationship between ‘fit; and new product evaluations was mediated by “customer certainty”. The authors defined ‘customer certainty’ as a belief in a company’s ability to deliver a product that meets his/her expectations. This ‘certainty’ that a new product would meet expectations depended on whether the customer believed that the skills needed to provide the new product were consistent with those she or he associated with the company. It was claimed that these findings might explain why firms often have success entering perceptually distant product categories (with apparently poor ‘fit).



Kim, Lavack and Smith (2001) researching in both the US car (Lexus, Toyota) and wristwatch categories (Rolex, Timex) found that the introduction of vertical brand extensions (or upscale - downscale extensions, Aaker, 1991) had a negative impact on the consumer evaluation of the core brand. The researchers found that regardless of whether the extension was upscale or downscale, and regardless of whether the core brand was prestige-oriented or function-oriented, the net result was always a reduction in the favouring of the core brand evaluation. This finding was supported by Dacin and Smith (1994) who suggested that brand extensions differing significantly in quality as compared to the core brand, would have a tendency to weaken the core brand (Ries and Trout, 1986, Loken and Roedder John, 1993). This phenomena was perhaps explained by Fishbein's attitude theory (Fishbein and Ajzen, 1975) which suggested that inconsistent information can weaken beliefs. Kim, et al. (2001) reported that the way the extension was presented to the consumer could improve extension evaluation and reduce negative impacts on the core brand. The authors suggested that the use of graphical and linguistic distancing could help with the evaluation of 'step-up' brand extension evaluations, and reduce negative impacts on the core brand. The authors illustrated their research findings with the example of Marriott Hotels. When introducing a 'downscale' extension, Marriott named the offspring 'Courtyard Inn'. 'Courtyard' was felt to be a distinctly separate identity whilst 'Inn' was felt to signal simpler accommodation than a 'Hotel'. These were examples of linguistic distancing from the parent brand, Marriott Hotels. The company was also felt to have used 'graphical distancing' in only showing the supporting 'Marriott' brand name in small type within the logo - thus downplaying the Marriott name. This research raised the importance of how a brand extension was communicated via branding, packaging and also advertising, in the way it would be evaluated by the consumer.

#### **2.14.7 Brand Extension - Communication Strategies**

Aaker and Keller (1990) showed how an 'elaborational strategy' could improve extension evaluations. For example, the 'elaborational strategy' for Heineken. "Heineken popcorn: In regular and cheese flavours", overcomes a negative perception that popcorn would taste like beer. Aaker and Keller (1990) concentrated on addressing negative associations which had been transferred from the dominant parent brand associations. Bridges, Keller and Sood (2000) found that, in general, the most effective communication strategies for brand extensions would be those which recognised the salient associations from the parent brand and highlighted those associations, which might otherwise be overlooked or misinterpreted in the extension context (Keller, 1993). Seemingly, communication strategies that raised the salience or credibility of explanatory links could increase the number of potential extension categories for a brand. In a similar vein, Lane (2000) sought to demonstrate how brand



extension communication strategies (ad content and repetition) could overcome negative evaluations with what might be regarded as 'incongruent extensions'. In a study of four highly regarded brands (Heineken, Crest, Keebler and Michelin) participants who viewed brand extension advertisements five times evaluated incongruent extensions more positively, expressed higher usage intentions, indicated more favourable consistency judgements, and exhibited increased elaboration and more positive elaboration than did participants who viewed the advertisements only once. It was, therefore, disputed by Lane (2000) that incongruent extensions are doomed to fail.

In one of the latest contributions to brand extension research, Klink and Smith (2001) questioned the importance of 'fit' and raised doubts about the external validity of much prior research within the field. The authors noted that much prior research had supported the importance of 'fit' between extension and parent brand - either based on product or image attributes. However, they also noted that much research had been undertaken experimentally, with respondents being shown scant details about one extension and most likely exposed only once. In addition, the authors noted that, as consumers, we vary in risk-aversion and new product adoption behaviour (Rogers, 1983), with the majority of consumers being classified as 'late adopters'. Previous research had not factored in this consumer adoption behaviour, and Klink and Smith usefully found that the effects of 'fit' disappeared when attribute information concerning the extension was increased. Klink and Smith tested for 'consumer innovativeness' in order to consider possible new product adoption behaviour and found that the effect of 'fit' diminished as 'consumer innovativeness' increased. The authors also found that as respondents' exposure to an extension increased, so too did the perception of fit between the parent brand and the extension product. In many ways this finding was supportive of Lane (2000), who had found that evaluations of 'incongruent' extensions improved with additional advertising exposures.

## **2.15 Conclusion**

This conclusion will consider the key points of relevance to the research propositions, and to the possible development of a working model of brand trust and its dimensions and correlates. The key aspects taken into the research methodology and development and refinement of research hypotheses will be noted.

### **2.15.1 Research Propositions and Hypotheses**

#### **2.15.1.1 The Relevance of Brand Trust**

The literature review revealed a healthy and growing acknowledgement of the importance of the trust concept within many fields, such as psychology and interpersonal relations, channel relations and relations exchanges, sales management relationship marketing and source



credibility. Of particular relevance to the context of this specific research study was the increasing emphasis on trust within marketing (Doney and Cannon, 1997), and specifically consumer marketing (Aaker, 1997; Fournier, 1998). The literature review revealed consumers as being capable of ‘trusting brands’, with the ‘relationship’ concept being held to be relevant in at least some consumer contexts ((Aaker, 1997; Fournier, 1998; Garbarino and Johnson, 1999). The literature review regarding trust also revealed a relative paucity of material within the context of consumer markets, the subject of this thesis. The role of gender and other demographic variables was not found to have been studied to any great depth, with just one study (Kang and Ridgway, 1996) which found that the elderly were often more ‘relationship receptive’ than younger consumers. The literature review has therefore been taken to underpin the importance and relevance of the trust concept and the research undertaken within this domain.

#### **2.15.1.2 Trust – its Conceptualisation and Definition**

The trust literature revealed areas of debate which remain unsolved. There was a lack of agreement on the nature of the construct as delineated from ‘trustworthy’ and ‘trusting behaviour’, which led to a lack of a universally accepted precise definition of the trust concept. The debate revolved around whether the construct of trust was: purely a ‘belief’ that another party was reliable and would fulfil its obligations in a relationship (Schurr and Ozanne, 1985); whether it was a ‘willingness to act upon such beliefs’(Chaudhuri and Holbrook, 2001); or whether actual ‘trusting behaviour’ in the form of ‘risk-taking’ had to be present for the concept to be operationalised (Ganesan, 1994). Some definitions of trust included the ‘bases’ or dimensions of such trust, for example, reliability (Ganesan, 1994), credibility (Doney and Cannon, 1997), and benevolence (Doney and Cannon, 1997). These ‘dimensions’ were seen by others, not as facets of trust, but as antecedents of trust (Selnes, 1998), or as the ‘trustworthy’ status of the party involved (Mayer, Davis and Schoorman, 1995).

In the face of the confusion presented within the literature, the researcher has used a working definition of trust taken from McAllister (1995), which defined trust as:

“the extent to which a person is confident in, and willing to act on the basis of the words, acts, and decisions of others”.

This definition conceptualises brand trust in terms of a belief held about another party based upon its ‘communications’, its actions and the way it operates, and a willingness to act upon those beliefs. Such a definition assumes, in line with the work of Smith and Barclay (1997), that trust can be present prior to ‘trusting behaviour’, for example via the experience of ‘trusted others’, or interpretation of communications material. The delineation between ‘trust’ and trustworthy’ is, in a sense, more complex. Many researchers have produced



dimensionalizations of trust which have included elements such as ‘benevolence’, ‘reliability’, and ‘credibility’, in the belief that these are properly viewed as part of the trust concept (Ganesan, 1994; Doney and Cannon, 1997). Other researchers have viewed these same ‘variables’ as merely being the evidence of the ‘trustworthy’ status of a person, organisation, or brand (Mayer, Davis and Schoorman, 1995).

Further to this, the literature also indicated disagreements as to whether the construct was ‘unidimensional’ (Selnes, 1998; Mayer, Davis and Schoorman, 1995) or ‘multidimensional’ (Ganesan, 1994; McAllister, 1995), with the majority of researchers in favour of a multidimensional conceptualisation. Even here, however, researchers were in disagreement about the number of dimensions, ranging between two (Morgan and Hunt, 1994), and four (Smith and Barclay, 1997). Whilst there was disagreement concerning the precise number and labelling of dimensions, there was almost universal agreement on the existence of two different types of trust, ‘cognitive’ and ‘affective’ (McAllister, 1995).

For the purposes of this study, the construct to be evaluated will be determined to be ‘brand trust’, which will be conceptualised as including a number of dimensions on which it is believed to be founded. The brand trust concept will be regarded as a ‘latent variable’, difficult to measure directly, and thus will be sought to be measured via observed variables (or indicators), which have been termed as ‘dimensions’ within the literature.

#### **2.15.1.3 Developing a Working Model of Brand trust**

The literature review provided thirty variables which were perceived to be either directly or indirectly related to the brand trust concept. The literature was in broad agreement with the differentiation between ‘cognitive’ and ‘affective’ forms of trust (McAllister, 1995), and various researchers have suggested alternative definitions or multidimensional conceptualizations of trust which included dimensions such as ‘benevolence’, ‘reliability’, ‘performance satisfaction’, ‘honesty’, ‘ability’, ‘credibility’, ‘confidence’, and ‘integrity’. Some authors also indicated the importance of ‘communication’ and quality of ‘interactions’ between parties (Selnes, 1998). On the basis of this literature review, a multidimensional conceptualisation of brand trust is hypothesised, which is built upon the dimensions of Probity, Equity, Reliability, Satisfaction, Communication and Process. Hypothesis 1 has been constructed to test the postulated working model of the ‘Dimensions and Correlates of Brand Trust’.

#### **2.15.1.4 Brand Extension – key learnings**

The literature on brand extension yielded many ‘brand extension success factors’, summarised within section 2.14.3, and detailed out under the categories of ‘parent brand or company characteristics’, ‘consumer characteristics’, ‘brand extensions characteristics’, and



'brand extension communication strategies'. No direct application of 'brand trust' was found to have been applied within the 'parent brand or company characteristics', or 'consumer characteristics', although Keller and Aaker (1992) did use 'trustworthiness' as part of a 'brand credibility' dimension, which was found to be positively related to brand extension acceptance. In addition to this, the only other mention of the 'trust concept' within the brand extension literature was where McWilliam (1993) found that senior marketing practitioners viewed most consumer as being relatively flexible regarding brand extension acceptance. These practitioners felt that consumers would accept extensions, which were well rationalised, of a good quality, and if they came from a highly trusted brand. The literature on brand extension discussed here, and an examination of the possible linkages between brand trust and brand extension (section 2.12), provided what is believed to be a strong foundation upon which to develop hypotheses seeking to relate brand trust and brand extension response. Hypotheses 2 and 3 have been developed to test whether brands with different trust levels have different brand extension responses, and to establish whether a correlation exists between the 'brand trust concept' and 'brand extension response' measures.

The role of gender and other demographic variables was not covered within the 'consumer characteristics' or any other area of the literature. However, other consumer characteristics studied, such as the influence of involvement level, user status, and the level of brand/category knowledge have led the researcher to believe that investigating demographic variables may yield some interesting findings. As such, Hypothesis 4 within the study, has been constructed to examine the role of demographics within brand trust and brand extension acceptance.

## **2.15.2 Research Methodological Linkages**

### **2.15.2.1 Appropriate pre-testing methodologies**

The literature was useful in establishing previous research designs within the area of brand extension. Some studies outlined in detail, the process adopted in selecting appropriate product or service categories, selecting suitable brands, and selecting and categorising brand extension concepts (Broniarczyk and Alba, 1994; Aaker and Keller, 1990).

The literature was useful in suggesting the inclusion of 'dummy' or fictitious brands into the research design, these being useful in disentangling the difference between brand and category level response by respondents (Park, Milberg, and Lawson, 1991; Keller and Aaker, 1992; Broniarczyk and Alba, 1994).

### **2.15.2.2 Brand Extension Response Measures**

The literature provided useful guidance as to the appropriate measures of brand extension response, with the 'Likely to Try' extracted from the methodologies of previous studies (Aaker and Keller, 1990). Keller and Aaker (1992) had shown experimentally that a measure

of 'brand trust' or 'trustworthy status' might have an impact on brand extension evaluation in other settings. Methodologically, the authors used tests of significance in means from different brands as a test of their hypothesis that higher credibility brands gained higher brand extension response ratings. Thus, the same methodology has been employed within this study to test Hypothesis 2.

### 2.15.2.3 Data Analysis Techniques

An awareness of the variety of data analysis techniques used within the literature on trust and models of trust was established. The data analysis techniques utilised were Cronbach Alpha coefficients, Lisrel structural equation models, Multiple Regression, Analysis of Variance (ANOVA), Factor Analysis, and Path Analysis. A table is provided below, which lists the techniques, and studies employing the techniques.

Statistical technique	Academic study
Cronbach Alpha	Anderson and Weitz (1989); Ganesan (1994); Morgan and Hunt (1994); Zaheer and Venkatraman (1995); Dahlstrom and Nygaard (1995); Geyskens et al. (1996); Nielson (1998); Zaheer, McEvily, and Perrone (1998); Fletcher and Peters (1997); Doney and Cannon (1997); Crosby, Evans and Cowles (1990); Moorman, Deshpande and Zaltman (1992/93)
Lisrel	Anderson and Narus (1990); Ganesan (1994); Morgan and Hunt (1994); Nielson (1998); Selnes (1998); Zaheer et al. (1998); Crosby, Evans and Cowles (1990); Doney and Cannon (1997); Smith and Barclay (1997).
Multiple Regression	Ganesan (1994); Mohr and Spekman (1994); Zaheer and Venkatraman (1995); Dahlstrom and Nygaard (1995); Geyskens et al. (1996); Moorman, Deshpande and Zaltman (1992/93); Fletcher and Peters (1997); Michell, Reast and Lynch (1998)
ANOVA	Dahlstrom and Nygaard (1995)
Factor Analysis	Ganesan (1994); Mohr and Spekman (1994); Moorman, Deshpande and Zaltman (1992/93); McAllister (1995); Fletcher and Peters (1997); Smith and Barclay (1997); Sirdeshmukh, Singh, and Sabol, (2000).
Path Analysis	Moorman, Deshpande and Zaltman (1992/93); Fletcher and Peters (1997); Sirdeshmukh, Singh, and Sabol, (2000).

**Table 2.3 Summary of Statistical Techniques used within the Measurement of Trust**

It was decided, following a review of the various techniques (outlined fully within the Research Methodology Chapter), that Cronbach's Alpha coefficient and standard multiple regression would be used for the testing of Hypothesis 1.



## **CHAPTER 3 RESEARCH METHODS**

### **3.1. Overview of the Chapter**

This Chapter of the thesis will present the research methodological approach undertaken for the research investigation. The structure of this chapter will follow the overall research process stages adopted for the PhD, from initial literature review through to data analysis techniques used for the main questionnaire survey sample. In detail, the chapter starts by examining the overall choices to be made within research methodology and research strategy, with broad methodological approaches, and the specific chosen methodological route being presented at this stage. A process flowchart and summary of all of the methodological stages undertaken on the investigation will then be provided. The chapter then outlines the following areas; the secondary research process undertaken; pilot qualitative and quantitative research 'findings'; theory development and model building processes; pre-testing stages I, II and III; survey instrument development; pilot sampling; main quantitative survey sample details; and, the rationale for the various statistical analysis methods undertaken as part of the investigation.

### **3.2 Methodological Approach and Theory Generation**

Researchers have choices to make, with some arguing in favour of an inductive approach - observing the world in order to construct explanation and theories about what has been observed (Gill and Johnson, 1991). The converse is deductive research, which entails the development of conceptual and theoretical structures prior to testing through empirical observation (Gill and Johnson, 1991). For many researchers within the deductive tradition, the source of the theory and framework matters far less than the methodical testing of such theories and frameworks (Popper, 1967, pp 130-143). The process of deduction can be summarised in the following stages (Gill and Johnson, 1991).

1. The researcher considers the theory or problem under investigation - considering which concepts represent the most important aspects.
2. The researcher considers the linking of concepts together in a causal chain - essentially a set of untested assertions about the relationship between the concepts. Concepts which are essentially abstract and not open to empirical testing are translated into observable indicators.
3. Concepts are operationalised, such that rules are laid down for making observations and the abstract concept becomes observable and measurable. The process of operationalisation enables the construction of clear and specific instructions about what and how to observe, such that any research study can be replicated and corroborated by other observers. Hence, deductive approaches rely heavily on verification.

### 3.3 Research Methods Compared

We can discriminate between different research methods in terms of their relative emphasis on deduction or induction, their degree of structure, the trends of data they generate and the forms of explanation they create. Nomothetic and ideographic methodologies represent the extremes of a methodological continuum. (Gill and Johnson, 1991)

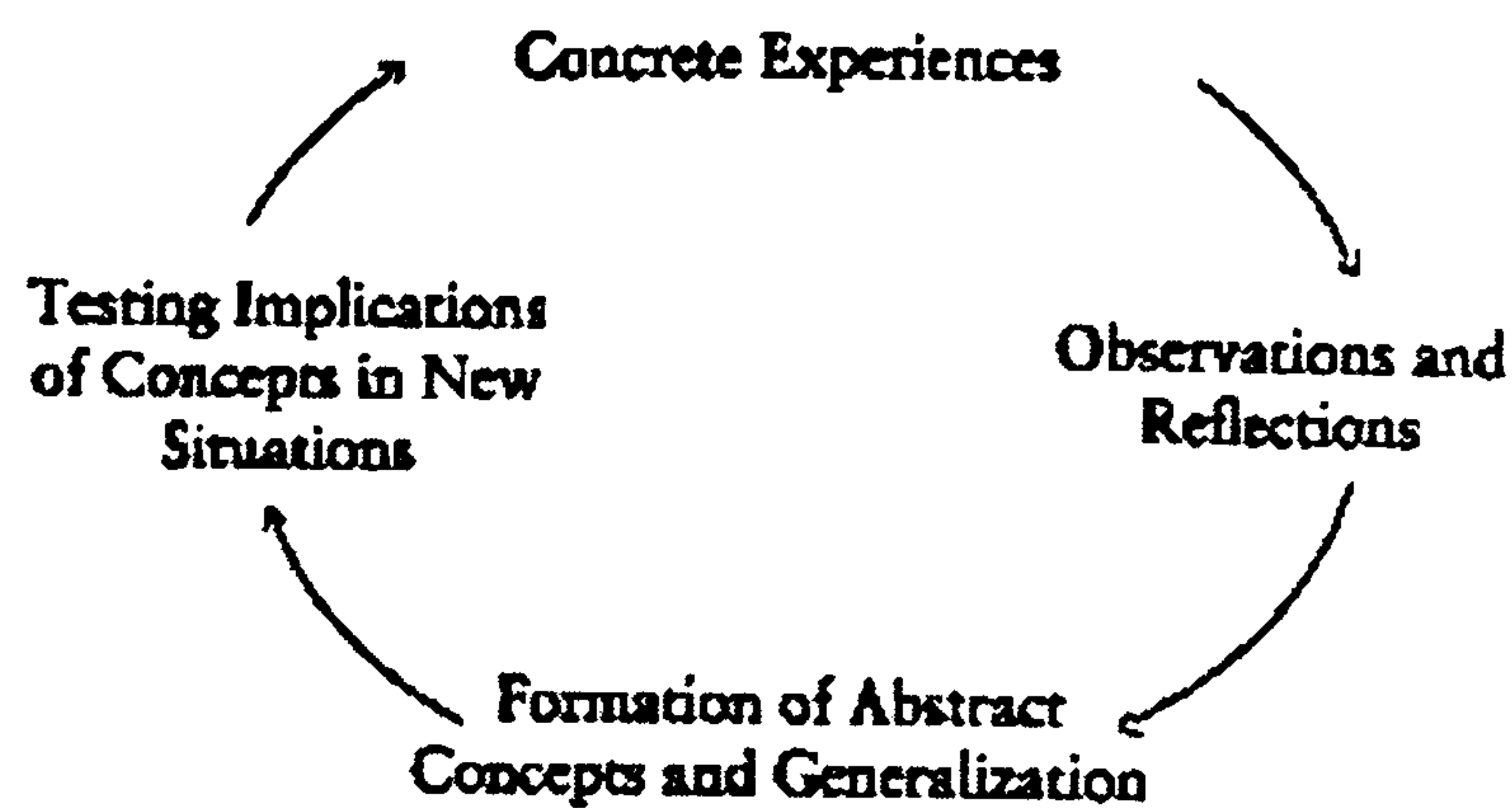
Nomothetic methods emphasize			Ideographic methods emphasize	
1	Deduction	vs		Induction
2	Explanation via analysis of causal relationships and explanation by covering-laws (etic)	vs		Explanation of subjective meaning systems and explanation by understanding (emic)
3	Generation and use of quantitative data	vs		Generation and use of qualitative data
4	Use of various controls, physical or statistical, so as to allow the testing of hypotheses	vs		Commitment to research in everyday settings, to allow access to, and minimize reactivity among the subjects of research
5	Highly structured research methodology to ensure replicability of 1, 2, 3 and 4	vs		Minimum structure to ensure 2, 3 and 4 (and as a result of 1)

**Figure 3.1 A Comparison of Nomothetic and Ideographic Methods.**

Nomothetic methods, in the deductive tradition (Burrell and Morgan 1979), focus on the traditions of testing hypotheses in accordance with the standards of scientific rigour, generating and using standardised research instruments. There is a focus on precise models and hypotheses for empirical testing. Ideographic methodologies fall within the inductive tradition (Burrell and Morgan, 1979) whereby everyday life is studied and explained as understanding increases. Clearly, then, nomothetic and ideographic research methodologies represent, especially, polar opposites and many research methodological approaches will fall between these extremes.

In understanding the approach taken for this particular research study on consumer brand trust and brand extension, reference to Kolb's learning cycle (Kolb, Rubin and McIntyre, 1979) is useful.





**Figure 3.1** Kolb's experiential learning cycle

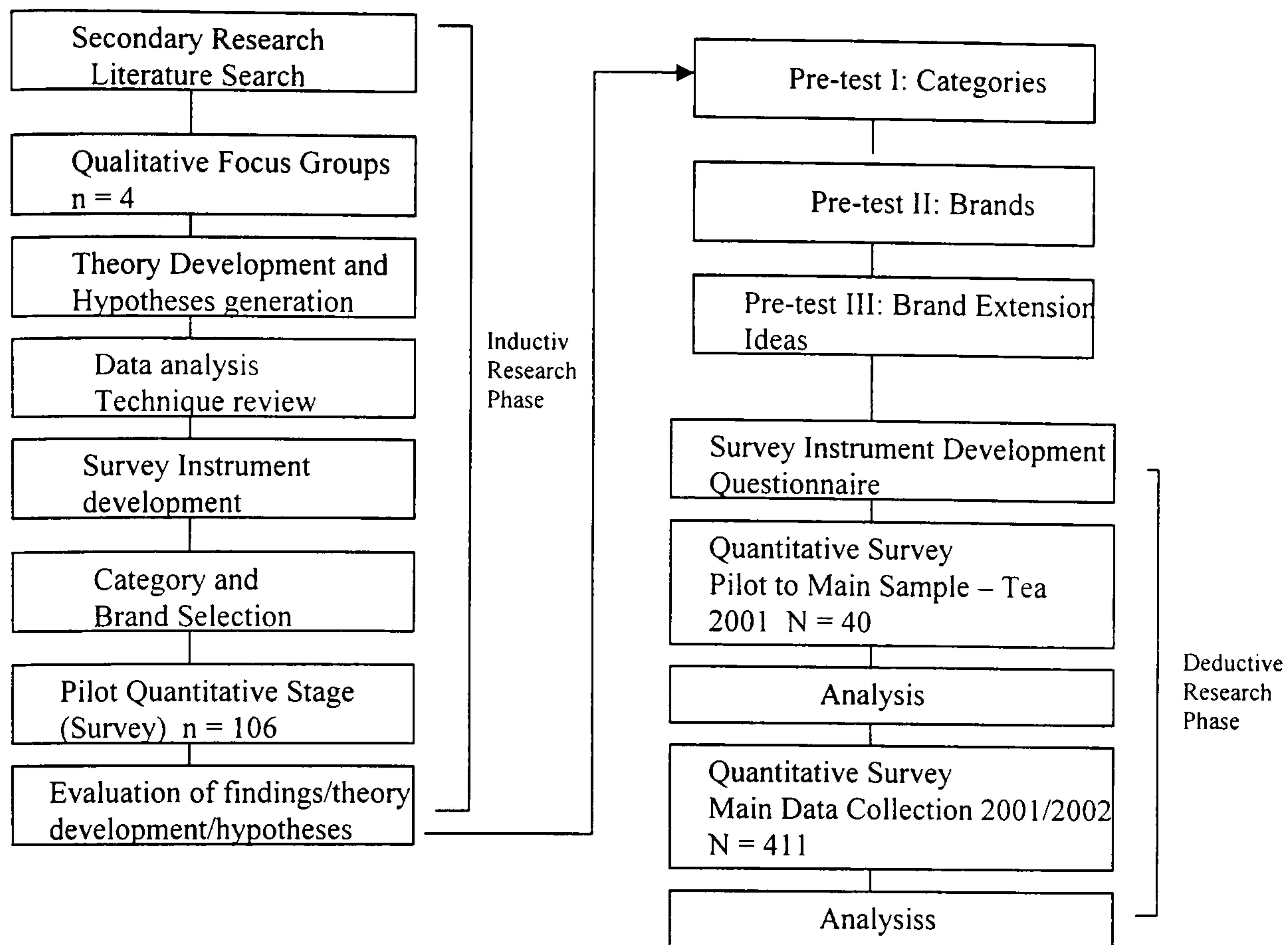
**Figure 3.2** Kolb's Experiential Learning Cycle

It is argued that the research process of this study, outlined within the next section of this chapter, broadly follows the Kolb learning cycle, starting with a world observation whilst employed within a manufacturing organisation (in a marketing capacity) and in conducting consultancy, following through into the literature review, each activity attempting to understand the 'world'; following into qualitative research focus groups, in the inductive research tradition. Specific models and hypotheses are then developed and tested, initially at a pilot quantitative stage, and then, following a further review of learnings and revised models and hypotheses, a full quantitative evaluation of hypotheses. It can be seen that the initial stages of the research process follow an inductive methodological approach whilst the later stages follow the quantitative deductive approach. The Kolb learning cycle in many ways builds upon the inductive - deductive model building process developed by Cox and Enis (1972), and these process frameworks have been reflected in the approach taken within this research study.

### **3.2 Research Methodology General Overview of Chosen Process**

As noted within the previous section, it is felt that the chosen research methodological approach utilises both inductive and deductive research methodologies and broadly follows the Kolb learning cycle. The overall methodological approach is demonstrated below as a process flow chart.

The chosen research methodological design involved many stages from the initial literature search and review through to the final analysis of the main quantitative survey data. This section of the chapter will provide an overview of the process prior to more detailed examination of individual elements.



**Figure 3.3 Research Methods Flowchart**

### 3.2.1 Literature Review

The process started with an extensive literature review of the ‘trust’ and ‘brand extension’ literature areas. The literature search served to convince the researcher that relatively minor attention had been paid to the notion of consumer (rather than inter-organisational or inter-personal) brand trust, and that there was no mention of the relevance to trust within the brand extension literature. The literature review produced a wide variety of terms associated with trust, together with several multi-dimensional frameworks, which were worthy of investigation in a consumer context. The literature also suggested some potential groupings of correlates associated with trust which had been related only within the inter-organisational, not the consumer, relationship context.

### 3.2.2 Qualitative Focus Groups

Using the researcher’s semi-structured questionnaire, discussion guide and briefing, a professional research moderator was used to undertake four qualitative focus groups amongst consumers drawn from the employees of two major organisations within the North of England. The focus groups, which each had a duration of approximately 2 hours, were utilised in order to evaluate whether ‘brand trust’ was a valid consumer concept, to capture consumer language associated with brand trust, and to gain consumer feedback to potential correlates of trust drawn from the academic literature. Potential groupings of such terms, where relevant, were discussed with the research groups in order to help with theory



generation and model building. Detailed discussion of this element of the research will be provided later within the chapter (Section 3.5.2).

### **3.2.3 Theory Development and Hypotheses Generation I**

Utilising learning from the literature review and from the qualitative focus groups, a model of the hypothesised correlates of consumer brand trust was constructed. The model included 22 variables which had been drawn from the literature and received support within the focus groups. The groupings of variables within the ‘model’ were discussed and debated within the focus groups, and were appropriate steps in defining the initial working model and specifying working research hypotheses. The model, and more detailed discussion of the stage of the research, will be provided later in Section 3.6.

### **3.2.4 Pilot Quantitative Survey Stage**

This survey stage involved a sample of 106 respondents, drawn from employees of two large organisations in the North of England. Respondents, subject to meeting usage criteria, completed a questionnaire, which looked at six brands across three product/service categories (electrical appliances, banking services and retailer). The stage was conducted in an attempt to gain initial support for the emerging hypotheses and model of the correlates of brand trust. The intention of this pilot phase was to further enhance learning and understanding of the concept of brand trust in a consumer context, and gain further insights into how the model could be enhanced for future research stages. Further detailed discussion of this stage of the research will be provided later in Section 3.6.5.1

### **3.2.5 Theory Development and Refinement of Hypotheses**

Following a review of the findings from the quantitative pilot research phase, and further ongoing literature analysis, amendments were made to the hypothesised correlates of brand trust. The model was expanded to include two new hypothesised dimensions and a total of 30 variables found within the literature to be associated with trust. Research hypotheses relating both to the structure of the concept of brand trust, and relating to brand extension acceptance were now finalised. The revised working model, and further discussion concerning this element of the research process, can be found later in the chapter in Section 3.7

### **3.2.6 Pre-test Stages I, II and III**

Stage by stage pre-testing was undertaken in order to ensure that appropriate product/service categories, brands (real and dummy) and brand extension concepts were included within the main survey questionnaire. In all, five products/service categories were chosen on the basis of consumers’ stated knowledgeability about the category, and that familiarity and prior usage of both brands within each of the selected categories. Exercises to generate brand extension concepts for each of the chosen categories were undertaken. Pre-testing of the selected “ideas” was undertaken to ensure that the extensions conformed to the ‘line



extension', 'related extension' and 'unrelated extension' categorisations. Further, more detailed, discussion of this stage of the research process is provided later in Section 3.8

### **3.2.7 Survey Instrument Development**

The main survey questionnaire was largely informed by the earlier quantitative pilot questionnaire, which had proven to be a successful format. Five product or service categories were included within the survey and, thus, five different questionnaires were generated. Each questionnaire included a selection of real and dummy 'fictitious' brands, with semantic differential scales being used to record respondents' perceptions of the brands via 31 scales. The questionnaires included American style 'consumer reports' information in order that respondents could gain some feeling for the fictitious brands prior to rating the brands and brand extension concepts. The questionnaire was designed with the statistical analysis methods in mind. Further, more detailed, discussion concerning the survey instrument development is provided later within this chapter in Section 3.11

### **3.2.8 Pilot Quantitative Survey to Main Sample**

A brief pilot study using one of the product categories (tea, n=40) was undertaken in late 2000. This pilot study was progressed in order to establish that the survey instrument was working satisfactorily, that the data collection method and incentive programmes were yielding sufficient response levels, and that the analysis techniques were aligned with the survey instrument. The pilot was shown to be successful and, hence, the main survey sample was collected across all five categories. The pilot sample became part of the Combined Experiment Sample (n= 207, five categories), and was also used as part of the Tea Large Sample (n=247, single category).

### **3.2.9 Main Quantitative Survey Sample**

The main quantitative survey sample was collected via door to door canvassing by the researcher in modern 'middle class' housing estates in the North of England. The data collection took 10 weeks, and was supported by an incentive programme, which allowed for an optional £5 payment to respondents for questionnaire completion. The data collection methodology achieved very high response levels, with a relatively low wastage level (due to incomplete questionnaire completion). Questionnaires were hand-delivered and hand-collected at a specified time which, it is felt, dramatically increased response levels. See section 3.12 for further details about the Main Quantitative Survey Sample.

### **3.2.10 Data Analysis Techniques**

A range of analysis techniques was utilised in order to test the research hypotheses. These included standard multiple regression, paired sample 't' tests, Chi-Square tests, and Anova (one-way, and two-way). Appropriate care was taken over matching sample sizes with statistical analysis techniques. Further discussion on the rationale for use of each of



statistical techniques is provided later in the chapter (See Section 3.13).

### **3.3 Secondary Research Process**

Once a research area is established, the subject of data collection follows naturally. Many researchers would advocate that, first, data collection should logically focus on secondary data (Churchill, 1996). Ferber and Verdoorn (1962) argued that “a good operating rule is to consider a survey akin to surgery - to be used only after other possibilities have been exhausted”. Secondary data are publications and statistics not produced for the immediate study, but for some other, usually general, purpose. Secondary published material would include industry journals and reports, press publications, Internet sources, governmental and academic publications.

There are some clear advantages to the use of secondary published information (Churchill, 1996), most significantly, the cost and time economies they offer the researcher, when compared to a primary study to collect the equivalent information. On occasion, secondary published information may be sufficient to answer a specific research question and may be more accurate than a primary study with a smaller sample (Aaker, Kumar and Day, 1988; McDaniel and Gates, 1998), but, more often, the logical follow on to secondary research is a tailored primary study. Even where secondary data does not provide sufficient detail or focus to answer the particular research question, it may well lead to a better statement of the problem under investigation (McDaniel and Gates, 1998), or inform the researcher as to the most appropriate methodology for the primary study. Such an approach could lead to powerful unforeseen or unexpected new serendipitous discoveries as a result of the reinterpretation of prior studies, and provide a data-set, with which to compare the primary data collected (Churchill, 1996; Saunders, Lewis, and Thornhill, 2000).

The problems commonly associated with secondary data relate to the lack of availability, lack of precise fit with the detailed research questions, and issues concerning accuracy and timeliness (Aaker, Kumar and Day, 1998, McDaniel and Gates, 1998). Despite these shortcomings, the balance is definitely in the favour of secondary/published material, providing a good starting point for most academic and industry based research problems.

As such, this research study started with a detailed search of academic journals and other related publications in order to: identify the issues surrounding trust in a consumer context more clearly; to establish the terminology and apparent correlates of trust within published material; to evaluate the state of ‘knowledge’ with regard to brand extension success and the apparent antecedents of extension success; and to gather information about research methodologies which had been implemented within similar or related research areas.



### 3.4 Qualitative Focus Groups

The qualitative focus groups undertaken for this study represented the first element of primary research within the methodology. Qualitative data collection methodologies in general are often undertaken to obtain a better understanding of issues at an exploratory stage of a research project before proceeding to the more analytical (usually quantitative) portion of study (Aaker, Kumar and Day, 1998).

Comparison Dimension	Qualitative Research	Quantitative Research
Types of questions	Probing	Limited probing
Sample Size	Small	Large
Information per respondent	Much	Varies
Administration	Requires interviewer with special skills	Fewer special skills required
Type of Analysis	Subjective, interpretative	Statistical, summarisation
Hardware	Tape recorders, projection devices, video, pictures, discussion guides	Questionnaires, computers, printouts
Ability to Replicate	Low	High
Training of the researcher	Psychology, sociology, social psychology, consumer behaviour, marketing, marketing research	Statistics, decision models, decision support systems, computer programming, marketing, marketing research
Type of research	Exploratory	Descriptive or causal

**Table 3.2** Qualitative versus Quantitative Research (McDaniel and Gates, 1998)

Within qualitative methodologies, the number of respondents tends to be small and only partially representative of any target population, often making them precludes to carefully structured, large-scale field studies (Aaker, Kumar and Day, 1998). There are three major categories of acceptable uses of qualitative research methods (Aaker, et al., 1998):

#### 1. Exploratory

- Defining problems in more detail.
- Suggesting hypotheses to be tested in subsequent research.
- Generating new product or service concepts, problem solutions, lists of product features, and so forth.
- Getting preliminary reactions to new product concepts.
- Pretesting structured questionnaires.

#### 2. Orientation

- Learning the consumer's vantage point and vocabulary
- Educating the researcher to an unfamiliar environment: needs, satisfactions, usage situations, and problems.

#### 3. Clinical

Gaining insights into topics that otherwise might be impossible to pursue with structured research methods.

**Table 3.3: Uses of Qualitative Research**

It was felt that the study at hand covered many of the areas within the exploratory categorisation (suggesting hypotheses to be tested in later research, gaining preliminary reactions), and also within the orientation categorisation (learning consumer vantage point and vocabulary, educating the researcher in the consumer context).

A focus group may be described as an interview conducted in an unstructured and natural



manner by a trained moderator among a small group of respondents (Malhotra, 1999). The main purpose of these qualitative focus groups was to gain insights from a group of people, who are in the target group, about topics or issues of interest to the researcher (Malhotra, 1999). Focus groups have a typical duration of 1-3 hours and group size of between 5 and 10 respondents.

<b>Characteristics of Focus Groups</b>	
Group Size	5-10
Group composition	Homogenous; respondents pre-screened
Physical setting	Relaxed, informal atmosphere
Time duration	1-3 hours
Recording	Use of audiocassettes and videotapes
Moderator	Observational, interpersonal, and communication skills of the moderator

**Table 3.4 Characteristics of Focus Groups (Adapted from Malhotra, 1999)**

An important consideration when planning focus groups is the selection of respondents such that they represent a relatively homogenous group who will be able to interact quite naturally amongst a similar peer group. Equally importantly stressed within the literature is the critical importance of a well trained professional moderator (Sudman and Blair, 1998; Malhotra, 1999; Churchill, 1999; McDaniel & Gates, 1998). According to Greenbaum (1993), many key attributes are felt to be required to be an effective focus group moderator:

- Superior listening ability - carefully picking up all respondent comments.
- Excellent short-term memory - retaining comments to be fed-back and integrated into later sections of the group.
- Well organised - following a good moderator guide in a logical sequence. Often much stimulus material is involved.
- A quick learner - often being involved in a wide variety of subject areas, not necessarily as a subject specialist themselves.
- High energy levels - focus groups can be very demanding both physically and mentally.
- Personable - able to develop a good and quick rapport.
- Well above average intelligence - being able to adjust content, sequencing and redirect discussions as events dictate.

Clearly, then, focus groups can be a powerful tool in the exploratory stages of research, but as with any research technique there are both positive and negative associated factors. It was felt that the researcher had systematically taken account of these factors in planning this qualitative phase of research activity. Greenbaum (1993) provides a detailed outline of some of the advantages and disadvantages of focus groups.



### “Advantages and Disadvantages of Focus Groups

Focus groups offer several advantages over other data collection techniques. These may be summarised by the 10 Ss:

1. **Synergism.** Putting a group of people together will produce a wider range of information, insight, and ideas than will individual responses secured privately.
2. **Snowballing.** A bandwagon effect often operates in a group interview, in that one person's comment triggers a chain reaction from the other participants.
3. **Stimulation.** Usually after a brief introductory period, the respondents want to express their ideas and expose their feelings as the general level of excitement over the topic increases in the group.
4. **Security.** Because the participants' feelings are similar to those of other group members, they feel comfortable and are therefore willing to express their ideas and feelings.
5. **Spontaneity.** Since participants are not required to answer specific questions, their responses can be spontaneous and unconventional and should therefore provide an accurate idea of their views.
6. **Serendipity.** Ideas are more likely to arise out of the blue in a group than in an individual interview.
7. **Specialization.** Because a number of participants are involved simultaneously, use of a highly trained, but expensive, interviewer is justified.
8. **Scientific scrutiny.** The group interview allows close scrutiny of the data collection process, in that observers can witness the session and it can be recorded for later analysis.
9. **Structure.** The group interview allows for flexibility in the topics covered and the depth with which they are treated.
10. **Speed.** Because a number of individuals are being interviewed at the same time, data collection and analysis proceed relatively quickly.

The disadvantages of focus groups may be summarised by the five Ms:

1. **Misuse.** Focus groups can be misused and abused by considering the results as conclusive rather than exploratory.
2. **Misjudge.** Focus group results can be more easily misjudged than the results of other data collection techniques. Focus groups are particularly susceptible to client and researcher biases.
3. **Moderation.** Focus groups are difficult to moderate. Moderators with all the desirable skills are rare. The quality of the results depends heavily on the skills of the moderator.
4. **Messy.** The unstructured nature of the responses makes coding, analysis, and interpretation difficult. Focus groups data tend to be messy.
5. **Misrepresentation.** Focus group results are not representative of the general population and are not projectable. Consequently, focus group results should not be the sole basis for decision making as the following example illustrates.”

**Table 3.5 Advantages and Disadvantages of Focus Groups**

### 3.5 Review of 1997 Qualitative Exploratory Consumer Research

Having fully considered the literature relating to qualitative focus groups, a set of four research groups took place in 1997. The objectives were to examine the concept of 'brand trust' in a consumer and consumer-brand context; to establish the appropriate consumer vocabulary surrounding brand trust; and to gain feedback on a set of variables thought to be associated with brand trust, drawn from academic literature. Each group included 5-7 respondents, and were planned such that they included homogenous profiles of people. Groups were recruited on the basis of age, gender, and occupation type as detailed below. The respondents were drawn from employees at two large organisations based in the north of



England. The research groups were moderated by a professional research practitioner, using a carefully constructed moderation guide provided by the researcher. The first group acted as a pilot group for later sessions, with discussion guide, stimulus material, etc., reviewed with relation to research objectives prior to completion of the remaining groups. The group discussions were taped and transcribed, and took place in suitably comfortable discussion rooms at both organisations; and, respondents were given a bottle of wine as a ‘thank you’ for attendance.

Group	Gender	Age	Job Role	N=
1*	Female	40-60	Admin.	7
2	Male	40-60	Academic	6
3	Female	25-39	Academic	6
4	Male	25-39	Management	5

**Table 3.6. Breakdown of Qualitative Respondents** \* Group 1 = pilot group

### 3.5.1 Research Objectives – Exploratory Focus Groups

The objectives were to:

1. Establish to what extent ‘trust’ in brands and organisations was a valid construct in the consumer context
2. Gather unprompted words used to describe trusted/dis-trusted people, brands and organisations
3. Gain respondents’ understanding of each of the hypothesised correlate-variables, noting any confusion or duplication
4. Gain respondents’ feedback on hypothesised variable groupings and ‘labels’.

### 3.5.2 Focus Group Research Findings

The focus group findings are shown in this methodology section, since they have input into subsequent stages of the research strategy.

#### 3.5.2.1 Objective 1

**Brand trust was found to be a valid consumer concept, occurring at different levels of intensity and being capable of being built or destroyed by the actions of the brand or organisation concerned. Brand trust was seen as being built over time, and was relatively enduring, with consumers allowing for lapses by the brands as long as these were not sustained.**

#### **Brand trust as a consumer concept?**

There was broad agreement about the nature of brand trust across the four research groups. Respondents acknowledged that they did have differing levels of trust in different organisations and brands.

**Did it make sense – the idea of having trust in a company or brand?**

‘Yes, it makes sense to me – I trust Marks and Spencer, and presumably if you have always had good experience, you’ve never been put off by the experiences of peers etc’. [Group 4, Male 25-39, Managers]

**Talking about brand trust...** ‘track-record is important’ [Group1, Female, 40-60 years, administrative staff]

**Discussions took place regarding the nature of ‘trust’ versus ‘faith’.** ‘trust is often based on more tangible things which we may have noted, witnessed or heard about. Faith seems to be based more on intangible things’ .... ‘trust might involve a higher level of freedom of determination, whilst faith might involve less freedom of determination’ [Group 2, Male 40 - 60 years, academic]

‘trust is all about performing consistently well over time’ [Group 4, Male 25-39 years, managers]

**Builders/destroyers**

The idea that a number of factors may build or destroy brand trust, was supported within the focus groups.

**The respondents agreed that most of the terms were relevant, and the respondents indicated the terms, which they felt, were most associated with developing or destroying brand trust:**

‘fair, caring, confidence in, truthful, integrity, reputation, dependable, consistent quality, company name gives guarantee, personal experience, always delivers’

[Group 1, Female, 40-60 years, administrative staff]

‘Yes I could see those things building trust in a company or brand, or if they got them wrong, it could damage it!’ [Group 1, Female, 40-60 years, administrative staff]

**Brand trust as a fixed versus relative concept.**

Whilst much of the literature has portrayed trust as ‘existing or not’, the respondents felt that there could be several levels of brand trust apparent in brand relationships. Brand trust was able to be built or be undermined over time.

‘If a lot of brand trust has been built over time - with lots of good experiences, one or two indiscretions won’t destroy all of this trust, but you would balance these against all of the good experiences’. [Group 1, Female, 40-60 years, administrative staff].

‘Do we have as much brand trust in Woolworths as we do in Marks and Spencer, instinctively, no. Their reputation is not as good’ [Group 4, Male 25-39 years, managers].

**Time and experience**

The idea that brand trust is built over a period of time, appears generally true, i.e. brand trust was built as a result of a pattern of good experience rather than a one-off purchase.



‘A single occasion would not be enough to build brand trust, but it would make you more likely to give the company another try to see if it is consistently good’ [Group 1, Female 40-60 years, administrative staff].

‘A pattern of poor service or poor results would be needed to significantly damage a long term and great level of brand trust. Being occasionally unreliable - such as M&S’ faulty clothing is one thing, being poorly treated or lied to is far more serious’ [Group 3, Female, 25-30 years, academic].

### 3.5.1.2 Objective 2

**Trust in people was described in much more emotive language, with trust in organisations and brands only sharing some of the same vocabulary. There was widespread agreement on most of the variables considered within the groups, with respondent’s views varying on the ‘softer’ affective variables.**

#### **Trust in people versus brands and organisations?**

There appeared to be significant differences in the way which respondents talked about trusted people and brands. For some respondents, the concept of trusting a brand or organisation at all was problematic - given that these respondents felt that trust was about ‘individuals’, rather than an abstract concept like a ‘brand’ or ‘organisation’. This was not an issue for the majority.

Respondents were asked to write down terms to describe trusted people and brands, the lists were then compared and discussed within the groups. Whilst some of the words were common between people and brands, such as **reliable, dependable, honest, truthful, consistent**, there were many more emotive terms which some felt could only relate to interpersonal relationships. Terms such as, **genuine, kind, open, loyal, sensitive, best friend, unselfish, loving, sharing, empathy, supportive, tactile, understanding, forgiving, strong, thoughtful**, appeared to, solely or primarily, lie in the domain of interpersonal trust relationships, whilst terms such as **helpful, caring, sincere, friendly** appeared to be in a ‘disputed middle ground’.

The focus groups appeared to indicate that such soft intangible descriptors were not easily, or perhaps appropriately, applied to organisations. Some respondents suggested that perhaps, the only way these variables might be applied, would be in a business to business or service based situation - where there would be a great deal of ongoing interpersonal contact, and the affective elements such as the sincerity of the firm might be reflected in the people that were being dealt with. An alternative situation might be where the firm had a prominent, and well-known figure-head, such as Richard Branson (Virgin Group). It was felt that the sincerity of the company could be judged by some groups on the basis of the perceived sincerity of Branson. Even here however, some people stated that they would find it difficult to judge.

There was particular opposition, within Group 3, concerning the inclusion of ‘softer variables’ when talking about trusting organisations or brands:

‘I would have pulled out the things that can only apply to people – this group would have been things like – sincere, caring, fair, truthful – that cannot apply to organisations’ [Group 3, Female, 25-39 years, academic].

Fair: ‘I cannot see how you would ever use this in a context of a company’ [Group 3, Female, 25-39 years, academic].

Truthful: ‘truth is too abstract a term for an organisation, it is too complex and large – people are truthful’ [Group 3, Female 25-39 years, academic].

Group 4 however, took the attitude that whilst some of the variables were more human in orientation, they could be applicable to organisations or brands:

‘Sincere, dependable, benevolent, truthful, caring, integrity – these are seen as more personal qualities, which companies can also exhibit – trying to make a company more human’ [Group 4, Male 25-39, managers].

Whilst some of the respondents expressed great difficulty relating to the application of such terms to companies or brands, terms exactly like these were used freely by the respondents in the warm-up element of the discussion group. Initial warm up discussion concerning Marks and Spencer and Virgin attached many pertinent descriptors to the brands, supporting the notion that ‘softer’ more affective labels were indeed relevant to brands and organisations:

‘They [Virgin] have gone from being the new clean fighting machine, fighting the big players on behalf of the customers, to being one of the big players, just wanting to make profits, and not **caring**, the same as other big companies’. [Group 2, Male, 40-60 years, academic].

The Marks and Spencer discussion led to following points: ‘They are **friendly and helpful**’ [Group 2, Male, 40-60 years, academic].

### **Areas of agreement**

Many of the variables presented and discussed within the groups received broad agreement: Confidence; Truthfulness; Integrity; Professional Standing; Reputation; Fair-Mindedness; Similar Values; Warranties; Dependability; Quality Consistency; Quality Standing; Guarantee from Company Name; Personal Experience; People’s Opinion; Experience of Peers; and Delivery

#### **3.5.1.3 Objective 3**

**Overall, the variables examined by the respondents were well understood, with few problems over duplication, interpretation or relevance. There were however a few exceptions, primarily ‘affective’ variables, which raised discussion within some of the groups.**



It can be seen from the material above, that Group 3 had a slightly different perspective on matters, being markedly more cynical about companies and their motives, and feeling that many terms could only be attributable to people rather than inanimate organisations or brands. Discussion about inappropriate or ambiguous variables did take place within a number of groups:

Benevolent - 'very patronising, paternalistic' [Group 3, Female, 25-39 years, academic].

Caring and benevolent seen as much the same [Group 1, Female, 40-60 years, administrative staff].

Integrity was seen as very similar to sincere [Group 1, Female, 40-60 years, administrative staff].

Truthful and sincerity seen as much the same thing [Group 1, Female, 40-60 years, administrative staff].

Dependable - 'that's the thing you say about boyfriends you are about to get rid of, boring – but dependable, it's always there, it works, it's not dynamic' [Group 3, Female, 25-39 years, academic].

Predictable - 'could be a derogatory term' – group questioned the positive and negative dimensions of the term. [Group 4, Male 25-39 years, managers]; 'Double-edged' [Group 1, Female, 40-60 years, administrative staff].

Helpful Advertising – 'non-existent?' 'True?' Informative seemed a better descriptor to the group [Group 4, Male, 25-39 years, managers]. A few questions over meaning [Group 3, Female, 25-39 years, academic].

"Length of time bought from" 'not clear on the meaning of this term, what does it mean, the statement at the moment is very vague and ambiguous?' [Group 3, Female, 25-39 years, academic]

Experience of peers - 'I think about friends, or family, or colleagues ... not the term peers' [Group 3, Female, 25-39 years, academic].

One respondent, in Group 4, suggested inclusion of 'value for money', an area in which he felt that people were looking for consistency.

#### **3.5.1.4 Objective 4**

##### **Proposed groupings of variables?**

**While there was a mixed reaction, the focus groups were, overall, supportive of the grouping areas. Support for the hypothesis that the groupings might be influential for building, maintaining or damaging trust in brands was also found.**

**Levels of reliability** – the label and terms were generally acceptable to respondents. There were some feelings that the term '**always delivers**' should be within this grouping rather than the 'Level of Satisfaction' grouping. Some feeling also, that the term '**confidence in**' should

be present in this group rather than the ‘Level of Probity’ group.

**Level of Satisfaction** - the term was changed by two of the groups to something in the area of **experience/consumer experience**. As noted above, the term ‘**always delivers**’ was seen as better placed in the ‘Level of Reliability’ group. The remaining groups were relatively happy with the label.

**Level of Probity** - this was operationalised as ‘**honesty and standing**’ in the research. Three of the groups found this label acceptable - one less so. Professional standing was seen as dictated by reputation, truthful seen as same as honest, integrity a very similar words to honest.

**Level of Equity** - labelled as ‘**Fair-minded and Reasonable**’ in the focus group research. ‘Benevolent’ was a problem, ‘helpful advertising’ was not seen as relevant, ‘similar values’ were misunderstood by some but on the whole worth keeping, ‘fair’ was seen as useful, ‘caring’ seen as useful by some and the same with ‘sincere’.

#### **Are the labelled dimensions important to consumer brand trust?**

Most of the focus groups agreed that the four labelled groups of variables were important in building or destroying brand trust. The area which caused the most debate, as to whether it was relevant or not for brands or organisations, was the ‘equity’ grouping. The debates centred on whether these terms were only relevant for interpersonal relationships, or could be extended to ‘brand-relationships’.

### **3.5.3 Relevance for Later Research**

3.5.3.1 Consumer ‘brand trust’ in brands and organisations has been attested to be a valuable concept, acknowledged as being important within consumer decision-making processes. ‘Yes, it makes sense to me, I trust Marks and Spencer’.[Group 4, Male 25-39, Managers].

3.5.3.2 A much greater understanding of the terminology used by consumers has been achieved. Variables such as Confidence; Truthfulness; Integrity; Professional Standing; Reputation; Fair-Mindedness; Similar Values; Warranties; Dependability; Quality Consistency; Quality Standing; Guarantee from Company Name; Personal Experience; People’s Opinion; Experience of Peers; and Delivery, received very broad support from all focus groups.

3.5.3.3 The focus groups provided an awareness of potential issues surrounding some of the variables, for example: ‘benevolence’, was seen as patronising and paternalistic; ‘integrity’ was seen as similar to ‘sincere’; ‘predictable’ could be ambiguous, either complimentary or derogatory; and, ‘helpful advertising’ and ‘length of time bought from’ were found to be somewhat confusing. The terminology, on the whole, was



well received, but much debate did take place concerning the softer ‘affective’ variables, as discussed below.

- 3.5.3.4 Some variables appeared to be more likely to be applicable to some organisations or brands than others. Most respondents accepted that even ‘softer’ affective variables could be applied to organisations and brands. ‘Sincere, dependable, benevolent, truthful, caring, integrity – these are seen as more personal qualities, which companies can also exhibit – trying to make a company more human’ [Group 4, Male 25-39, managers]. There was, however, some disagreement regarding these ‘softer variables’, with one focus group, in particular, unhappy about the application of such variables to organisations or brands. ‘I would have pulled out the things that can only apply to people – this group would have been things like – sincere, caring, fair, truthful – that cannot apply to organisations’ [Group 3, Female, 25-39 years, academic].
- 3.5.3.5 The qualitative research provided outline support for the development and testing of a ‘model’ of the correlates and dimensions of consumer brand trust. ‘Yes, I could see those things building trust in a company or brand, if they got them wrong, it could damage it!’ [Group 1, Female, 40-60 years, administrative staff.] The groups, overall, were supportive of the potential groupings of variables, and indicated that these would be relevant in building or damaging brand trust. The qualitative groups were helpful in developing the first working model of brand trust and its dimensions and correlates.

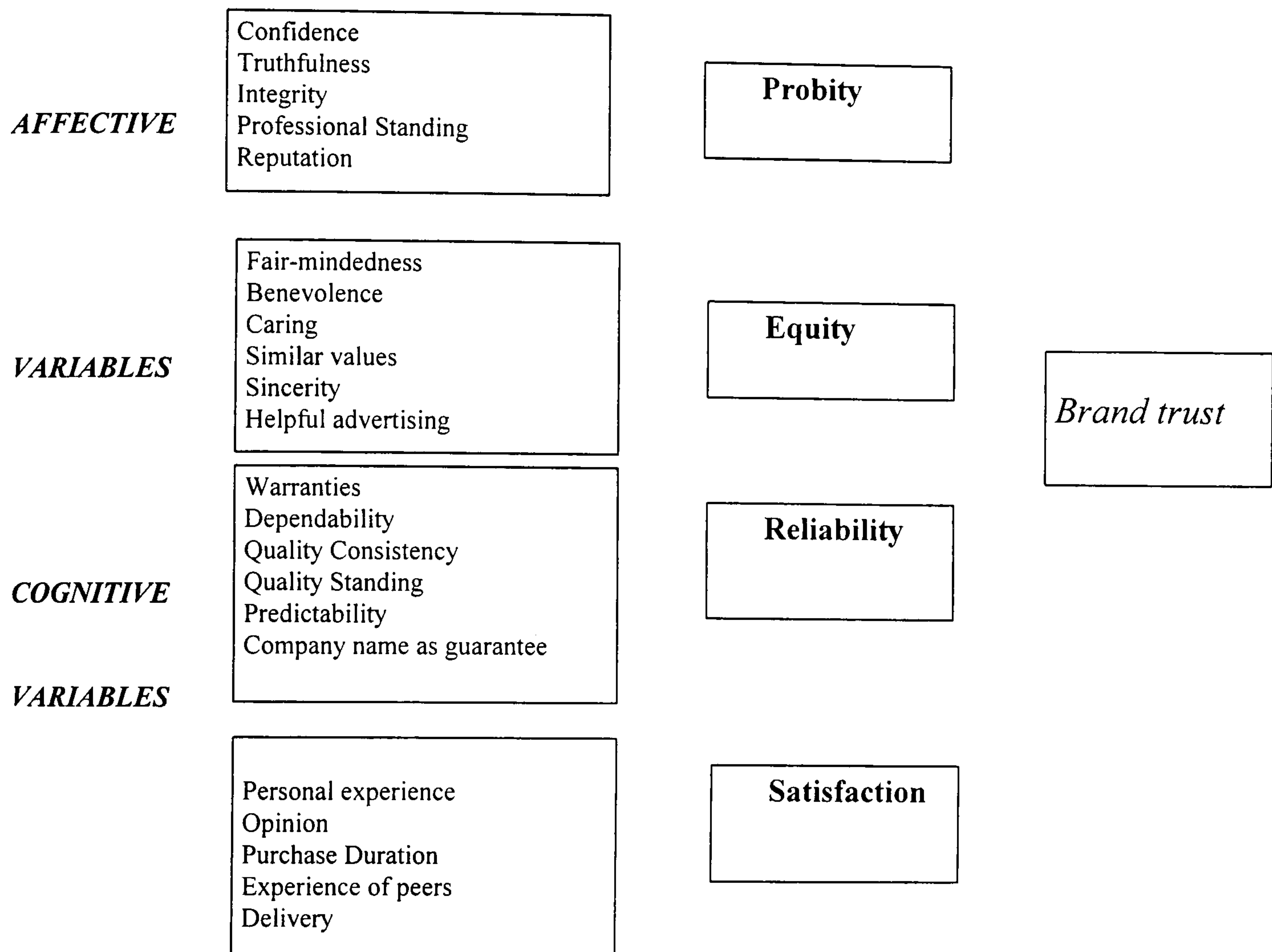
### **3.6 Theory Development and Model-Building**

The combination of results of the detailed literature review within and without the area of ‘trust’, and the qualitative focus groups outlined within the last section, enabled the researcher to build a model of the hypothesised dimensions and correlates of brand trust. The literature review showed that publications within the area of trust spanned several decades, covering the interpersonal, the business or organisational context, and only very much more recently the consumer content. Rotter (1967) defined trust as “a generalised expectancy held by an individual that the word of another can be relied on”. More recently, writers stressed the multidimensional nature of trust (e.g. Morgan and Hunt, 1994), with conceptualisations emphasising both the behavioural aspects (confidence in the probity and equity) and the cognitive elements (confidence in the reliability and performance satisfaction) of exchange partnerships (Johnson et al, 1997).

#### **3.6.1 Working Model of the Postulated Dimensions and Correlates of Brand Trust**

A set of 22 variables (discussed within the qualitative research section 3.5.1.2) were extracted from the academic literature and examined within the qualitative focus groups.

Potential groupings of variables were discussed and reviewed in this qualitative setting. The model developed at this stage postulated that brand trust could be related to four 'predictor' dimensions, probity, equity, reliability and satisfaction, which were associated with twenty-two second order variables taken from the literature.



**Figure 3.4 Model of Postulated Dimensions and Correlates of Brand trust**

### 3.6.2 The Model Dimensions

The model was constructed as above on the basis of the learnings at this stage of the research process (Cox and Enis, 1972) and it is believed that the researcher followed a logical and well documented approach in developing such a working model.

The **Probity** dimension contained five test variables: confidence, truthfulness, integrity, professional standing, and reputation, and focuses on honesty.

The **Equity** dimension contained six test variables: fair-mindedness, benevolence, caring, values, sincerity, and helpful advertising, and pivots on brand trust being an implied contract with mutual expectations and perceived obligations.

The **Reliability** dimension also contained six test variables: warranties, dependability, quality consistency, quality standing, predictability and corporate name guarantee, relating to the firm having the required expertise to perform its business effectively and reliably.



The **Satisfaction** dimension involved five test variables: personal experience, opinion, the purchasing duration, the experience of peers, and the standard of delivery, with anticipated levels of satisfaction/performance having an important effect on the duration of trust.

### **3.6.3 Anchoring of the Variables to the Literature**

It has been stated that each of the variables presented within the qualitative research stage, and included within the postulated correlates of brand trust model, were gleaned from the academic literature. Whilst a fuller coverage of these variables was provided within the literature review chapter, the initial anchoring of the variables will be provided here.

#### **3.6.3.1 Probity Variables**

*Confidence.* Trust has been defined as a “willingness to rely on an exchange partner in whom we have confidence” Moorman, Deshpande and Zaltman (1993); echoing many other authors, including Anderson and Narus (1990) and Larzelere and Huston (1980).

*Truthfulness.* This has been related to ‘character’ in general and specifically to communications (Schlenker, Helm and Tedeschi (1973); Gahagan and Tedeschi (1968).)

*Integrity.* Trustworthy parties have been associated with high integrity by Butler and Cantrell (1984) and Hunt, Chunko and Wilcox (1984).

*Professional Standing.* Trust includes a number of expectations concerning standards of behaviour and perceived obligations (Madhok (1995); Bradach and Eccles (1989)).

*Reputation.* In sustained co-operative exchange, concern for reputation is likely to be an important aspect of trust (Jarillo, 1988).

#### **3.6.3.2 Equity Variables**

*Fair-mindedness.* To help to elicit trust firms need to develop a respect for fairness (Anderson and Weitz, 1992).

*Benevolence.* This variable focuses on the motives and intentions of the exchange partner (Rempel, Holmes and Zanna, 1985).

*Caring.* A caring attitude may assist partners in choosing the necessary behaviour for a new situation (Arrow, 1974).

*Values.* This variable relates to the firm having similarity of values to the intending purchasers, with the firm relating to its social context (Bidault and Jarillo, 1997).

*Sincerity.* Similarly, a company’s perceived sincerity may constitute a basis for trust by providing a framework for decision-making (Crosby, Evans and Cowles, 1990).

*Helpful Advertising.* Implicit stimulants of trust, such as advertising, may also form the basis for judging trustworthiness (Swan and Nolan, 1985).

#### **3.6.3.3 Reliability Variables**

*Warranties.* An explicit guarantee may act as a proxy for trust and operate as an order winner (Schurr and Ozanne, 1985).

*Dependability.* An image of dependability implies an intentionality to provide similar levels of service quality (Rempel and Holmes, 1986).

*Quality Consistency:* Confidence on the part of the trusting party may result from a belief that the trustworthy partner is associated with consistent quality (Altman and Taylor, 1973).

*Quality Standing:* Product quality, as a key influence in source credibility, may give tangibility to building confidence about an exchange partner (Dwyer, Schurr and Oh, 1987).

*Predictability.* Predictability has been suggested as a source of trust, requiring not only a relationship but also courtship by a partner (Lewicki and Bunker, 1995).

*Corporate Name Guarantee.* A strong corporate name can become another implicit stimulant of trust (Schurr and Ozanne, 1985).

#### **3.6.3.4 Satisfaction Variables**

*Personal Experience:* Experiences may play a role in trust by making it possible to test and recheck the realities of the firm related to preconceived expectations (Scanzoni, 1979).

*Opinion:* This variable relates to the satisfactory worth of word of mouth related to the reputation of a firm (Jarillo, 1988).

*Purchasing Duration.* This factor relates to the history of purchase behaviour with a firm, correlating trust with a longer-term orientation to purchase (Ganesan, 1994).

*Experience of Peers:* It has been suggested that the mechanisms of trust production need to be socially legitimised before real trust can emerge (Zucker, 1985). Thus we are testing the experience of others as a predictor of individual trust.

*Delivery.* This variable checks on the validity of continued delivery satisfaction as a foundation of trust (Ganesan, 1994).

#### **3.6.4 Working Hypotheses Development**

The planned research data collection methods do not include experimental or longitudinal studies and thus causality is not the central issue within the research. The working hypotheses at this stage relate to an association or positive correlation being found between the twenty two 'associative' variables and 'brand trust', the dependent variable. The hypotheses developed at this stage of the research process were:

Hi) Brand trust will be positively correlated with variables representative of all four of the dimensions (probity, equity, reliability and satisfaction).

Hii) Each of the twenty-two variables will positively correlate with brand trust.

Having developed the postulated model of the correlates of brand trust and as a first attempt at testing the above hypotheses, a pilot quantitative survey took place in 1998, the details of which are included within the next section.



### **3.6.5 Quantitative Pilot Research**

This section will describe the approach taken for the quantitative pilot survey and present a summarised version of the ‘findings’ for this stage as an input to the broader research strategy.

#### **3.6.5.1 The Pilot Quantitative Study - Introduction**

A sample comprising middle managers, junior managers, clerical personnel and operatives employed by two large organisations in the north of England was surveyed in 1998. 106 personal interviews were conducted at the premises of the two organisations, and the participants were requested to complete a questionnaire in their capacity as customers. Each participant, subject to personal usage experience, was requested to complete a six-page questionnaire which related to six companies well known in the UK. The questionnaires contained companies from three categories: two banks (Barclays and TSB); two retailers (Marks and Spencer and Littlewoods); and two domestic appliance manufacturers (Hoover and Philips). The categories and brands were selected as well known and accessible, and as such it was hoped that usage criteria of brands would be easily attained. Participants were asked to select three of these firms, one from each category, and complete the questionnaire, but only if they had personal experience as a customer of the chosen firm. The breakdown of the full sample is shown in Table 3.7 below. The questionnaire contained 23 seven-point semantic differential rating scales (1=Low, 7=High), one for each of the 22 independent variables and one concerning brand trust, the dependent variable (See Appendix 1 for Questionnaire). The issue of questionnaire design will be covered in a later section of this chapter relating to the main sample questionnaire instruments.

The research stage hoped to establish a relationship between brand trust and the postulated 22 correlates of brand trust, and show that brand trust was related to groupings of these variables (‘dimensions’). The specific hypotheses are stated below, and reflected in a model of the postulated correlates of brand trust shown in the previous section (3.6.1).

#### **3.6.5.2 Working Hypotheses – Research Phase Two**

The specific working hypotheses were as follows:

- H i) Brand trust will be positively correlated with variables representative of all four of the dimensions (probity, equity, reliability and satisfaction).
- H ii) Each of the twenty-two variables will positively correlate with brand trust for at least one of the six selected firms.

	<b>Respondents</b>	<u>No.</u>	<b>Responses</b>	<u>No.</u>
Sex:	Females	64	Barclays	43 )
	Males	42	TSB	39 ) 82
		106	Marks and Spencer	90 )
Education:	Non-graduates	45	Littlewoods	13 ) 103
	Graduates	61	Hoover	45 )
		106	Philips	41 ) <u>86</u>
Age:	< 36	42		271
	≥ 36	64		
		106		

**Table 3.7: Breakdown of Respondents and Responses**

### 3.6.5.3 Hypothesised Brand Trust Model

The model, developed as a result of the literature review and qualitative research amongst consumers, postulated that brand trust could be related to four dimensions, probity, equity, reliability and satisfaction, which were associated with twenty-two 'associative' variables taken from the literature. In developing the 'model', illustrated in figure 3.4, guidance was taken from the findings from the earlier qualitative research. In particular, the 'Equity' set of variables had caused debate, with respondents had having mixed views as to whether these 'softer' affective variables were applicable to organisations or brands. It was decided to retain these variables within the research and learn from them within this pilot quantitative phase. Performance of these and all other variables was to be monitored and reviewed in the development of future iterations of the model. The working model sought to reflect the multidimensional nature of brand trust (e.g. Morgan and Hunt, 1994), and emphasised both the behavioural aspects and the cognitive elements (Johnson et al, 1997). It was axiomatic to the study that both behavioural and cognitive factors must be present for brand trust to be facilitated.

### 3.6.5.4 Multiple Regression Analysis –Pilot Quantitative Study

**H i) Brand trust will be positively correlated with variables representative of all four of the dimensions (probity, equity, reliability and satisfaction).**

**A high correlation existed between Brand Trust and the Four Dimensions of Probity, Equity, Reliability and Satisfaction. Hypothesis Hi is found to be upheld.**

Analysis of the pilot quantitative research started by using the full sample to regress brand trust against the 22 anticipated correlates, employing step-wise multiple regression. As shown in Table 3.8 below, seven variables entered the resulting equation, which had an adjusted  $R^2$  of .787 ( $F = 143.89$ ; Significance  $F = .0000$ ). Six were positively correlated with brand trust - Confidence, Dependability, Personal Experience, Fair-mindedness, Quality



Standing, and Truthfulness had entered the multiple regression equation. The 'Predictability' variable was found to be inversely correlated, increasing as brand trust increased, but not linearly with the level of brand trust (See Appendix 2).

Dependent Variable: Level of Brand Trust

Independent Variables: 22

Variable	B	SEB	Beta	T	Sig T
Confidence	.1896	.0623	.1924	3.050	.005
Dependability	.1707	.0634	.1509	2.691	.01
Personal Experience	.1655	.0469	.1694	3.528	.0005
Fair-mindedness	.2641	.0422	.2534	6.257	.0000
Quality Standing	.1583	.0579	.1346	2.733	.01
Predictability	-.1145	.0388	-.0961	-2.955	.005
Truthfulness	.2062	.0474	.1937	4.348	.0000
Multiple R	.890				
R <sup>2</sup>	.793				
	.787				
Standard Error	.712				

		Analysis of Variance			
		DF	Sum of Squares	Mean	Adj. R <sup>2</sup>
Regression	7	510.18		72.88	
Residual	263	133.21		.51	
		F = 143.89	Sign F = .0000		

**Table 3.8: Pilot Test Results of Multiple Regressions: Full Pilot Sample**

The 1998 study results found variables in the main sample regression equation which represented all four of the then hypothesised dimensions of brand trust – Probity, Equity, Reliability and Satisfaction.

**H ii) Each of the twenty-two variables will positively correlated with brand trust for at least one of the six selected firms.**

**Whilst not quite achieving a positive correlation with all twenty-two of the variables, a positive correlation with fifteen of the twenty-two variables was found at the full or split sample level. Partial support for Hypothesis Hii) was claimed.**

The 1998 study proceeded to undertake regression analysis at experiment level, this produced a selection of R<sup>2</sup> ranging from .918 (Philips) to .697 (Hoover). The analysis below showed that an additional eight variables were included within the equations for the individual companies (Barclays, TSB, Marks and Spencer, Littlewoods, Hoover and Phillips). The eight additional variables produced by the experiment level regressions were: delivers; consistency of quality; experience of peers; name guarantee; opinion; purchasing history; sincerity and values. Thus fifteen of the twenty-two variables were found to be statistically significant (at the  $\leq .01$  level) in either the equation for the full sample or in at least one of the equations for any one firm.

Dependent Variable = Level of Brand Trust  
Independent Variables = 22

<u>Firm:</u>	<u>Adjusted r<sup>2</sup></u>	<u>Variables in Equation</u>
Barclays	.842	Confidence, "Delivers", Dependable
TSB	.703	Personal Experience, Fair-mindedness, Experience of Peers
Marks and Spencer	.748	Purchasing History, Confidence, Quality Standing, Opinion Truthfulness, Values
Littlewoods	.911	"Delivers", Fair-mindedness
Hoover	.697	Consistency of Quality, Fair-mindedness, Name Guarantee Truthfulness
Philips	.918	Purchasing History, Confidence, Consistency of Quality Fair-Mindedness, Sincerity

**Table 3.9 Quantitative Pilot Brand Level Results**

**There were major differences in the brand trust profiles of Firms, with Marks and Spencer strongest and TSB weakest**

The sample was split by each of the six firms, with the means for the 22 variables and brand trust calculated for each of the firms. The brand trust scores produced ranged from 5.59 (Marks and Spencer) to 3.49 (TSB), with 4.02 (Barclays), 4.31 (Littlewoods), 4.40 (Hoover), and 4.76 (Philips), in between. The scores for the 22 variables, with means for each of the Four Dimensions was also calculated, these were very consistent with the overall brand trust rankings for the brands. For example Marks and Spencer gained the highest mean ratings for all of the four dimensions, whilst TSB consistently gained the lowest mean score (Appendix 3). The other point noted was that the Equity Dimension consistently had the lowest overall set of mean ratings for all brands. Reputation recorded the highest values and benevolence the lowest for both the full sample and by sample splits.

**Females were more trusting of firms, but there was little variation by education or age Splits**

Sub samples were generated by sex, education (non-graduates and graduates), and age (36 and under vs. older), as shown in Table 3.10 on the following page. There was a slight bias towards non-graduates and older respondents giving higher ratings in general to the 22 correlates of brand trust, and to brand trust, but these differences were very small. The general picture, therefore, was one of similarity rather than divergence on education and age when grouping the six companies together. The only marked difference was between non-graduates and graduates concerning the Equity variables. The largest differences, although still relatively small on a seven point scale, were by sex. Females rated the Equity, Reliability and Satisfaction dimensions on average at a higher level than males (p .05). In fact the means for females on twenty-one of the variables, and brand trust, were higher than those for males, and only predictability was rated lower. Females were thus, in general, more trusting of firms than were males.



	<u>Full Sample</u> (n=106) <u>mean*</u>	<u>Sex</u>		<u>Education</u>		<u>Age</u>	
		<u>Female</u> (n=64) <u>mean</u>	<u>Male</u> (n=42) <u>mean</u>	<u>Non-grad.</u> (n=45) <u>mean</u>	<u>Graduate</u> (n=61) <u>mean</u>	<u>&lt;36</u> (n=42) <u>mean</u>	<u>≥36</u> (n=64) <u>mean</u>
Reputation	5.44	5.50	5.35	5.44	5.55	5.57	5.37
Professional Standing	5.28	5.35	5.21	5.29	5.27	5.38	5.23
Integrity	4.87	4.85	4.90	4.82	4.90	4.84	4.89
Confidence	4.80	4.95	4.63	4.90	4.74	4.75	4.84
Truthfulness	4.65	4.67	4.66	4.67	4.63	4.52	4.76
<b><u>Average for Probability values</u></b>	<b><u>5.01</u></b>	<b><u>5.07</u></b>	<b><u>4.95</u></b>	<b><u>5.02</u></b>	<b><u>5.01</u></b>	<b><u>5.01</u></b>	<b><u>5.02</u></b>
Helpful Advertising	4.60	4.64	4.55	4.79	4.48	4.63	4.58
Sincerity	4.48	4.55	4.38	4.52	4.46	4.56	4.43
Fair-Mindedness	4.31	4.37	4.22	4.44	4.23	4.22	4.37
Similar Values	3.99	4.10	3.82	4.14	3.88	3.77	4.13
Caring	3.94	4.03	3.78	4.01	3.90	3.71	4.07
Benevolence	3.80	3.90	3.63	3.98	3.64	3.70	3.86
<b><u>Average for Equity Variables</u></b>	<b><u>4.19</u></b>	<b><u>4.27</u></b>	<b><u>4.06</u></b>	<b><u>4.31</u></b>	<b><u>4.10</u></b>	<b><u>4.10</u></b>	<b><u>4.24</u></b>
Quality Standing	5.19	5.33	4.99	5.27	5.14	5.26	5.15
Quality Consistency	5.09	5.16	4.98	5.13	5.07	4.96	5.18
Guarantee from Corporate name	5.08	5.20	4.90	5.19	5.01	5.13	5.05
Predictability	5.06	5.04	5.08	5.05	5.07	4.97	5.10
Warrantees	5.04	5.13	4.88	5.00	5.06	5.01	5.06
Dependability	5.03	5.16	4.87	5.06	5.00	5.02	5.05
<b><u>Average for Reliability Variables</u></b>	<b><u>5.08</u></b>	<b><u>5.17</u></b>	<b><u>4.95</u></b>	<b><u>5.12</u></b>	<b><u>5.06</u></b>	<b><u>5.05</u></b>	<b><u>5.10</u></b>
Opinion	5.09	5.16	4.98	5.20	5.01	5.32	4.94
Experience of Peers	4.99	5.06	4.88	5.03	4.96	5.11	4.91
Personal Experience	4.91	5.07	4.67	4.96	4.88	4.68	5.05
Purchase Duration	4.90	5.01	4.74	4.80	4.97	4.58	5.10
Delivers Satisfaction	4.87	5.01	4.70	4.96	4.93	4.97	4.81
Brand trust	4.65	4.75	4.50	4.64	4.16	4.63	4.68
<b><u>Average for Satisfaction Variables</u></b>	<b><u>4.95</u></b>	<b><u>5.06</u></b>	<b><u>4.79</u></b>	<b><u>4.98</u></b>	<b><u>4.94</u></b>	<b><u>4.93</u></b>	<b><u>4.96</u></b>

\* 7 point Likert Scale

(1=Low, 7 = High)

**Table 3.10: Pilot Sample Mean Values by Demographic Groupings**

### 3.6.5.5 Data Limitations

#### Sample size – Multiple Regression

The value of  $R^2$  is influenced by the number of predictor variables relative to the sample size (Hair, et al. 1998). A number of different rules of thumb have been proposed and suggest that the number of observations should be equal to at least 10 to 15 times the number of predictor variables (McDaniel and Gates, 1998). This means that for the analysis at the total sample level, the criteria have been met, whereas analysis at the sub-sample (company) level has not met this rule of thumb.

As an exploratory stage of research, only the literature and qualitative research groups amongst UK consumers conducted in 1997 have been used to anchor the selected 22 variables into our four dimensions. With sample splits, and a relatively small sample size for

this 'pilot' study, the database was not sufficient to conduct, with certainty, a factor analysis of the variables to check how they loaded with dimensions.

#### **3.6.5.6 Relevance for Later Research Phase**

A wide selection of variables, 15 out of the 22, entered the main or sub-sample regression equations, suggesting a firm foundation for the development of the working 'brand trust model', with a wide number of variables. The four dimensions of Probity, Equity, Reliability, and Satisfaction were represented by variables within the main sample regression equation, which suggested that they should be maintained in future phases of research.

Differences in mean scores relating to demographics could be utilised in developing specific hypotheses for later stages of research.

### **3.7 Theory Development and Model Building II**

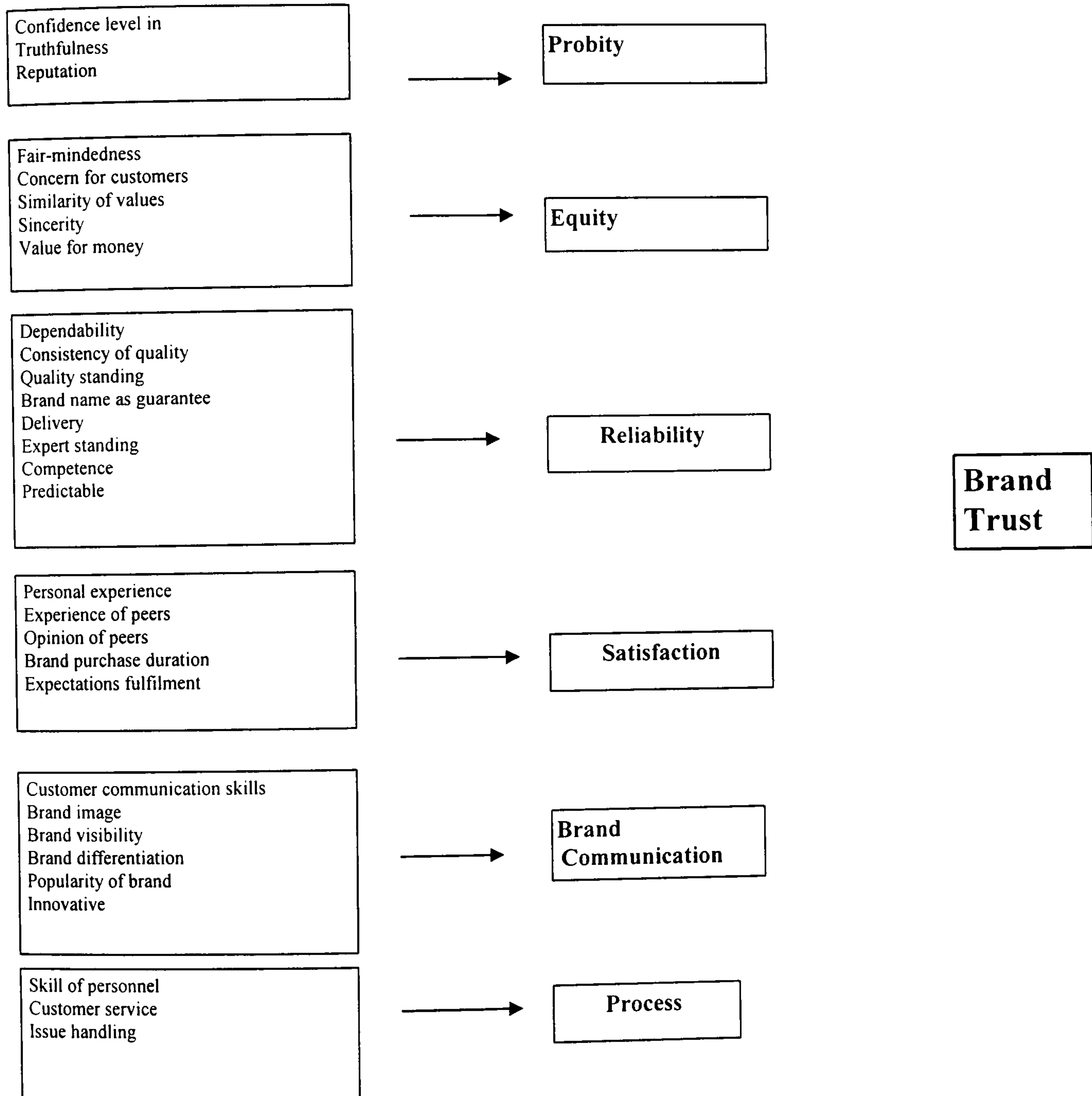
In response to the results from the pilot quantitative research stage, additional literature searching activity, the comments of peer reviewers on a published article on the subject (Michell, Reast and Lynch, 1998), and further interpretation of the consumer perspective expressed within the qualitative research groups, an expanded version of the postulated dimensions and correlates of brand trust model was developed. This new working model of the dimensions and correlates of brand trust included thirty variables, with sixteen variables drawn directly from the earlier pilot stage of research, two being modifications of earlier variables, and the additional twelve drawn from the expanding published literature base (Figure 3.5).

The model was expanded to include two additional dimension areas, 'Brand Communication' and 'Process'. These two dimensions were added to try to establish the relevance of 'branding' and marketing communications, and measures which related to personal interaction between the customer and the brand (or brand owner). Following the quantitative pre-test, and taking account of some of the responses within the qualitative research phase, the model utilised sixteen of the original twenty-two variables in their existing form, with some other amendments and additions as follows. 'Professional standing' was remodelled as 'Expert Status', 'Caring' was replaced by 'Concern for Customers', 'Helpful Advertising' was replaced by 'Customer Communication Skills', and 'Company name is a guarantee' was replaced by 'Brand name is a guarantee'. Based upon non-appearance within earlier regression equations and poor response within the earlier qualitative pre-test research, a small selection of variables were removed – 'Integrity' and 'Warranties'. The new working model thus had ten additional variables included for analysis: 'Value for Money'; 'Expectations Fulfilment'; 'Brand Image'; 'Brand Visibility'; 'Brand Differentiation'; 'Popularity of the



brand'; 'Innovative'; 'Skill of Personnel'; 'Customer Service' and 'Issue Handling'. In extending the model from 22 to 30 variables it was accepted that the support of hypothesis seeking to gain positive correlations with all variables would be more difficult to achieve, it was however felt that in so doing, more would be learnt about the dimensions and correlates of brand trust. The Cronbach Alpha scores for the reliability of the scales will provided later within this chapter (Section 3.13.2.4), but the six scales gained Alpha's in excess of .7, with only one exception.

### 3.7.1 The revised Working Model



**Figure 3.5: Further Working Model of Postulated Dimensions and Correlates of Brand Trust**

### **3.7.2 Anchoring of the Dimensions and Variables to the Literature**

Just as the earlier iteration of the ‘model’ had been anchored to the literature, the variables within the second version are similarly anchored. For the sake of brevity, the section below will focus on the new variables within the ‘model’. The variables shown with an asterisk are the newly introduced variables for the updated working model.

#### **3.7.2.1 Probity Dimension and Variables:**

Confidence in (as before )

Truthfulness (as before)

Integrity (removed)

Reputation (as before)

#### **3.7.2.2 Equity Dimension and Variables:**

Fair-mindedness (as before)

Concern for customers (prior caring – change to cares about customers)

Similar values (as before)

Sincerity (as before)

\*Value for money (Dyson, Farr & Hollis, 1996)

#### **3.7.2.3 Reliability Dimension and Variables:**

Warranties (removed)

Dependable (as before)

Consistent quality (as before)

Quality standing (as before)

Brand name guarantee (was ‘Company name’, same literature sources)

Predictable (as before)

Always delivers (as before)

Expert standing (was ‘Professional standing’ Crosby, Evans & Cowles, 1990; Moorman, Deshpande & Zaltman, 1993; Ganesan, 1994)

Competence (Morgan & Hunt, 1994; Smith & Barclay, 1997; Selnes, 1998)

#### **3.7.2.4 Satisfaction Dimension and Variables:**

Personal experience (as before)

Experience of peers (as before)

Opinion of peers (as before)

Brand purchase duration (as before)

\*Fulfils expectations (Blau, 1964; Rotter, 1967; Dwyer, Schurr & Oh, 1987; Selnes, 1998; Oliver, 1980)

#### **3.7.2.5 Process Dimension and Variables:**

\*Skilled personnel (Moorman, Deshpande & Zaltman, 1993)



\***Customer service** (Selnes, 1998)

\***Issue handling** (Selnes, 1998)

### **3.7.2.6 Brand Communication Dimension and Variables:**

**Customer communication** (was 'Helpful Advertising', reference support as before, additionally Selnes, 1998)

\***Brand image** (Selnes, 1998)

\***Brand visibility** (Dyson, Farr & Hollis, 1996)

\***Brand differentiation** (Dyson, Farr & Hollis, 1996)

\***Popular brand** (Dyson, Farr & Hollis, 1996)

\***Innovations** (Dyson, Farr & Hollis, 1996)

In expanding the working model, the researcher had considered the academic literature more broadly as it progressed in the search for the possible dimensions and correlates of brand trust. For example, the brand equity literature was considered for possible antecedents, this was particularly in the case of the two new hypothesised dimensions 'Process' and 'Communication'

## **3.8 Pre-Test Stages I, II and III**

### **3.8.1 The Pre-Test Process**

The process followed for this piece of the research was common to many studies within the area of brand extension (Broniarczyk and Alba, 1994; Aaker & Keller, 1990; Loken & Roedder John, 1993; Keller and Aaker, 1992; Boush and Loken, 1991), encompassing a number of pre-test stages in order to select appropriate categories, brands and possible brand extensions for consideration within the study. The researcher also took account of issues made clear in the literature which concerned the selection of a single brand from each category, and thus not being able to disentangle brand from category effect (Broniarczyk and Alba, 1994). The study design used for this research encompassed the use of 5 categories, including a fictitious brand in 3 categories and either one or two 'real' brands in each category.

The study was developed to include several categories in order to have the potential for wider applicability of the research findings. The study included more than one brand per category to overcome issues of interpretation of brand versus category effects. The study included fictitious brands in order that other extraneous brand associations could be controlled for within the experiment (Keller and Aaker, 1992), but also included carefully pre-tested real brands so that any findings would have more obvious application to the 'real world' (external validity).

### **3.8.2 The Use of Dummy or Fictitious Brands**

Several studies within the area of brand extension have used the technique of incorporating fictitious brands in order to test for specific effects or associations (Keller and Aaker, 1992; Park, Milberg and Lawson, 1991; Boush and Loken, 1991; Dacin and Smith, 1994). An example of the use of this technique was found in work by Keller and Aaker (1992) in which the authors selected the chips (crisps) category in the US (since respondents were believed to have good purchase and usage experience) and introduced two ‘dummy’ brands ‘Cranes’ and ‘Medallion’ crisps. The authors wished to manipulate the perceived quality of the brand, and so rationalised their methodology as follows:

“to avoid confounding quality with other possible brand associations, we used hypothetical brands that combined unfamiliar brand names with information about quality”.

Other authors (Boush and Loken, 1991) have used a similar rationale, using ‘Brand B’ and ‘Brand G’ within the food and electrical goods categories in order to look at the impact of brand width (whilst controlling other variables). Park, Milberg and Lawson (1991), studying the impact of prestige on the acceptance of brand extension, selected two real brands ‘Timex’ and ‘Rolex’ and included a fictitious brand (ABC Watch company). The authors argued that “comparing reactions to Timex and Rolex extensions with reactions to ABC extensions allows us to assess the impact of brand concept consistency”.

### **3.8.3 The Use of ‘Consumer Reports’ Briefing Information**

In incorporating fictitious brands within their research studies, various authors had utilised US style ‘consumer reports’ information to provide background information on the brands within the research (Park, Milberg and Lawson, 1991; Dacin and Smith, 1994; Boush and Loken, 1991; Keller and Aaker, 1992). This information enabled the researcher to manipulate key variables and enabled the respondent to establish some level of familiarity with the brand(s) prior to conducting the research. An example of the ‘Consumer Reports’ type background information for fictitious brands is provided below (Keller and Aaker, 1992).

For the high quality brand, the following description was used:

“The company’s main product is Medallion Potato Chips. This brand has shown steady sales growth in the 30 years of its existence. Consumers have shown a great deal of loyalty to Medallion and are willing to pay a premium price for the potato chips. Retailers also like the product and keep it well-stocked in a prominent position in the store.”

For the average quality brand, the following description was used:

“The company’s main product is Crane’s Potato Chips. This brand has shown small sales growth in the 15 years of its existence. Consumers have shown some loyalty to Crane’s and will sometimes pay a premium price for the potato chips. Retailers keep it well-stocked, but not in a prominent position in the store.”



The research approach adopted for this PhD study included, in common with the above studies, use of ‘consumer report’ style briefing information for the fictitious brands within the study. However to avoid any issues of brand name association which may have arisen with a newly created ‘dummy’ brand name, the researcher labelled any fictitious brand as ‘Brand L’ (Boush and Loken, 1991; Park, Milber and Lawson, 1991).

#### **3.8.4 Pre-Test Stage I - Category Selection**

The objective of this pre-test stage was to develop a shortlist of categories where consumers had good familiarity and knowledge of category.

An initial category pool of 90 categories was generated from the Marketing Pocket Book (1998), Yellow Pages (1999) and a supermarket inventory check.

1. The researcher undertook an initial sample review, and, using the selection criteria and consideration of pairings of suitable brands within the categories, reduced the category pool down to 46.
2. The researcher undertook a limited sample pre-test questionnaire (See Appendix 4) amongst 16 consumers in order to refine the category pool downwards on the basis of consumers’ perceived familiarity, knowledge and prestige perceptions of the categories. The stage provided a useful, simple, reduction in suitable categories down to a possible 9 categories (Rangaswamy, Bourke and Oliva, 1993).
3. The researcher then undertook a pre-test stage amongst 51 consumers with the 9 remaining categories in order to reduce it to a maximum of five categories to be utilised within the main sample study. Specific brands were also considered as part of the category selection criteria.

#### **3.8.5 Pre-Test Stage II - Brand Selection and Dummy Selection**

The objective of Pre-Test Stage II was to select brands for each of five categories, a ‘lead brand’ or Brand 1, with higher brand trust level, and ‘following brand’ or Brand 2 with lower brand trust level, were required for each category.

1. The above final category selection stage was the foundation for the brand selection stage, with the 51 consumers being asked about their familiarity, usage, brand trust and prestige perceptions of the brands within the questionnaire (Rangaswamy, Bourke and Oliva, 1993). The categories included within this pre-test questionnaire (see Appendix 5) were coffee, watches, breakfast cereals, tea, pens, crisps, biscuits, frozen foods and grocery retailers. Respondents were asked to provide their perceptions of five brands within each category. Additionally, at this stage, the researcher conducted a pre-test amongst 76 respondents, specifically looking at the Internet retailer category on the same criteria as above, to ascertain whether Internet retail could be included as a category within the main sample. As a result of these pre-test exercises, five categories were selected to be

progressed to the main sample - pens, grocery shops, coffee, tea and internet retail. Two real brands were selected for each category except for Internet retail, where, as of October 2000, only Amazon met the criteria for selection in terms of awareness and usage figures (see Appendix 6).

2. In parallel to the above pre-test exercise, the researcher conducted pre-testing amongst 52 respondents (16 university staff and 36 consumers) to gather brand trust and prestige perceptions, based upon the 'Consumer Reports' Data constructed for the fictitious brands to be used within the survey. The questionnaire (see Appendix 7) covered eight product categories, with two fictitious brands per category ('Brand L' and 'Brand M'). The responses were analysed in order to check that the dummy brands had been manipulated successfully in terms of the 'brand trust', which they elicited amongst respondents. Three dummy brands were selected for inclusion within the main sample in conjunction with the brand and category selection final review. The dummy brands were included within the research in order to establish a 'category level response' from consumers (relative to known brands), and as such it was not felt necessary to include dummy brands within every category.
3. The finalised list of categories, real and fictitious brands are shown below, with their respective brand trust mean (scale 1-7) familiarity and usage scores.

Category	Brands	Brand Trust	Awareness	Usage
Pens	Parker	5.88	100%	98%
	Pilot	3.15	61%	45%
Grocery Shops	Sainsbury	5.74	100%	96%
	Co-op	3.84	98%	75%
	'Brand L'	3.45		
Coffee	Nescafe	5.56	100%	92%
	Maxwell House	4.84	100%	76%
Tea	Tetley	5.29	100%	80%
	Typhoo	4.63	100%	53%
	'Brand L'	4.53		
Internet	Amazon.com 'Brand L'	4.57	71%	28%

**Table 3.11: Pre-Test Results of Brand trust Profile, and Usage and Awareness of Brands**

4. It can be seen that the 'consumer reports' information had generated lower brand trust ratings for dummy brands than for the real brands.
5. The pre-test stage II successfully produced five categories, with brands conforming to the real 'brand 1' (higher brand trust) and 'brand 2' (moderate brand trust), and three categories including a lower brand trust rated fictitious dummy brand to assist in measuring 'brand' effects. The only operational problem was the inability to find a second real brand within the Internet retail category; the next brand, Lycos, was judged to not have a sufficiently high awareness and usage profile for inclusion.



### 3.8.6 Pre-Test Stage III - Brand Extension Selection

1. The objective of Stage III of the pre-test methodology was to generate and validate brand extensions for each of the five product categories produced by Stage I and II above. The brand extensions had to conform to the descriptions 'line extension', 'related extension', and 'unrelated extension' (c/f Broniarczyk and Alba, 1994; Keller and Aaker, 1992; Boush and Loken, 1991).
2. This process was in three stages; new brand extension ideas for the selected categories were gathered via a sample of 10 respondents (between 13 and 22 ideas generated for each of the five product categories – using five consumers and five students); an initial review was conducted amongst 8 respondents; and finally, an 'expert review' was undertaken amongst a panel of 10 marketing academics from two UK Business Schools. The idea generators, respondent reviewers, and expert reviewers were all using the same 1-9 scale to define the different types of extensions.
3. Both the brand extension idea generators and the reviewers were using the same defined descriptors of 'line extension', 'related extension', and 'unrelated extension'. The briefing information for the reviewers, for example, is shown below together with Figure 3.6, and the full questionnaire shown in appendix 8:

Please read the following instructions very carefully prior to completing the attached sheets. You will be asked to put some 'new product' ideas into different 'categories' as outlined below - 'line extensions', 'related extensions' and 'unrelated extensions'.

The following three groupings relate to the similarity of 'new product' ideas which have been generated versus the original product category in which a brand may reside. It might help to think of a 9 point scale whilst you are rating the new product ideas - with a score of 1-3 being very similar to the original product area, a score of 4-6 being in some way related to the original product area, and a score of 7-9 being pretty much totally unrelated to the original product category.

1	2	3	4	5	6	<u>Scale</u>	7	8	9
[Line extension]			[Related Extension]			[Unrelated extension]			

**Figure 3.6: Brand Extension Categorisation Rating Scale**

#### Line Extension

A 'line extension' is a new product introduction by an established brand. This introduction is in many ways very similar to the products already available from a brand in a category. It may be a new flavour variant, new format, e.g. Giant Smarties, KitKat Chunky, etc. - these would score in the region of 1-3 on a 1-9 scale of similarity.

#### Related Brand Extension

A 'related extension' shares some similarities with the original brand and product offerings, but in some way is seen to move the brand from its original product category. Some core



elements may be maintained in this stretch into a new product category, e.g. Mars Milk, Mars Ice-Cream - these would score in the region of 4-6 on the above similarity scale.

#### Unrelated Brand Extension

The unrelated brand extension is much more of a shift away from a brand's original product category - with possibly a few broadly consistent elements, e.g. Marlboro Clothing, Bic Lighters, Virgin Financial Services - these would score in the region of 7-9 on the above similarity scale.

The result of this pre-test stage was the selection of three brand extension concepts for each of the five categories included within the main sample. Each brand (or dummy brand) faced the same set of three brand extension concepts - line, related and unrelated. These extension concepts are reflected within Table 3.12 below.

Category	Extension 1 Line Extension	Extension 2 Related Extension	Extension 3 Unrelated Extension
Tea	Lemon Tea	Café Chain	Spice Range
Coffee	Irish Coffee	Coffee Biscuits	Fresh Pasta
Pens	Fashion Pens	Writing Paper	Personal Computers
Grocery Retail	Home Delivery	Giftware	Legal Advice
Internet Retail	Branded Clothing	Personal Computers	Pensions

**Table 3.12 Categories and Brand Extension Concepts**

### 3.9 Survey Data Collection Method and Questionnaire Design

Having undertaken exploratory qualitative and pilot quantitative research, large sample data collection was required in order to test the hypotheses for this research. The researcher had various options in terms of collecting the data including personal interviews, telephone interviews, mail surveys and fax or email survey. The alternative survey methods and characteristics were considered (Aaker, Kumar and Day, 1998).

Survey Method	Characteristics
Personal interviews	The interviewer interviews the respondent in person. There is direct contact between the interviewer and the respondent. The environment (mood of the respondent and the interviewer, the time and place of the interview, etc.) affects the data collection process to a large extent. Costliest, and the most time-consuming form of data collection.
Telephone interviews	The interviewer interviews the respondent over the telephone. The interviewer has only verbal contact with the respondent. The environment plays a relatively minor role in the data collection process. Data collection cost is in between that of a personal interview and a mail survey.
Mail Surveys	The questionnaire is administered through the mail. The interviewer has no contact with the respondent. The environment plays no role in the data collection process. The least expensive form of data collection.
Fax Surveys	The questionnaire is administered through the fax. The interviewer may or may not have contact with respondent. The environment plays no role in the data-collection process. Data collection cost can be close to the cost of a mail survey, depending on whether the surveys are sent to local businesses or out of town.

**Table 3.13: Basic Survey Methods and their Characteristics**



Having considered the advice on survey method selection from Aaker, et al. (1998), and Malhotra (1999) and others, it was decided to adopt a data collection methodology of door to door delivery, and collection of questionnaires. In essence, this methodology was like a combination of personal interview method and mail surveys. It had elements of personal interview method, since there were personal interactions between the researcher and the respondent, and criteria for respondent inclusion were established by communication 'at the door'. It also had elements of a mail survey method since the questionnaire was self-completion by the respondents.

### **3.10 Rationale for the Chosen Methodology**

1. It was felt that a complete interview methodology would be too expensive and time-consuming to obtain the data required within budget and time-frames (Malhotra, 1999; McDaniel and Gates, 1998).
2. The researcher felt that response rates would be improved if some personal contact and 'recruitment' took place for respondents, rather than a mail-out survey (McDaniel and Gates, 1998). The researcher had the opportunity to build a rapport with respondents.
3. The researcher had more control over the complex sample characteristics, ensuring that respondents met the necessary criteria in terms of product usage, and achieved the gender based quota requirements. The researcher was able to choose the specific areas by visual reference of house age and house value, as to the appropriate areas to be included within the sample. The researcher could, by proxy, obtain a quota sample with regard to academic level, without difficulty (Aaker, Kumar and Day, 1998).
4. The researcher had previous experience in both sales and marketing and was confident of having the necessary skills for the task of cold-calling on households (Aaker, Kumar and Day, 1998).
5. Self-administered methods allow more time for the respondent to think and 'digest' any information contained within a survey tool.

### **3.11 Survey Instrument Development**

As discussed, the survey instrument used for the main sample data collection was a questionnaire. In fact, a questionnaire was developed for each of the five product categories.

#### **3.11.1 Questionnaire Structure**

1. Each questionnaire had an opening statement about the research being related to PhD studies at Leeds University, and that respondents would be asked their opinions about new products (Keller and Aaker, 1992).

2. A completion incentive of £5 was highlighted on the front of the questionnaire in order to try to boost response rates (Malhotra, 1999).
3. Some basic demographic information was included in the next section, which included age category, gender, highest level of educational achievement, and occupation of main earner in household. This information was required to ensure that gender quotas were met, and enabled analysis of the subsequent database to evaluate hypotheses related to demographic variables.
4. The five main questionnaires had the same core design and layout, but varied in their inclusion of numbers of real brands (Internet only had one real brand) and inclusion of dummy brands (no dummy brands included within coffee or pens). As such, it will be most useful to describe a questionnaire including two real and one dummy brand, that of grocery shops.
5. The first main section of the grocery shops questionnaire included background information about Sainsbury and Co-op, as well as the 'Consumer Reports' briefing profile for the fictitious 'Brand L' (see Appendix 9).
6. Following respondents' familiarisation with this information about the three brands, they were requested to complete seven 7-point rating scales (1 = Low, 7 = High) for each of the brands (trustworthy, honest, fair-minded, reliable, satisfaction, image, customer service). While the choice of the semantic differential rating scales will be covered later in this chapter (section 3.11.5), the inclusion of these seven summary scales needs explanation.
  - 6.1 It was judged by the researcher, specifically for the fictitious brand, that respondents' ability to respond to a wide selection of rating scales would be hampered by the lack of familiarity or detailed knowledge of the brand. It was therefore decided that an abridged set of variables would be included for all three brands for consistency and to aid comparability. The seven variables were based upon brand trust, the dependent variable, and a representative variable from each of the six hypothesised brand trust dimensions.
7. The main section of the questionnaire included thirty-one 7-point semantic differential scale rating points (1 = Low, 7 = High), one for brand trust, the dependent variable and one for each of the thirty hypothesised correlates of brand trust. An illustrative scale was provided in each section of the questionnaire in order to facilitate correct questionnaire completion. The variables were randomised within the questionnaire. Brand trust was operationalised as high/low brand trust. The questionnaire was structured brand by brand, such that respondents completed the 31 rating scales for a brand and then evaluated extension concepts for that same brand prior to repeating the whole process for the next brand.

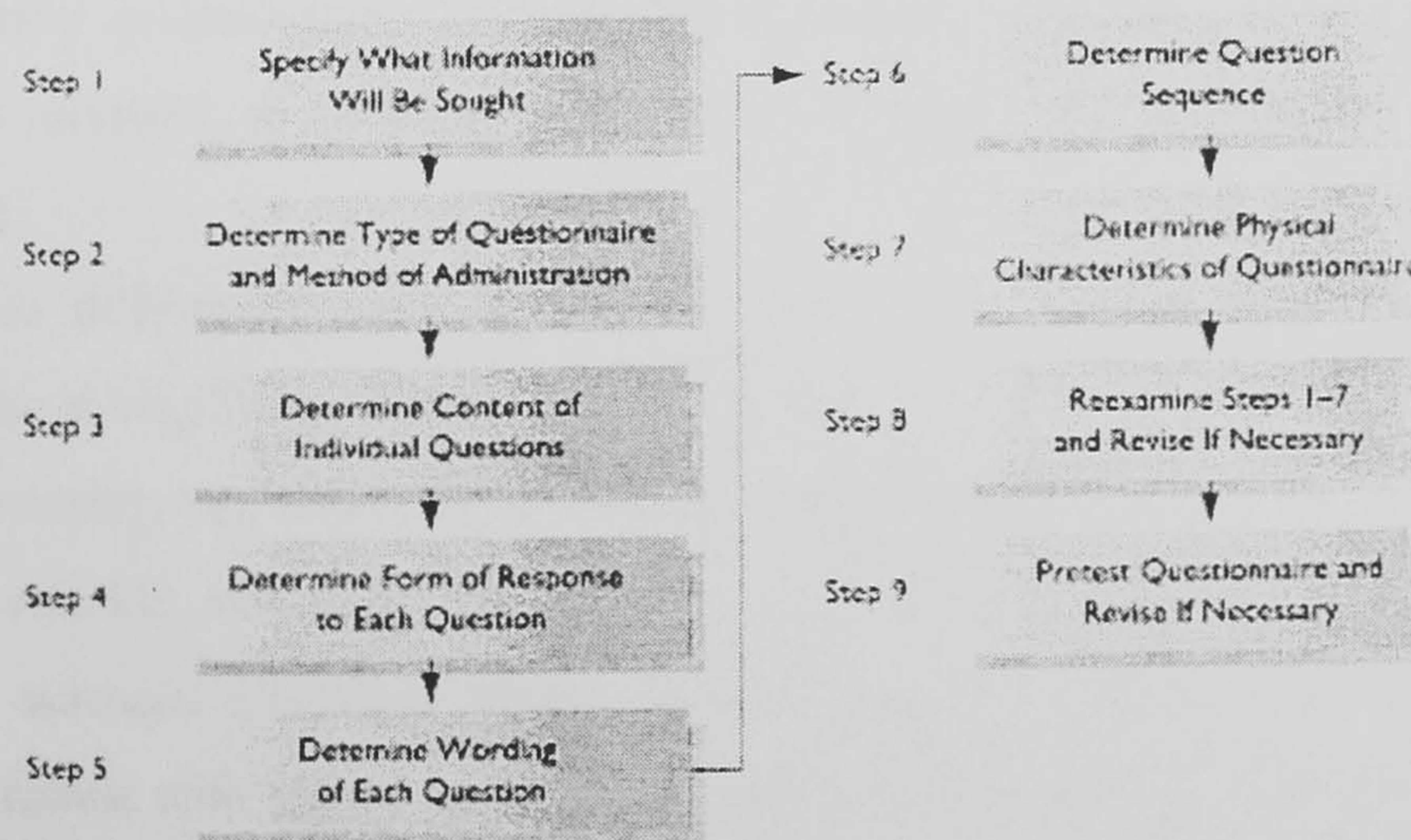


8. Having reminded respondents of the background information on the brand, respondents were asked to consider three brand extension concepts for the brand, and rate them using two 7-point semantic differential (1=low, 7=high) scales ('likely to try' and 'trust in brand to provide' the extension). Respondents completed the two rating scales for each of the extension concepts in turn. The brand extension concepts were randomised within this questionnaire section to remove an "ordering effect" amongst 'line', 'related' and 'unrelated' extensions (McDonald and Vangelder, 1998). Further discussion of question ordering will be considered within section 3.11.6.
9. Having completed the brand extension response scales for the first brand, respondents then repeated the process for subsequent brands. For the dummy or fictitious brand within the questionnaire, respondents only had to complete the extension response questions. As stated earlier, it was felt that respondents would be unable to complete a full set of 31 variable scales for the fictitious brands.

### 3.11.2 Rationale for Questionnaire Design

The approach followed in designing the questionnaire is very much in line with that recommended in the various process flow-charts associated with questionnaire design procedures (e.g. McDaniel and Gates, 1998).

It is believed that all nine steps of the questionnaire development procedure outlined in figure 3.7 (Churchill, 1999) have been followed in development of the questionnaire for this research.



**Figure 3.7 Procedure for Developing a Questionnaire**

The questionnaire was developed on the basis of clearly established research questions, with variables to be included within the questionnaire clearly anchored to the literature. The question content was structured with a wish to seek associations between brand trust (the dependent variable) and 30 hypothesised correlates of brand trust (forming dimensions). The



brand extension response questions were gleaned from similar studies within the area of brand extension, for example, 'Likely to try' (Aaker and Keller, 1990; Keller and Aaker, 1992).

### **3.11.3 Question Format**

The type of questions used, i.e. closed rating scales, were felt to be more relevant to the research hypotheses and the type of information required.

### **3.11.4 Closed Questions**

Respondents were asked to respond to several scales throughout the questionnaire, which allowed for capture of attitudes about brands and about possible brand extension concepts in a simple and timely manner (Aaker, Kumar and Day, 1998). This type of question was appropriate, brief, was easy to answer and made tabulation and analysis easier for the researcher. Clear instructions and illustrative rating scales were provided throughout the questionnaire. Given that the researcher wished to collect statistical data (and categorical demographic data) for establishing relationship between variables, the use of open-ended questions was not felt to be appropriate.

### **3.11.5 Question Scales**

The researcher wished to collect information on respondents' attitudes towards brands in a form that could be statistically analysed, and the semantic differential scale was selected as being appropriate for these data requirements. Construction of the scales began with selection of dichotomous, and opposite, pairs of words or phrases which could be used to describe the variables under consideration, namely the dependent variable, brand trust, and the 30 independent variables, in addition to the brand extension response measures (McDaniel and Gates, 1998).

The semantic differential scale has been shown to be a quick and efficient means of examining the strengths and weaknesses of a product or company image (McDaniel & Gates, 1998). Importantly, the semantic differential scale (Malhotra, 1981) has been shown to be sufficiently reliable and valid for decision making and prediction in marketing and the behavioural sciences (Barclay, 1964). The semantic differential scale has proven to be statistically robust with regard to corporate image research and application to more than one group (Clevenger and Lazier, 1965).

There is, however, no single set of scales, and therefore, scales had to be developed carefully by the researcher. The question of the number of intervals also had to be addressed, and, according to McDaniel and Gates, (1998), "researchers have found the seven-point scale to be the most satisfactory".

Malhotra (1999) has noted that "if the researcher wants to force a response or believes no neutral or indifferent response exists, a rating scale with an even number of categories should



be used". It was believed by the researcher that most respondents would have an opinion on the items and brands within the study, and, therefore a 7-point scale was utilised (McDaniel and Gates, 1998).

#### **3.11.6 Ordering Effects**

The researcher took account of the literature on ordering effects, with scale items, brand ordering and brand extension concepts being rotated via different versions of the questionnaire. An order effect occurs when the response to a particular question is influenced by the content of previous questions (Sudman and Blair, 1998). A 'partial rotation' was used for brands, trust related variables and brand extension concepts in order to minimise ordering effects.

#### **3.11.7 Question Ambiguity and Leading Questions**

The researcher was careful to ensure that the questionnaire was easy to understand and interpret and did not bias the responses of the respondents. A professional consumer market researcher, with much experience of questionnaire drafting and implementation, was used to review the questionnaire at the various development stages and provide useful feedback on 'consumerising' the survey instrument, and improving questionnaire instructions.

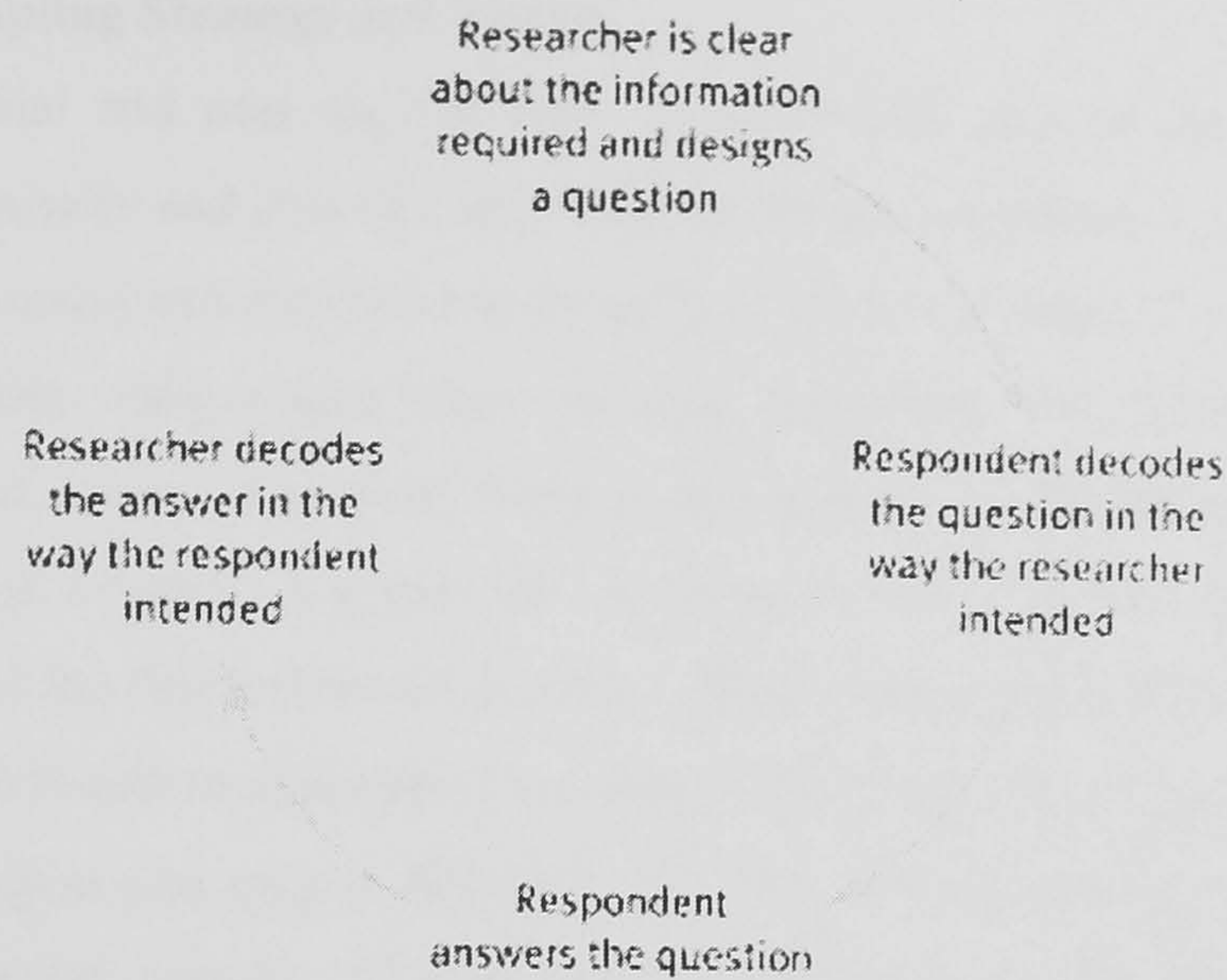
#### **3.11.8 Piloting**

The questionnaire was initially reviewed at a qualitative level using several administrative staff at Leeds University Business School, who were asked to read through the questionnaire, complete it and provide feedback. The piloting of questionnaires (Aaker, Kumar and Day, 1998; Malhotra, 1999; Gill and Johnson, 1991) has become a well-accepted methodological approach for correcting errors and biases in the questionnaire. Aaker, et al., (1998), as well as others, have recommended a reasonable sample size, representative of the main sample, to be used for an initial pilot of the questionnaire. As such, the researcher utilised the questionnaire developed for the 'tea' product category and collected and analysed an initial 40 questionnaires. The data collection, questionnaire completion and statistical analysis of the questionnaires, were found to be appropriate, and the remainder of the main sample was therefore duly collected.

#### **3.11.9 Questionnaire Development Process - Overview**

The various steps and stages followed by the researcher in drafting, refining, reviewing and piloting the questionnaire instrument have resulted in a reliable tool for collecting consumer evaluations and attitudes towards brands and their extension concepts. Saunders, Lewis and Thornhill (2000) have provided a framework (developed from Foddy, 1994) with the appropriate process approach to ensure a reliable questionnaire instrument, and these elements have all been addressed successfully.



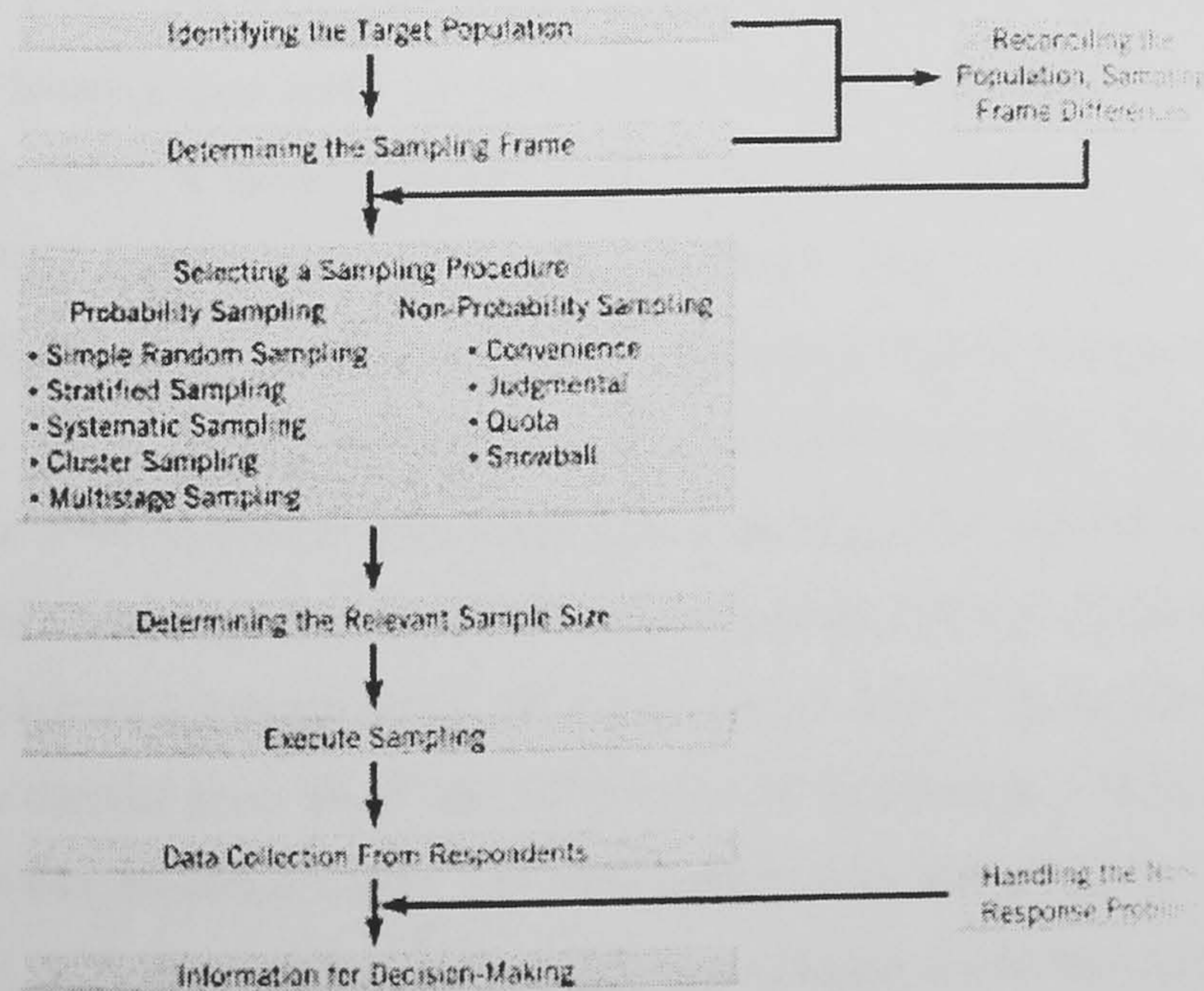


**Figure 3.8: Stages that Must Occur if a Question is to be Valid and Reliable**

**3.12 SAMPLING PROCESS**

The decisions taken within the sampling process are clearly critically important to the outcomes of a research project. Various authors have provided similar process-based models for deciding on the sampling approach to be adopted by a researcher (Aaker, Kumar and Day, 1998; McDaniel and Gates, 1998; Malhotra, 1999; Churchill, 1999; Sudman and Blair, 1998; Saunders, et al. 2000).

A process model within Aaker, et al., (1998) is used to illustrate the process adopted by the researcher in determining target population, sampling frame, sampling procedure and sample size.



**Figure 3.9: The Sampling Process Utilised in This Study**



### **3.12.1 The Sampling Strategy and Target**

Various operational and cost aspects were considered as part of the sampling strategy, including the proximity and cost of data collection for the researcher. It was decided that the target population could and should be set broadly as adults (20 years plus) of AB C<sup>1</sup>C<sup>2</sup> social profile drawn from villages and towns in East Yorkshire, UK. The social profile was stipulated so that issues over poor literacy and ability to understand or complete the questionnaire were avoided. A proxy for the social profile was the type of housing stock targeted as part of the data collection exercise. These were to be modern estate houses (less than 10 years old) in mid to upper price brackets in the towns and villages of Beverley, South Cave and Walkington (see map in Appendix 10). Part of the sampling criteria for the adults was prior or current usership of two brands within one of the five product category questionnaires. It was felt that due to the deliberately broad definition of the target sample (adults, 20+, ABC<sup>1</sup>C<sup>2</sup>), and the high penetration levels of most of the brands (as evidenced by pre-testing, section 3.8.5), there would be a relatively high incidence of the target sample within the wider population.

### **3.12.2 The Sampling Frame**

Clearly, a database of the specific target sample including brand usage behaviour for East Yorkshire addresses could not be obtained. It was therefore decided to use the Royal Mail Postal Address Book (North East, 1999/2000) as the sampling frame for the research (Appendix 11).

### **3.12.3 Sampling Method**

Postcode blocks within the three specified locations were randomly selected, and checks on conformance to housing type made to allow the blocks into the sample. The researcher then chose to sample 100% of these postcode blocks covering each street and house within the selected area. This methodology is a form of cluster sampling called 'area sampling' (Churchill, 1996). Here, the researcher randomly selects from discrete geographic areas and then chooses to either sample all of the area(s) selected (one-stage area sampling) or a proportion of the selected area(s) (two-stage area sampling). The research approach adopted for this study was a one-stage area sample design. Arguably, it is not a pure probability based sample, since judgmental criteria about the housing stock had to be applied to the postcode blocks randomly derived from the Postal Address Book. In addition, a minimum ratio of 1:2 males to females was desired in order to provide sufficient gender groupings for demographic analysis. Clearly, there are strengths and weaknesses associated with all sampling approaches (Malhotra, 1999), whether in terms of cost, time to collect, representativeness, and other issues. The sampling methodology applied in this research, it is argued, was appropriate for the study and should have provided a representative sample without obvious failings in terms



of sample bias (Sudman and Blair, 1998).

### 3.12.4 Sample Size

The sample size was in part driven by the data analysis techniques to be applied to the data. Within the research strategy it was planned to use various multivariate techniques, including multiple regression, One-Way and Two-Way ANOVA, and Chi-Square tests. With multiple regression, sample sizes are partially determined by the ratio of independent variable (IV's) to the dependent variable (DV), which conventionally should be at 10:1 or 15:1, and certainly not fall below 7:1 (Tabachnick and Fidell, 2001). For structural equation modelling, a recommended sample size is 200, or more. The number of sub-samples to be analysed (McDaniel and Gates, 1998) was also of concern, given the desire to analyse by gender, and also seek differences by age and educational level, and combinations of these variables.

### 3.12.5 Sample Structure

Data were collected across five different product categories, with respondents included within the sample on the basis of product usage criteria (screening). It was decided that two samples, each exceeding 200 respondents, would be collected. One sample would be based upon a combination of the five categories, with a target minimum of 40 respondents per product category. It was planned that, subject to conducting random 'run tests' across the combined sample, it could be analysed at both a total sample level, and also at the individual 'experiment' level. Following a brief pilot collection exercise using the 'tea product category', the rest of the data collection for the various categories took place.

Category	Sample (n)	% Male	% Female	% ≤ 40	% Over 40	% No Grad	% Grad	% ABC1	% C2DE
Tea	40	24	76	55	45	62	38	42	58
Coffee	41	18	82	51	49	68	32	33	67
Grocery Retail	39	19	81	50	50	47	53	56	44
Pens	44	42	58	55	45	39	61	60	40
Internet	40	68	32	67	33	28	72	65	35
<b>Total Sample (n=204)</b>	<b>100</b>	<b>34</b>	<b>66</b>	<b>55</b>	<b>45</b>	<b>49</b>	<b>51</b>	<b>51</b>	<b>49</b>

**Table 3.14: Combined Experiment Sample Demographic Breakdown by Category**

In total, a sample of 204 usable questionnaires was collected across the five categories, with a minimum sample size of 39 per product category.

### 3.12.6 Boosted Tea Sample Rationale

In addition to the above Combined Experiment sample, it was decided that a single 'boosted'



product category sample would be collected. It was felt to be a useful further leg of the research that a single category sample (n = 200+) was collected in addition to the multiple category sample (n = 200+) be collected, to offer confidence concerning issues which could not be addressed by a multi-category sample at the total sample level (e.g. multiple regression at the individual variable level).

The tea sample was specifically chosen because the researcher found the incidence of tea users to be much higher than for other product categories, thus making data collection much more timely. Since initial analysis of the individual categories had shown the brand trust profile and brand extension response for the dummy brand to be supportive of the research hypotheses, the dummy was dropped from the boosted tea questionnaire. The boosted tea sample has included the initial sample of 40 tea respondents from the main study. It can be seen from the demographic details shown for the Tea Large Sample in Table 3.15, that the profile of this sample was very consistent with the profile of the main sample (See Table 3.14).

<b>Sample (n)</b>	<b>% Male</b>	<b>% Female</b>
247	33	66
<b>Sample (n)</b>	<b>% ≤40 years</b>	<b>% &gt; 40 years</b>
247	53	47
<b>Sample (n)</b>	<b>% Non-Graduate</b>	<b>% Graduate</b>
247	52	48
<b>Sample (n)</b>	<b>% ABC1</b>	<b>% C2DE</b>
247	56	44

**Table 3.15: Boosted Tea Sample Demographic Breakdown**

### 3.12.7 Handling Non-Response

Since low response rates can increase the likelihood of non-response bias, attempts should be, and were, made to maximise response rates (Chen, 1996).

The researcher used various strategies to try to increase response (Malhotra, 1999).

- I. Data collection was undertaken at both weekends and weekdays.
- II. An optional incentive of £5 for completion of questionnaire was offered.
- III. Households not at home, were visited a further 3-4 times.
- IV. Where a questionnaire had been accepted, repeated collection visits were made to households to encourage response.
- V. Where possible, the researcher made specific appointment times to collect questionnaires, and ensured that these were adhered to by the researcher.
- VI. The researcher utilised school holidays for distribution and collection where possible.

### 3.12.8 Response Rate and Completion Rate

The response rates and completion rates achieved for the study were high. In total 2118 houses were visited, with 844 found to be at home. The researcher gathered 425 completed



questionnaires, a completion rate of 50.5% of subjects encountered, and 20% of total houses visited. Table 3.16 illustrates the number of households visited, the number of householders found to be at home, the number of refusals, failure to meet sample usage criteria, and failure to complete a questionnaire following prior agreement (non-response). In more detail: ‘refusals’ were where householders were not interested in taking any part in the survey; ‘criteria issues’ were where householders did not meet the brand or category usage criteria; and ‘non-response’, covered situations where a householder had accepted a questionnaire, but failed to complete. In addition to the high completion rates discussed above, the Table illustrated that the refusal rates were very low, at only 13.8% of those at home, with the balance of householders either completing a questionnaire, or being willing to complete a questionnaire, but not meeting the sample recruitment criteria. Only a small percentage (10% of ‘at home’) of respondents agreed to take part in the survey, and then failed to complete.

Houses Visited	At Home	Not at home	Completed Questionnaires	Usable Questionnaires	Refusals	Criteria Issues	Non-Response
2118	844	1274	425	411	116	218	85
% of all houses	40.0	60.0	20.0	19.4	5.5	10.3	4.0
% of ‘at home’	100.0	N/A	50.5	48.7	13.8	25.8	10.0

**Table 3.16: Data Collection and Sample Response Rates**

The researcher followed the advice and guidance of various authors (e.g. Malhotra, 1999) in obtaining these results.

### 3.12.9 Non-Sampling Errors

The researcher has taken account of issues of non-sampling error (Churchill, 1996) in the use of a comprehensive sampling frame, and the minimisation of non-response and non-completion. It is also believed that due to data screening, errors in data capture will have been removed. Over 96% of collected questionnaires were found to be useable. Analysis of responses from prompt respondents versus laggards yielded no response bias.

### 3.13 Statistical Analysis Methods

The hypotheses of the study have been restated below as a precursor to providing the rationale for the use of statistical techniques for analysis.

#### 3.13.1 Overall Research Hypotheses

Brand trust can be shown to be associated with a number, of key ‘associative variables’- which form a ‘model’ of the construct, in that:

1. Brand trust will be positively correlated with the six dimensions overall and with each of the six ‘Dimensions’ (Probity, Equity, Reliability, Satisfaction, Brand Communication and Process) for both ‘brand 1’ and ‘brand 2’ within the full samples (Combined and Tea Large) and at product category level.

2. Brands with higher brand trust levels will be more likely to succeed in extension categories (particularly distant extension categories), with success measured by ‘likelihood to try’ or ‘trust to provide extension’, in that:
  - a) Brand 1 (the higher brand trust brand) will outperform brand 2 (the moderate trust brand) in extension 1, 2 and 3 (in total and split sample).
  - b) Brand 1 (the higher trust brand) will outperform brand 3 (the lower trust fictitious brand) in extension 1, 2 and 3 (in total and split sample).
  - c) Brand 2 (the moderate trust brand) will outperform brand 3 (the lower trust fictitious brand) in extension 1, 2 and 3 (in total and split sample).
3. Differences in the level of brand trust, in the six hypothesised ‘Dimensions of Brand trust’, and in brand extension acceptance (‘trust brand to provide’ and ‘likely to try’) will occur according to gender, age and educational level such that:
  - a) Older respondents will score the above at higher levels than will younger respondents.
  - b) Females will rate the above at higher levels than will males.
  - c) More highly educated respondents will rate the above at lower levels than will those respondents of lower education.

The research seeks to show that a relationship exists between ‘brand trust level’ and brand extension acceptance, and does not test for any ‘causal’ relationship between the two.

In aiming to test the above hypotheses and examine the relevance of a model of brand trust in a consumer context, various statistical techniques have been considered and applied. These statistical techniques will now be discussed under each hypothesis area.

### **3.13.2 Hypothesis 1**

A multi-method approach has been used to test hypothesis 1.

#### **3.13.2.1 Scale Reliability - Rationale**

The literature emphasises the importance of establishing that ‘reliable’ scales have been developed (Pallant, 2001, Nunnally, 1978, Briggs and Cheek, 1986). Each of the six ‘brand trust dimensions’ (probity, equity, reliability, satisfaction, brand communication and process) may be viewed as scales, with between three and eight variables being aggregated within them. One of the main concerns regarding scale reliability regards the scales’ ‘internal consistency’. Pallant (2001) has described this as the extent to which the items ‘hang together’, all measuring the same underlying construct. One of the most commonly used indicators of internal consistency is Cronbach’s alpha coefficient (Cronbach, 1951).



The Cronbach alpha coefficient has been used to validate each of the scales' internal consistency (Pallant, 2001). Ideally, the Cronbach alpha coefficient should be above .7 (Nunnally, 1978), with Hair, et al. (1999) talking of .6 as the lower limit of acceptability for exploratory research. It has also been reported that with short scales (e.g. scales with less than ten items) it is common to find lower Cronbach values, at e.g. .5. The coefficient scores for each of the six dimensions, shown in Tables 3.17 and 3.18, exceeded .7 in all but one case (Brand 2, Combined Experiment Sample, at .69), and were consistently found to be at the .8 level or above. In fact, in only three cases out of the twenty-four below did the alpha value fall below .8.

	Probity	Equity	Reliability	Satisfaction	Communication	Process
<b>Combined Sample N = 204</b>	.845	.847	.893	.828	.744	.855
<b>Tea Large Sample N = 247</b>	.858	.843	.917	.847	.780	.864

**Table 3.17: Cronbach Alpha – Scale Reliability Results. Brand 1**

	Probity	Equity	Reliability	Satisfaction	Communication	Process
<b>Combined Sample N = 204</b>	.850	.876	.937	.690	.849	.875
<b>Tea Large Sample N = 247</b>	.879	.894	.945	.903	.863	.909

**Table 3.18: Cronbach Alpha – Scale Reliability Results. Brand 2**

The Tables above confirm the internal consistency of the 'Brand Trust Dimension' scales. The Tables have also confirmed that even in the case of short scales, with only three items, such as Probity and Process, scores in excess of .8 were obtained in both samples (Tea Large and Combined Experiment), and for both Dimensions. This is against a backdrop of short scales, with few items, often gaining much lower alpha scores (Briggs and Cheek, 1986), and often having to be evaluated purely via inter-item correlation scores.

In addition to the Cronbach alpha tests above, tests were conducted combining all six scales together as a measure of 'brand trust'. The results obtained for the Combined Sample were .928 and .956 for Brands 1 (Higher Brand trust Brands) and 2 (Moderate Brand trust Brands) respectively. The results obtained for the Tea Large Sample were .896 and .937 for Brand 1 and Brand 2. These were exceptionally high measures of internal consistency.

### **3.13.2.2 Standard Multiple Regression - Rationale**

Having established that the scales had good internal consistency (i.e. that the items within the scales were all measuring the same construct) for both the Combined Experiment sample and the Tea Large sample, the researcher progressed to the use of Multiple Regression. Multiple



regression, based on correlation, enables the researcher to relate one set of variables (e.g. subscales) to predict a particular outcome (Aaker, et al., 1998). Multiple regression provides information about the explanatory power of the model as a whole, and also the relative contribution of each of the variables (or scales) that make up the model (Pallant, 2001). There are three main types of multiple regression: Standard (Simultaneous), Hierarchical (Sequential) and Stepwise. The standard multiple regression methodology, used most commonly, has been selected as being most appropriate for this research study. Within standard multiple regression, each independent variable (e.g. the six dimensions) is evaluated in terms of its predictive power, over above that offered by all of the other independent variables. This type of multiple regression is felt to be ideally suited to situations where the researcher has a set of variables (e.g. personality scales) and wants to know how much variance in a dependent variable (e.g. anxiety) is able to be explained as a group or block (Pallant, 2001). The approach also tells the researcher how much unique variance in the dependent variable is explained by each of the independent variables. Such a scenario was felt to be well aligned with the context of this research study, with the six 'Dimensions of Brand trust' and the dependent variable 'brand trust'.

The Standard approach has been selected over the stepwise methodology, since this 'controversial' method has received a certain amount of criticism (Tabachnick and Fidell, 2001) within the research community. Criticisms concerning stepwise regression have been based upon the fact that decisions about inclusion and order of entry of variables are made solely on statistical criteria (Tabachnick and Fidell, 2001). Small differences in these statistics, computed from the particular sample under study, can have profound effects upon the apparent importance of an independent variable (IV), and may lead to a lack of generalisability. In addition to this, for stepwise regression, there should ideally be a minimum of a ratio of forty cases for every independent variable (Tabachnick and Fidell, 2001). This has thus meant that the multi-category sample with a sample size of 204 did not meet the minimum criteria for using stepwise regression (with a ratio of 34:1), and the Tea Large Sample just met the minimum ratio of 40:1.

Hierarchical methods were also rejected since the researcher had no theoretical grounds upon which to influence the sequencing of independent variables into the model. This method would have been more useful had the researcher wished to specifically know how well a particular dimension within the postulated model predicted brand trust. The objective was, however, to assess the overall predictive power of the model and the relative contributions made by all six dimensions.

The recommended tests for multicollinearity, outliers, normality, linearity, homoscedasticity and independence of residuals have been conducted as part of the analysis (Pallant, 2001;



Tabachnick and Fidell, 2001).

### **3.13.2.3 Interpretation of Multiple Regression Results**

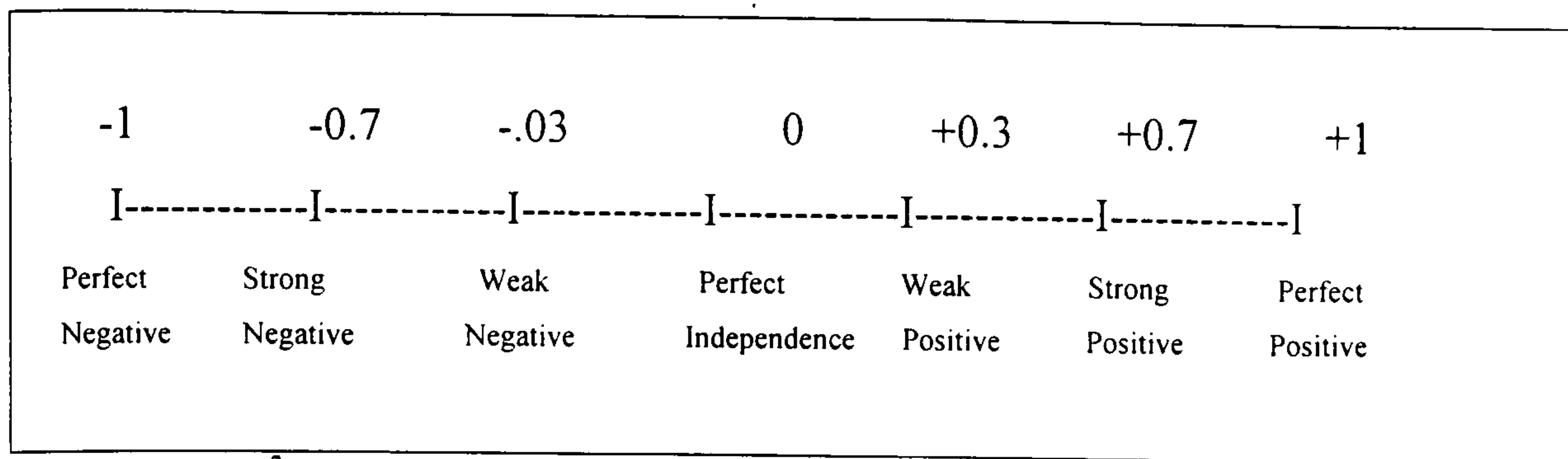
Multiple Regression results are interpreted by the value of R Squared (or  $R^2$ ), the squared correlation coefficient or coefficient of determination (Hair, et al., 1998). However, when a small sample is involved, the R square value can give a rather optimistic overestimation of the true value in the population (Tabachnick and Fidell, 2001), in which case the Adjusted  $R^2$  can be used to 'correct' this value, to provide a better estimate of the population value.

### **3.13.2.4 Critical Values of $R^2$ Statistic**

The key inferential tests in multiple regression have been reported to be significance tests (Sudman and Blair, 1998), to measure (1) whether the multiple correlation was significantly different from zero, thus indicating a significant overall relationship between the dependent and independent variables, and (2) whether individual regression weights were significantly different from zero. Essentially, achieving an  $R^2$  value which was significant at the p.05 or p.01 level would have meant that the coefficient was unlikely to have occurred by chance (Saunders, Lewis and Thornhill, 2000). Tabachnick and Fidell (2001) reported the use of tables for assessing the critical value of  $R^2$  (Wilkinson and Dallal, 1981), the value  $R^2$  had to reach, based upon the sample size and the number of Independent Variables (IV's), for the value to be considered significant at either the p.05 or p.01 level. The tables provided within Tabachnick and Fidell (See Appendix 12) indicate the critical size that the  $R^2$  statistic had to reach for the result to become significant. In the samples used within this research study (in excess of 200), and with six IV's, a multiple  $R^2$  value of .05 was required to be considered significantly different from zero at  $\alpha = .05$ , and an  $R^2$  value of .08 at  $\alpha = .01$ .

### **3.13.2.5 The $R^2$ Statistic and its Interpretation**

A wide variety of interpretations of the  $R^2$  statistic were found within the literature. Sudman and Blair (1998) stated that there was no 'rule' as to the fraction of the variance which needed to be explained in order to define a relationship as 'strong', they labelled an  $R^2$  value of .09 as 'fairly weak', and stated that an  $R^2$  value of .3 or larger would be considered to be at least 'moderately strong' by many researchers. Pallant (2001) stated that an adjusted  $R^2$  value of .45 was 'respectable', when compared to some of the results reported within journals. Saunders, Lewis and Thornhill (2000) provided, without further literature support or rationale, a framework for assessment of  $R^2$  values, (these were non-adjusted values) (in Figure 3.10 below.



**Figure 3.10: R<sup>2</sup> values and their interpretation.**

### 3.13.2.6 Sample Size Requirement - Multiple Regression

A variety of authors provide different rules of thumb of the sample size for use of multiple regression, ranging from between 7:1 to 20:1 (Cone and Foster, 1993) for the independent variables to dependent variable. Many authors have suggested a ratio of 10:1 (McDaniel and Gates, 1999), and Tabachnik and Fidell (1996, p. 132) have provided a formula for calculating sample size requirements. The formula takes into account the number of independent variables that the researcher wishes to use:  $N > 50 + 8m$  (where  $m$  = number of independent variables). With the six independent variables within this study, a sample size of 98 would be recommended using this rule of thumb formula. Clearly the combined multi-category sample of 204, and the boosted tea sample of 247 meet this strict criteria, but for analysis at brand level within the multi-category sample a ratio of around 7:1 is still achieved.

### 3.13.2.7 Factor Analysis – Rationale for Exclusion

Nunnally (1978) has recommended a minimum of a 10:1 ratio between subjects (or respondents) and items to be factor analysed. i.e. a minimum sample size of 300 respondents for the 30 variables within the postulated Dimensions and Correlates of Brand trust model. Similarly, Comrey and Lee (1992) have described sample sizes of 200 as only 'fair', 300 as good, 500 as very good and 1000 as excellent. Tabachnick and Fidell, equally, have stated that, as a general rule of thumb, at least 300 cases are required for Factor analysis. Hair, Anderson, Tatham, and Black (1998) have talked of acceptable minimum sizes of ten-to-one ratios of observations to variables. Hair, et al., (1998), further, have pointed out that with 30 variables, for example, there would be 435 correlations in the factor analysis, and at a .05 significance level, perhaps 20 or more of those correlations would be significant just by chance. Hair, et al., have further noted that the researcher should always try to obtain the highest 'cases per variable' ratio to minimise the chances of 'overfitting' the data, (i.e., deriving factors that are sample specific with little generalisability). Most literature, therefore, would suggest the need for higher sample sizes for factor analysis than for multiple regression, with factor solutions being very sensitive to sample size.

In light of the sample size requirements, the sensitivity of factor solutions to sample size and potential lack of generalisability of factor solutions (Comrey and Lee, 1992), the desire to



have two separate data samples to cross-validate results, and the relative confidence in the working model of the 'Dimensions and Correlates of Brand trust' drawn from the earlier qualitative focus groups, it was decided, for strong technical reasons, to utilise Cronbach's alpha as a method of validating the scales within the postulated model (see Section 3.13.2.1 earlier). Multiple regression would be utilised as the method for establishing association levels between the postulated 'Dimensions of Brand trust' and Brand trust as a single measure.

### **3.13.3 Hypothesis 2**

#### **3.13.3.1 Paired Sample t-tests - Rationale**

##### **Paired Sample t-tests – description and suitability**

As part of Hypothesis 2, the researcher was interested in comparing the mean scores for the different brand types, Brand 1 (higher trust brands), Brand 2 (moderate trust brands), and Brand 3 (fictitious brands) in terms of 'brand trust', the 'Dimensions of Brand trust', and in terms of brand extension response measures Trust to Provide, and Likely to Try extensions. Given that, for the most part, the means of two brand types at a time were being compared, it was decided to use t-tests as the most appropriate method to assess whether statistically significant differences in means existed. Paired sample t-tests are used when a researcher has one sample of respondents, and data is collected on two separate occasions, or under two conditions. In collecting the data samples for this research, the researcher did use the same sample of respondents for gathering responses regarding Brand types 1, 2 and 3, responses to the different brand contexts being seen as the 'different conditions' described above. The analysis using t-tests has been undertaken using SPSS software, which produced statistics which included: means; standard deviations; standard error of the mean; a t-value; degrees of freedom; and the probability level as to whether a significant difference in mean scores exists, for the two variables under study. The researcher was looking for significance values of .05, .01 or higher. A further statistic can be used in conjunction with the t-value and significance level, this is the 'effect size' or the 'magnitude of the intervention's effect' (Pallant, 2001). The Eta squared, which is calculated using the t-value and the sample size, and is one of the most commonly used effect size statistics, can be calculated directly within the SPSS software and should be interpreted as follows: .01 = small effect size, .06 = moderate effect size, and .14 or above is a large effect size (Cohen, 1988).

### **3.13.4 Hypothesis 3**

#### **3.13.4.1 Chi-Square Testing - Rationale**

Hypothesis 3 was concerned with establishing whether 'brand trust' or the 'Dimensions of Brand Trust' were correlated with brand extension response, as measured by Trust Brand to Provide (TTP) or Likely to Try Extension (LTT). Such tests are useful when correlation





### **3.13.4.2 Multiple Regression**

The multiple regression data analysis tool was described in full under Hypothesis 1 (section 3.13.2.2) above, and was used again as part of the testing of Hypothesis 3. The hypothesis testing utilising Chi-Square tests had not upheld the null hypothesis that the two measures were uncorrelated, and the multiple regression was intended to look at the strength of the associations between the measures.

Standard multiple regression was utilised (see rationale 3.13.2.2) in order to examine the nature of any relationship between measures of brand trust (either 'brand trust' as a single measure, or 'Dimensions of Brand trust') and measures of brand extension response (TTP and LTT). The adjusted  $R^2$  value is again the measure by which the strength of the association between the dependent variable (extension response measures) and the independent variables (measures of brand trust) is judged.

### **3.13.5 Hypothesis 4**

Hypothesis 4, which relates to hypotheses concerning demographic differences toward brand trust and brand extension, will use one-way independent sample ANOVA to look for significant differences in the mean scores of the groups under consideration (Pallant, 2001). The researcher has also used two-way ANOVA in order to consider combination or 'interaction' effects of independent variables upon the dependent variables of 'brand trust', 'Dimensions of Brand trust' and brand extension response measures (TTP and LTT).

#### **3.13.5.1 One-way ANOVA - rationale**

Pallant (1999) has indicated that analysis of variance is so called because it compares the variance (variability in scores) between the groups (believed to be due to the independent variable), with the variability within each of the groups (believed to be due to chance). The ANOVA analysis which tests Hypothesis 4 is of the 'between-groups' type, and seeks to establish whether there is statistically significant difference in an dependent variable (e.g. brand trust) between two groups, for example males and females. The analysis is described as one-way, since there is only one categorical 'independent variable' (e.g. gender), which is compared against a continuous dependent variable. The ANOVA analysis, conducted with the use of SPSS software, produces a full set of statistics including, importantly, an F ratio statistic, which represents the variance between the groups, divided by the variance within the groups. A large (statistically significant) F ratio indicates that there is more variance between the groups (due to the independent variable) than there is within the groups (an error term), indicating that we can reject the null hypothesis that the two means are equal. Post-hoc tests enable the researcher to establish between which groups (if there are more than two) there has been a statistically significant ( $> .05$ ) difference in mean values. Such tests are ideal



for comparing responses to 'brand trust', 'dimensions of brand trust', and 'brand extension response' measures, between different categories within the following demographic groups, age, gender and educational level.

### **3.13.5.2 One-way ANOVA Effect Size**

In common with the t-testing outlined in section 3.13.3.1 above, statistics can be calculated (automatically within SPSS) to establish the 'effect size' of any statistically significant differences in means found using ANOVA. The 'effect size' statistic is again referred to as Eta squared, and within ANOVA is calculated using the 'Sum of Squares' between groups, divided by the Total Sum of Squares. Interpretation of the Eta Squared statistic produced is, again, .01 = small, .06 = medium, and .14 = large effect size (Cohen, 1988). These effect size statistics have been used widely within the data analysis and findings chapter.

### **3.13.5.3 Two-way ANOVA - Rationale**

In addition to one-way ANOVA described above, the researcher also conducted analyses using two-way 'between groups' ANOVA as part of the testing of Hypothesis 4. Two-way ANOVA differs from one-way ANOVA in that there are now two independent variables tested at the same time. The researcher is looking to see if there are any 'interaction' effects produced by combinations of the independent variables. A further output of the analysis (conducted on SPSS) is an indication if there are any 'main effects' produced by the independent variables, and if so, which variable was responsible. So, the two-way ANOVA analyses described in the next chapter included a single dependent variable (brand extension acceptance measure), and two independent (categorical) variables (e.g. age and gender) in order to look for the predictive strength of each individual variable (main effect), or combinations of variables (interaction effects) in terms of the variance in the dependent variable (Pallant, 2001).

### **3.13.5.4 Two-way ANOVA Effect Size**

'Effect size' utilising two-way ANOVA, for either 'main effects' produced by one independent variable (e.g. gender) or 'interaction effects' produced by two independent variables (e.g. gender and age), are again measured and evaluated by the Eta Squared statistic outlined within section 3.13.3.7 above.

## **3.14 Chapter Conclusion**

The chapter has explained the methodological process (from exploratory to descriptive) employed by the researcher in the development and testing of models and hypotheses. Within the inductive stages of the project, the researcher undertook: secondary research, conducting a full literature review; qualitative focus groups to understand 'brand trust' from a consumer perspective, and to aid model building and survey instrument development; model building



and initial hypothesis development; and pilot quantitative research amongst 106 respondents. Having gained insights into 'brand trust' from this inductive stage of research, the researcher developed a revised working model and refined research hypotheses in preparation for a deductive stage of research. Within the deductive stage of research, the researcher undertook the following: pre-testing of appropriate categories, brands and brand extension concepts; the planning of sampling strategy, data collection and data analysis methods; survey instrument design and piloting; pilot category data collection and analysis; full data collection of the two quantitative samples (Combined Experiment (n=204) and Tea Large (n=247)); analysis and presentation of results. All stages of the methodological process have been described in detail within this chapter, together with appropriate rationale. The research methodological processes and strategies outlined within this chapter have themselves been informed by literature from within the market research and research methodology fields, in addition to the research methodological insights gained from the literature within the fields of 'brand trust' and 'brand extension' outlined within Chapter 2.

The following Chapter, Data Analysis and Results, has considered each of the research hypotheses in turn, utilising the data analysis techniques outlined within this Chapter, in order to test the stated hypotheses. Summary results have been provided at the end of each block of analyses, with an overall Chapter summary concluding the Chapter. Interpretation of the data analyses and results has been provided within Chapter 5 Discussion of Findings, with a Summary and Conclusions to the study provided within Chapter 6.

## **CHAPTER 4: DATA ANALYSIS AND RESULTS**

### **4.1 Introduction**

This Chapter of the thesis will present the results of the research investigation. The chapter will focus on: the concept of consumer brand trust and the extent to which it was multi-dimensional; the extent to which high trust brands gained higher brand extension measurement responses versus same category rivals and dummy brands; the extent to which brand trust and brand extension were positively correlated; and, finally, the relevance of demographics within consumer brand trust and brand extension acceptance. The chapter, thus, has been structured around the following research hypotheses:

#### **Hypothesis 1**

Brand trust can be shown to be associated with a number, of key ‘associative variables’- which form a ‘model’ of the construct, in that:

Brand trust will be positively correlated with the six dimensions overall and each of the six ‘Dimensions’ (Probity, Equity, Reliability, Satisfaction, Brand Communication and Process) for both ‘Brand 1’ and ‘Brand 2’ within the full samples (Combined and Tea Large) and at product category level.

#### **Hypothesis 2**

Brands with higher trust levels will be more likely to succeed in extension categories (particularly distant extension categories), with success measured by ‘likelihood to try’ (LTT) or ‘trust to provide extension’ (TTP), in that:

- a) Brand 1 (the higher trust brand) will outperform Brand 2 (the moderate trust brand) in extension 1, 2 and 3 (in total and split sample).
- b) Brand 1 (the higher trust brand) will outperform Brand 3 (the lower trust fictitious brand) in extension 1, 2 and 3 (in total and split sample).
- c) Brand 2 (the moderate trust brand) will outperform Brand 3 (the lower trust fictitious brand) in extension 1, 2 and 3 (in total and split sample).

#### **Hypothesis 3**

Brand trust, or the dimensions of brand trust, will be positively correlated with brand extension measures.

#### **Hypothesis 4**

Differences in the level of brand trust, in the six hypothesised ‘Dimensions of Brand trust’, and in brand extension acceptance (TTP and LTT) will occur according to gender, age and educational level such that:

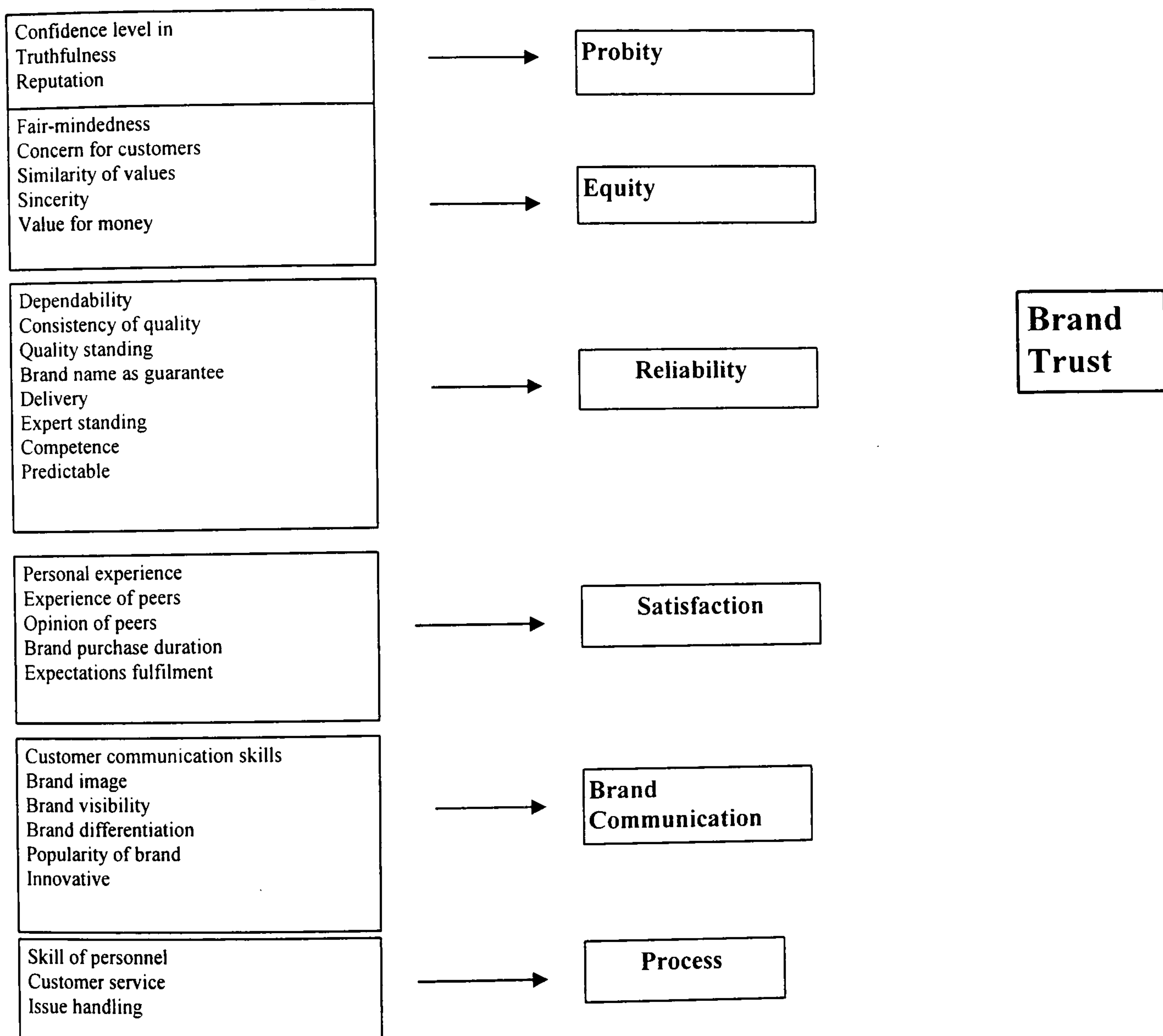
- a) Older respondents will score the above at higher levels than will younger respondents.
- b) Females will rate the above at higher levels than will males.



- c) More highly educated respondents will rate the above at lower levels than will those respondents of lower education.

The data analysis and results presented within this Chapter, have built upon the broad literature review, exploratory qualitative and quantitative research and various pre-test stages outlined within the Research Methodology Chapter. To reiterate, the data upon which this Chapter has been based were drawn from a large-scale consumer questionnaire-based survey involving 411 respondent-consumers from the North of England.

#### 4.2 Was 'brand trust' positively correlated with each of the six dimensions contained within the postulated model of brand trust?



**Figure 4.1 Model of Postulated Correlates of Brand trust**

The postulated model is believed to reflect both the 'affective' (Probity and Equity) and the 'cognitive' (Reliability and Satisfaction) elements of brand trust, in addition to elements of brand trust specifically related to Brand Communication, and interaction Processes with consumers. Drawn from the broad literature search (Chapter2), and, in part, considered within earlier exploratory qualitative and quantitative research evidence (Chapter 3), the

model has been tested to establish whether positive correlations existed between brand trust and the six 'Dimensions of Brand trust' reflected within the model. Each of the thirty-one variables reflected within the model dimensions were included within the survey questionnaire. Each variable was represented by a 7-point semantic differential scale (1 = Low, 7 = High), one for brand trust, and one for each of the thirty hypothesised correlates of brand trust. Each questionnaire included a 'lead brand' (Brand 1), which had been shown in pre-tests to have a relatively 'high' brand trust rating, and a 'secondary brand' (Brand 2), which had been shown in pre-tests to have a lower brand trust rating relative to Brand 1. The Tea, Grocery Retail and Internet Retail sample questionnaires also included a dummy or fictitious brand (Brand 3), and the Internet Retail sample was the only questionnaire not to include a Brand 2 for sample criteria reasons (see Chapter 3).

In order to test the hypothesis that brand trust is positively correlated with the six dimensions shown within the above model, standard multiple regression has been utilised (as outlined within Research Methodology Section 3.13.2.2). In testing the hypothesis using multiple regression, the Combined Experiment Sample (CES) was considered first followed by the Tea Large Sample (TLS) and, finally, analysis at an individual category and brand level. The data have been presented for 'Brand 1' and 'Brand 2' separately since the nature of responses may have differed, and combining the data could have led, potentially, to a weakening of associations. Each of the six dimensions was calculated using a mean of the variables postulated to reflect the dimension, as tested within Cronbach alpha analysis to reflect the internal consistency of the scales (Section 3.13.2.1).

#### 4.2.1 Combined Experiment Sample – Brand 1

Dependent Variable: Level of Brand Trust in Brand 1

Independent Variable: Six Postulated Dimensions of Brand Trust

Correlations							
	Brand 1 Do you trust?	Brand 1 Probity Construct	Brand 1 Equity Construct	Brand 1 Reliability Construct	Brand 1 Satisfaction Construct	Brand 1 Communi- cation Construct	Brand 1 Process Construct
Pearson Correlation							
Brand 1 Do you trust?	1.000	.675	.681	.752	.639	.366	.466
Brand 1 Probity Construct	.675	1.000	.760	.820	.636	.467	.637
Brand 1 Equity Construct	.681	.760	1.000	.778	.609	.528	.701
Brand 1 Reliability Construct	.752	.820	.778	1.000	.787	.512	.671
Brand 1 Satisfaction Construct	.639	.636	.609	.787	1.000	.441	.493
Brand 1 Communication Construct	.366	.467	.528	.512	.441	1.000	.473
Brand 1 Process Construct	.466	.637	.701	.671	.493	.473	1.000

**Table 4.1 Combined Experiment Sample - Brand 1 (Correlations)**

It can be seen from Table 4.1 for Brand 1 that the Independent variables showed at least some relationship with the dependent variable i.e. above .3 (Pallant, 2001), but with some notably



high correlations (exceeding .7) between Reliability and Probity (.820), Equity (.778) and Satisfaction (.787).

The collinearity diagnostics table (Table 4.2) showed a relatively low tolerance score of .176 for Reliability, which supported the correlation data, and suggested some possibility of multicollinearity within the variables. However, the scores were not felt to be worthy of removing any variables from the analysis.

		Coefficients <sup>a</sup>	
		Collinearity Statistics	
Model		Tolerance	VIF
1	(Constant)		
	Brand 1 Probity Construct	.288	3.469
	Brand 1 Equity Construct	.300	3.337
	Brand 1 Reliability Construct	.176	5.672
	Brand 1 Satisfaction Construct	.374	2.671
	Brand 1 Communication Construct	.679	1.472
	Brand 1 Process Construct	.455	2.199

<sup>a</sup> Dependent Variable: Brand 1 Do you trust?

**Table 4.2: CES, Brand 1 Coefficients and Collinearity Statistics**

The Normal Probability Plot of regression of standardised residuals suggested no major deviations from normality (c/f, Pallant, 2001). The model produced by the analysis provided a high adjusted R<sup>2</sup> of .603 (F=51.397; significance F = .000).

The standard multiple regression results for Brand 1 (Table 4.3) were statistically significant, with positive correlation between Reliability (Beta = .465) at .000, Equity (Beta = .302) at .000, and the Dependent variable brand trust. Notably with regard to the postulated model of brand trust, the Process dimension was found to be negatively correlated to brand trust within the CE sample (Beta = -.166) at .013.

Dependent variable: Level of Brand Trust N=204  
Independent variables: Six Postulated Dimensions of Brand Trust

Variable	Unstandardised		Standardised		Sig T
	B	SEB	Beta	T	
Probity	.154	.104	.124	1.486	.139
Equity	.382	.103	.302	3.700	.000*
Reliability	.603	.138	.465	4.371	.000*
Satisfaction	.129	.078	.120	1.651	.100
Communication	-.058	.050	-.064	-1.177	.241
Process	-.190	.076	-.166	-2.504	.013**
Multiple R	.784				
R Square	.615				
Adj. R Square	.603				
Standard Error	.677				
Analysis of Variance [* = p.01, ** = p.05]					
			DF	Sum of Squares	Mean Square
		Regression	6	141.68	23.61
		Residual	193	88.67	.459
		F=	51.39	Sign F=	.000

**Table 4.3: Multiple regression – Combined Experiment Sample Brand 1**

#### 4.2.2 Combined Experimental Samples - Brand 2

Again, as an aide memoir, the Combined Experiment Sample, consisted of 204 respondent-

consumers, split across five category areas: Tea, Coffee, Grocery Retail, Pens and Internet Retail. The data for the thirty-one variables included within the postulated model of brand trust were again captured within the survey questionnaire using 7-point semantic differential scales (1 = Low, 7 = High).

The correlation results of the regression analysis for Brand 2 provided a similar profile to that of Brand 1 regarding correlation between independent variables, and a similar situation regarding collinearity. Analyses of residuals suggested no major deviation from normality. In the interests of brevity, the analysis has focussed on model fit and key variables.

Dependent variable: Level of Brand Trust N=204  
Independent variables: Six Postulated Dimensions of Brand Trust

Variable	Unstandardised		Standardised		Sig T
	B	SEB	Beta	T	
Probity	.264	.115	.224	2.303	.023**
Equity	.620	.125	.475	4.958	.000*
Reliability	.285	.141	.239	2.029	.044**
Satisfaction	.094	.085	.094	1.168	.244
Communication	-.057	.082	-.051	-.707	.481
Process	-.160	.102	-.122	-1.580	.116
Multiple R	.832		Analysis of Variance [* = p.01, ** = p.05]		
R Square	.691		DF	Sum of Squares	Mean Square
Adj. R Square	.679	Regression	6	160.91	26.81
Standard Error	.682	Residual	154	71.79	.466
		F=	87.52	Sign F=	.000

**Table 4.4: Multiple regression – Combined Experiment Sample Brand 2.**

The model within the multiple regression for Brand 2 explained almost 70% of the variance in the dependent variable (adjusted  $R^2$  .679;  $F = 87.52$ ; Significance  $F = .000$ ). Three variables were found to have a statistically significant correlation with brand trust, Probity (Beta = .224) at .05, Equity (Beta = .475) at .001, and Reliability (Beta = .239) at .05. No variables were found to be statistically negatively correlated to Brand 2 brand trust.

#### 4.2.3 Combined Experiment Sample – Four Dimensional Model of Brand Trust

Analyses conducted regressing the postulated six dimensions of brand trust against a single measure of brand trust had delivered high adjusted  $R^2$  results, yet the Process and Communication ‘dimensions’ had either appeared negatively correlated or showed no correlation with brand trust within the Combined Experiment Sample. Further analyses were conducted which regressed the remaining four brand trust dimensions (Probity, Equity, Reliability and Satisfaction) with the single measure of trust in order to introduce more parsimony into the postulated trust model.



Dependent variable: Brand Trust  
 Independent variables: Four Postulated Dimensions of Brand Trust

Variable	Unstandardised		Standardised		Sig T
	B	SEB	Beta	T	
Probity	.130	.104	.104	1.251	.212
Equity	.268	.096	.212	2.786	.006
Reliability	.520	.136	.401	3.829	.000
Satisfaction	.137	.078	.128	1.754	.081
Multiple R	.773		<u>Analysis of Variance</u>		
R Square	.598		<u>DF</u>	<u>Sum of Squares</u>	<u>Mean Square</u>
Adj. R Square	.590	Regression	4	140.522	35.130
Standard Error	.689	Residual	199	94.473	.475
		F=	73.99	Sign F=	.000

**Table 4.5: Multiple regression – Combined Experiment Sample Brand 1, Four Dimensions versus Brand Trust**

Dependent variable: Brand Trust  
 Independent variables: Four postulated Dimensions of Brand Trust

Variable	Unstandardised		Standardised		Sig T
	B	SEB	Beta	T	
Probity	.238	.113	.202	2.099	.037
Equity	.539	.112	.413	4.797	.000
Reliability	.239	.137	.200	1.738	.084
Satisfaction	.0767	.080	.073	.963	.337
Multiple R	.827		<u>Analysis of Variance</u>		
R Square	.684		<u>DF</u>	<u>Sum of Squares</u>	<u>Mean Square</u>
Adj. R Square	.676	Regression	4	161.197	40.299
Standard Error	.686	Residual	158	74.422	.471
		F=	85.55	Sign F=	.000

**Table 4.6: Multiple regression – Combined Experiment Sample Brand 2, Four Dimensions versus Brand Trust**

Results for Brand 1, Table 4.5, using a four dimensional model, showed an adjusted  $R^2$  of .590 ( $F=73.99$ ; Sig.  $F=.000$ ), where two variables showed a statistically significant correlation with brand trust, Equity (.006) and Reliability (.000). For Brand 2 (Table 4.6), the four dimensional model explained almost 68% of the variance in the dependent variable (adjusted  $R^2$  of .676;  $F=85.55$ ; Sig.  $F=.000$ ), two variables had a statistically significant correlation with brand trust, Probity (.037) and Equity (.000). These adjusted  $R^2$  figures were near identical to the levels of association achieved by the six dimensional models for Brand 1 (adjusted  $R^2$  .603, Table 4.3) and Brand 2 (adjusted  $R^2$  .679, Table 4.4), but offered greater model parsimony. The sample size of 204 for the C E Sample did not meet the sample requirements for undertaking further analyses on the twenty-one variables representative of the four dimensions, such analyses has been conducted at 4.2.6.2 for the Tea Large Sample.

#### 4.2.4 Tea Large Sample (TLS) - Brand 1

In addition to the Combined Experiment Sample of 204 respondents, data were collected in an enlarged sample of Tea users. A total of 247 questionnaires were analysed, these respondents being users of both brands (Typhoo and Tetley) within the study. In line with the earlier analysis, data on all thirty-one variables were collected using 7-point semantic

differential scales (1 = Low, 7 = High). Brand 1, the higher trust brand, was Tetley tea, whilst Brand 2, the lower trust brand, was Typhoo tea. Pre-testing had established the differences in brand trust profile between the brands; these were replicated within this Tea Large Sample. Consistent with the CE sample, whilst the majority of correlations between independent variables lay between .4 and .7, the Reliability dimension showed some correlations above .7. However, collinearity statistics suggested no need to remove variables from the equations, and the Normal Probability Plot of standardised residuals suggested no major deviations from normality. The table is not shown for reasons of brevity.

Dependent variable: Level of Brand Trust N=247  
 Independent variables: Six Postulated Dimensions of Brand Trust

Variable	Unstandardised		Standardised		
	B	SEB	Beta	T	Sig T
Probity	.001	.101	.001	.011	.991
Equity	.558	.104	.448	5.378	.000*
Reliability	.375	.126	.324	2.969	.003*
Satisfaction	.111	.092	.100	1.202	.231
Communication	.143	.098	.102	1.462	.145
Process	-.276	.080	-.243	-3.464	.001*
Multiple R	.732		Analysis of Variance [* = p.01, ** = p.05]		
R Square	.536		DF	Sum of Squares	Mean Square
Adj. R Square	.524	Regression	6	156.43	26.073
Standard Error	.756	Residual	237	135.547	.572
		F=	45.58	Sign F= .000	

**Table 4.7: Multiple regression –Tea Large Sample Brand 1 (Tetley)**

The overall model for Brand 1 (Tetley Tea) within the Tea Large Sample (Table 4.7) had an adjusted  $R^2$  of .524 ( $F = 45.58$ ;  $\text{Sig. } F = .000$ ), and two variables, Equity (Beta = .448), and Reliability (Beta = .324), were positively correlated with brand trust at a statistically significant level ( .01). In common with earlier regression analysis, the Process dimension was found to be negatively correlated with brand trust within the equation (Beta -.243, .01).

#### 4.2.5 Tea Large Sample Brand 2

Data were collected on the Dependent Variable, brand trust, and the thirty independent variables within the postulated model of brand trust, using thirty-one 7-point semantic differential scales (1 = Low, 7 = High). The analyses again sought to establish whether brand trust was positively correlated with each of the six dimensions within the postulated model of brand trust. Focusing on responses regarding the Typhoo tea brand (Brand 2) within the Tea Large Sample, the standard multiple regression approach provided a model with an adjusted  $R^2$  of .700 ( $F = 95.65$ ;  $\text{Sig. } F = .000$ ), with three independent variables statistically significant and positively correlated with brand trust.



Dependent variable: Level of Brand Trust N=247  
 Independent variables: Six Postulated Dimensions of Brand Trust  
 Unstandardised Standardised

Variable	B	SEB	Beta	T	Sig T
Probity	.065	.125	.051	.525	.600
Equity	.486	.124	.360	3.925	.000*
Reliability	.401	.141	.319	2.841	.005*
Satisfaction	.385	.082	.345	4.684	.000*
Communication	-.019	.090	-.014	-.213	.832
(Process)	-.276	.088	-.211	-3.146	.002*

Multiple R .841  
 R Square .708  
 Adj. R Square .700  
 Standard Error .719

Analysis of Variance [\* = p.01, \*\* = p.05]  
 Sum of Squares  
 Mean Square

Regression	6	296.82	49.47
Residual	237	122.56	.517

F = 95.65 Sign F = .000

**Table 4.8: Multiple regression – Tea Large Sample Brand 2 (Typhoo)**

Table 4.8, for the Typhoo tea brand shows that Equity (Beta = .360), Reliability (Beta = .319) and Satisfaction (Beta = .345) were positively correlated with brand trust at a statistically significant level (.01). The Process construct was again found to be negatively correlated to brand trust at a significant level (Beta = -.211, .01).

#### 4.2.6 Tea Large Sample – Four Dimensional Model of Brand Trust

##### 4.2.6.1 Multiple Regression using Four Dimensions with Brand Trust

Consistent with the results for the C E Sample, the regression analyses within the Tea Large Sample have found positive correlations for four of the six dimensions with the dependent variable brand trust (Probity, Equity, Reliability and Satisfaction). The Brand Communication and Process variables produced either negative or no correlations with the dependent variable. In light of these results, and in an effort to introduce more model parsimony, further analyses have been conducted which regressed the remaining four dimensions with brand trust, the dependent variable.

Dependent variable: Brand Trust N=247  
 Independent variables: Four Postulated Dimensions of Brand Trust  
 Unstandardised Standardised

Variable	B	SEB	Beta	T	Sig T
Probity	.015	.103	.013	.153	.879
Equity	.446	.095	.357	4.687	.000
Reliability	.288	.126	.249	2.284	.023
Satisfaction	.172	.090	.156	1.902	.058

Multiple R .716  
 R Square .512  
 Adj. R Square .504  
 Standard Error .771

Analysis of Variance  
 Sum of Squares  
 Mean Square

Regression	4	149.574	37.393
Residual	239	142.410	.596

F = 62.75 Sign F = .000

**Table 4.9: Multiple regression – Tea Large Sample Brand 1, 4 Dimensions versus Brand Trust**

Dependent variable: Brand Trust  
 Independent variables: Four postulated Dimensions of Brand Trust

Variable	Unstandardised		Standardised		Sig T
	B	SEB	Beta	T	
Probity	.08	.126	.062	.636	.525
Equity	.259	.105	.192	2.471	.014
Reliability	.341	.142	.271	2.391	.018
Satisfaction	.403	.077	.361	5.218	.000
Multiple R	.833		<u>Analysis of Variance</u>		
R Square	.694		<u>DF</u>	<u>Sum of Squares</u>	<u>Mean Square</u>
Adj. R Square	.689	Regression	4	291.175	72.794
Standard Error	.732	Residual	239	128.214	.536
		F=	135.692	Sign F= .000	

**Table 4.10: Multiple regression – Tea Large Sample Brand 2, Four Dimensions versus Brand Trust**

Tables 4.9 and 4.10 showed explanatory powers of .504 ( $F=62.75$ ; Sig.  $F=.000$ ) and .689 ( $F=135.69$ ; Sig.  $F=.000$ ) for Brands 1 and 2 respectively, when regressing the Probity, Equity, Reliability and Satisfaction dimensions with brand trust. The equation for Brand 1 (Table 4.9) produced variables statistically significantly correlated with trust (Equity, .000; and Reliability, .023) and Brand 2 (Table 4.10) produced three variables statistically significantly correlated with trust (Equity, .014; Reliability, .018; and Satisfaction, .000). The adjusted  $R^2$  figures obtained using the (more parsimonious) four trust dimensions of .504 (Brand 1) and .689 (Brand 2) were, again, very close to the association levels achieved using six dimensions, where Brand 1 had an adjusted  $R^2$  of .524 and Brand 2 an adjusted  $R^2$  of .700.

#### 4.2.6.2 Multiple Regression using Twenty-One Variables and Brand Trust

Given that the Tea Large Sample ( $n=247$ ) more than provided a 10:1 ratio of independent to dependent variables, and met the formulaic sample requirements within the Research Methodology Chapter (Tabachnik and Fidell, 1996, Section 3.13.2.6) it afforded further regression analyses using the twenty-one variables representative of the four brand trust dimensions (Probity, Equity, Reliability and Satisfaction) with the single measure of brand trust.

Dependent variable: Brand Trust  
 Independent variables: Twenty-One Postulated variables related to Brand Trust

Variable	Unstandardised		Standardised		Sig T
	B	SEB	Beta	T	
Sincere	.275	.060	.295	4.574	.000
Similar Values	.118	.061	.131	1.943	.050
Truthful	-.179	.075	-.177	-2.383	.018
Quality Level	.196	.082	.205	2.390	.018
Multiple R	.787		<u>Analysis of Variance</u>		
R Square	.619		<u>DF</u>	<u>Sum of Squares</u>	<u>Mean Square</u>
Adj. R Square	.582	Regression	21	178.399	8.495
Standard Error	.708	Residual	219	109.979	.502
		F=	16.916	Sign F= .000	

**Table 4.11: Multiple regression – Tea Large Sample Brand 1, 21 Variables versus Brand Trust**



Dependent variable: Brand Trust  
 Independent variables: Twenty-One Postulated variables related to Brand Trust

Variable	Unstandardised		Standardised		Sig T
	B	SEB	Beta	T	
Sincere	.242	.062	.217	3.878	.000
Delivery	.310	.070	.277	4.440	.000
Confidence	.242	.085	.214	2.840	.005
(Concern)	-.195	.061	-.159	-3.197	.002
Personal Experience	.152	.073	.164	2.080	.039

N=247

Multiple R		Analysis of Variance			
		DF	Sum of Squares	Mean Square	
R Square	.786				
Adj. R Square	.765	Regression	21	328.147	15.626
Standard Error	.636	Residual	221	89.517	.405
		F=	38.578	Sign F=	.000

**Table 4.12: Multiple regression – Tea Large Sample Brand 2, 21 Variables versus Brand Trust**

The analyses at variable level resulted in adjusted  $R^2$  values of .582 ( $F=16.91$ ;  $\text{Sig. } F=.000$ ) for Brand 1 (Table 4.11) and .765 ( $F=38.578$ ;  $\text{Sig. } F=.000$ ) for Brand 2 (Table 4.12). For Brand 1 three variables were statistically significantly correlated with brand trust (Sincere, .000; Similar Values, .05; and Quality Level, .018), and one variable significantly negatively correlated (Truthful, .018). For Brand 2, four variables were significantly, and positively, correlated with brand trust (Sincere, .000; Delivery .000; Confidence .005; and Personal Experience, .039), and one variable, 'Shows Concern' (.002) was significantly, negatively, correlated with brand trust. The adjusted  $R^2$  results for Brand 1 (.582) and Brand 2 (.765) using the twenty-one variables compared favourably with the adjusted  $R^2$  figures produced using the four dimension approach, where Brand 1 had .504 (Table 4.9) and Brand 2 had .689 (Table 4.10).

#### 4.2.7 Individual Category Sample Analysis - Brands 1 and 2

The analysis and results will now be presented splitting the Combined Experiment Sample into its sub-samples of Coffee, Pens, Internet and Grocery Retail. The same standard multiple regression approach was adopted, with the sample sizes yielding the minimum 7:1 case to independent variable ratio as discussed within the Research Methodology Chapter (Cone and Foster, 1993). As an overview to this sub-sample analysis, a summary Table (4.13) has been provided which shows the explanatory power of the models tested for each brand, and the variables which were found to be statistically significant within each equation.

Dependent Variable: Level of Brand Trust

Independent Variables: Six Postulated Dimensions of Brand trust

Brand	Adjusted R <sup>2</sup>	Variables in Equation	F Values	Sig.
Sainsbury	.626	Probity**	11.592	.000
Coop	.716	Equity**, Reliability**	16.946	.000
Parker	.434	Equity*	6.484	.000
Pilot	.695	Reliability**, (Process)**	17.339	.000
Nescafe	.763	Probity*, (Process)*	20.303	.000
Maxwell House	.672	Equity**	13.621	.000
Amazon	.712	Equity*, Satisfaction**	17.100	.000

[\*= p.01, \*\*= p.05] The inversely correlated variables are shown in parenthesis.

**Table 4.13 Summary Results of Multiple Regression – Split by Brand**

The data above, with adjusted R<sup>2</sup> figures ranging from .434 (Parker) to .763 (Nescafe), showed that variables within the models had a good level of explanatory power with regard to the dependent variable, brand trust. The analysis for each brand at the category level will be presented next.

#### 4.2.7.1 Sainsbury

The Grocery Retail brands, Sainsbury and Co-op, will be considered first, where analyses was based upon 39 respondent-users of both brands.

Dependent variable: Level of Brand Trust N=39

Independent variables: Six Postulated Dimensions of Brand Trust

Variable	Unstandardised		Standardised		Sig T
	B	SEB	Beta	T	
Probity	.432	.214	.458	2.019	.050**
Equity	-.103	.223	-.112	-.463	.646
Reliability	.512	.351	.455	1.459	.154
Satisfaction	.286	.219	.270	1.303	.202
Communication	-.388	.268	-.348	-1.450	.157
Process	.087	.211	.081	.417	.680

Multiple R	.828	Analysis of Variance [*= p.01, **= p.05]			
R Square	.685	DF	Sum of Squares	Mean Square	
Adj. R Square	.626	Regression	6	20.47	3.413
Standard Error	.542	Residual	32	9.42	.294
		F=	11.59	Sign F=	.000

**Table 4.14: Multiple Regression – Sainsbury Brand**

The analysis for the Sainsbury brand within the Grocery Retailer category found Probity (Beta = .458) at .05, alone, to be statistically significant when correlated with brand trust. None of the other five variables were found to be significantly correlated with brand trust, either positively or negatively. The model provided a good level of explanatory power, with the adjusted R<sup>2</sup> at .626 (F = 11.59; Sig. F = .000).

#### 4.2.7.2 Co-op

The analysis for the Co-op grocery store brand found Equity and Reliability to be correlated with brand trust at statistically significant levels (.05), with Beta values of .371 and .490 respectively. The overall explanatory power of the model was high, with an adjusted R<sup>2</sup> of .716 (F = 16.94; Sig. F = .000). None of the other four dimensions within the postulated model of brand trust were shown to be statistically correlated with brand trust at the .05 level or higher.



Dependent variable: Level of Brand Trust n=39

Independent variables: Six Postulated Dimensions of Brand Trust

	Unstandardised		Standardised		
Variable	B	SEB	Beta	T	Sig T
Probity	.413	.238	.345	1.732	.093
Equity	.540	.260	.371	2.081	.046**
Reliability	.740	.378	.490	1.956	.050**
Satisfaction	.027	.186	.020	.127	.900
Communication	-.299	.188	-.209	-1.587	.122
(Process)	-.288	.322	-.178	-.895	.377
Multiple R	.872		Analysis of Variance [*= p.01, **= p.05]		
R Square	.761		DF	Sum of Squares	Mean Square
Adj. R Square	.716	Regression	6	49.421	8.237
Standard Error	.697	Residual	32	15.554	.486
		F=	16.94	Sign F= .000	

**Table 4.15: Multiple Regression – Co-op Brand**

#### 4.2.7.3 Parker Pens

The Pen brands, Parker and Pilot, have next been considered, where analysis was based upon a sample of 44 respondent-users of the brands in question.

Dependent variable: Level of Brand Trust n=44

Independent variables: Six Postulated Dimensions of Brand Trust

	Unstandardised		Standardised		
Variable	B	SEB	Beta	T	Sig T
Probity	.499	.370	.366	1.347	.186
Equity	1.034	.363	.800	2.849	.007*
Reliability	-.386	.482	-.238	-.800	.429
Satisfaction	.144	.265	.105	.542	.591
Communication	-.030	.068	-.061	-.447	.157
Process	-.368	.247	-.323	-1.492	.144
Multiple R	.716		Analysis of Variance [*= p.01, **= p.05]		
R Square	.513		DF	Sum of Squares	Mean Square
Adj. R Square	.434	Regression	6	24.172	4.029
Standard Error	.788	Residual	37	22.987	.621
		F=	6.484	Sign F= .000	

**Table 4.16: Multiple Regression – Parker Pen Brand**

The model of the six postulated 'dimensions of brand trust' was the weakest among the brands for Parker pens in explaining the variance in the data when regressed against brand trust, with an adjusted  $R^2$  of .434 ( $F = 6.484$ ;  $\text{Sig. } F = .000$ ), normally regarded as a strong result, but not compared with the average adjusted  $R^2$  of .697 for the other six brands. Equity (Beta = .800) was found to be statistically significant within the regression equation at the .01 level; none of the other five dimensions were statistically significant.

#### 4.2.7.4 Pilot Pens

The regression equation for the Pilot pen brand showed an adjusted  $R^2$  of .695 ( $F = 17.33$ ;  $\text{Sig. } F = .000$ ), and two variables entered the model at a statistically significant level (.05). Reliability (Beta = .531) was positively correlated with brand trust, and Process again appeared negatively correlated with brand trust (Beta = -.312).

Dependent variable: Level of Brand Trust N=44  
 Independent variables: Six Postulated Dimensions of Brand Trust  
 Unstandardised Standardised

Variable	B	SEB	Beta	T	Sig T
Probity	.243	.174	.200	1.398	.171
Equity	.385	.285	.294	1.350	.185
Reliability	.614	.275	.531	2.228	.032**
Satisfaction	.018	.237	.015	.077	.939
Communication	.109	.188	.084	.582	.564
(Process)	-.477	.191	-.312	-2.496	.017**

Multiple R .859  
 R Square .738  
 Adj. R Square .695  
 Standard Error .647

Analysis of Variance [\* = p.01, \*\* = p.05]  
 Sum of Squares  
 Mean Square  
 Regression 6 43.65 7.27  
 Residual 37 15.52 .420  
 F= 17.33 Sign F= .000

Table 4.17: Multiple Regression – Pilot pen Brand

#### 4.2.7.5 Nescafe

The Coffee brands, Nescafé and Maxwell House, have next been considered, where analysis was based upon a sample size of 41 coffee drinking respondents-users of both brands.

Dependent variable: Level of Brand Trust N= 41  
 Independent variables: Six Postulated Dimensions of Brand Trust  
 Unstandardised → Standardised

Variable	B	SEB	Beta	T	Sig T
Probity	1.036	.226	.801	4.587	.000*
Equity	.257	.182	.227	1.415	.167
Reliability	.419	.263	.329	1.597	.121
Satisfaction	-.219	.197	-.204	-1.111	.275
Communication	.130	.198	.093	.656	.517
(Process)	-.627	.128	-.583	-4.907	.000*

Multiple R .896  
 R Square .802  
 Adj. R Square .763  
 Standard Error .425

Analysis of Variance [\* = p.01, \*\* = p.05]  
 Sum of Squares  
 Mean Square  
 Regression 6 22.017 3.669  
 Residual 30 5.422 .181  
 F= 20.30 Sign F= .000

Table 4.18: Multiple Regression – Nescafé Brand

The multiple regression analysis for Nescafé coffee revealed a strong adjusted  $R^2$  of .763 ( $F = 20.30$ ;  $\text{Sig. } F = .000$ ), with the Probity variable ( $\text{Beta} = .801$ ) entering the equation significantly and positively correlated (.01) with brand trust. Process, again, featured within the equation for the Nescafé brand ( $\text{Beta} = -.583$ ) as negatively correlated with brand trust at a statistically significant level (.01).

#### 4.2.7.6 Maxwell House

Dependent variable: Level of Brand Trust n=41  
 Independent variables: Six Postulated Dimensions of Brand Trust  
 Unstandardised Standardised

Variable	B	SEB	Beta	T	Sig T
Probity	.231	.325	.219	.710	.483
Equity	.539	.270	.472	1.992	.050**
Reliability	.046	.358	.046	.130	.897
Satisfaction	.064	.130	.078	.499	.621
Communication	.005	.163	.006	.034	.973
Process	.123	.215	.105	.573	.571

Multiple R .851  
 R Square .725  
 Adj. R Square .672  
 Standard Error .648

Analysis of Variance [\* = p.01, \*\* = p.05]  
 Sum of Squares  
 Mean Square  
 Regression 6 34.37 5.72  
 Residual 31 13.03 .421  
 F= 13.62 Sign F= .000

Table 4.19: Multiple Regression – Maxwell House Coffee



The multiple regression analysis for the Maxwell House brand produced an adjusted  $R^2$  of .672 ( $F = 13.62$ ,  $\text{Sig. } F = .000$ ), showing strong explanatory power. The equation included one variable positively correlated with brand trust at a significant level, Equity (Beta = .472) at the  $p = .05$  level. No variables were negatively correlated within the equation.

#### 4.2.7.7 Amazon.com

Amazon.com, the only brand used at sufficiently high levels within the Internet Retailer sample of 40 respondents, has been considered next.

Dependent variable: Level of Brand Trust n=41  
 Independent variables: Six Postulated Dimensions of Brand Trust

	Unstandardised		Standardised		
Variable	B	SEB	Beta	T	Sig T
Probity	.250	.256	.230	.978	.335
Equity	.702	.235	.542	2.988	.005*
Reliability	.254	.330	.189	.768	.448
Satisfaction	.261	.102	.299	2.554	.015**
Communication	-.162	.219	-.098	-.737	.466
(Process)	-.175	.151	-.175	-1.160	.254
Multiple R	.870		Analysis of Variance [* = p.01, ** = p.05]		
R Square	.757	DF	Sum of Squares	Mean Square	
Adj. R Square	.712	Regression	6	32.081	5.347
Standard Error	.559	Residual	33	10.319	.313
		F=	5.347	Sign F = .000	

**Table 4.20: Multiple Regression – Amazon.com**

The multiple regression analysis for the Amazon.com brand produced a model which explained over 70% of the variance in brand trust (adjusted  $R^2$  .712;  $F = 5.34$ ;  $\text{Sig. } F = .000$ ). The equation included two variables, which entered the equation positively correlated with brand trust at a statistically significant level. The variables, Equity (Beta = .542) and Satisfaction (Beta = .299), both had strong Beta values and levels of significance at the .01 and .05 levels, respectively.

#### 4.2.7.8 Individual Sample Analysis – Four Dimensional Model of Brand Trust

In line with additional analysis undertaken within the C E Sample (Section 4.2.3) and Tea Large Sample (Section 4.2.6), additional analyses which regressed the four dimensional model of trust within the individual categories has been presented next. For reasons of brevity, summary analyses only have been provided.

Table 4.21 showed the adjusted  $R^2$  association levels obtained when Probity, Equity, Reliability and Satisfaction were regressed against brand trust in each of the separate product/service categories. A comparison with the results presented in Table 4.13 for the six dimension regression analyses, showed that levels of association using the four dimensions were very similar to those using the six dimension model equations.

Dependent Variable: Level of Brand Trust

Independent Variables: Four Postulated Dimensions of Brand Trust

Brand	Adjusted R2	Variables in Equation	F Values	Sig.
Sainsbury	.625		16.811	.000
Coop	.695		22.600	.000
Parker	.427	Equity **	9.024	.000
Pilot	.660		21.886	.000
Nescafe	.600	Probity **	15.997	.000
Maxwell House	.690	Equity *	22.689	.000
Amazon	.709	Equity * Satisfaction **	24.739	.000

**Table 4.21 Summary Results of Four Dimension Multiple Regression – Split by Brand** [\*= p.01, \*\*= p.05]

In most cases levels of association were maintained (e.g. Sainsbury .625 and .626), and in only one case, Nescafe, did the level of association drop substantially when using the four factor dimensional model (.763 to .600). Consistent with the C E and Tea Large Samples, the four dimensional model tended to maintain adjusted R<sup>2</sup> association levels, whilst providing more parsimony.

### 4.3 Did brands with higher mean brand trust scores have significantly higher mean brand extension response scores?

Prior to considering the results of the data analysis regarding this hypothesis area, some explanation of the brand extension concepts used, and the measurement of brand extension response has been provided. Each brand within a given category (e.g. coffee) was related to the same three brand extension concepts, a 'line extension', a 'related extension', and an 'unrelated extension'. Careful pre-testing of the concepts took place to ensure that they conformed to the stated 'labels', as detailed within the Research Methodology Chapter (Section 3.8.4 - 3.8.6). 'Line extensions' were defined as being very similar to the original product area, for example new flavour variants, or new formats. 'Related extensions' were defined as in some way related to the original product category, but also in some way moving the brand away from the original area, for example a chocolate confectionery moving into a different category, but retaining a chocolate theme. An 'unrelated extension' was defined as being largely unrelated to the original product category, with possibly a few consistent elements relating to brand values, for example, quality, style, and value. The extensions were randomised within the questionnaire to remove any ordering effect. They were as follows:

Category	Extension 1 Line Extension	Extension 2 Related Extension	Extension 3 Unrelated Extension
Tea	Lemon Tea	Café Chain	Spice Range
Coffee	Irish Coffee	Coffee Biscuits	Fresh Pasta
Pens	Fashion Pens	Writing Paper	Personal Computers
Grocery Retail	Home Delivery	Giftware	Legal Advice
Internet Retail	Branded Clothing	Personal Computers	Pensions

**Table 4.22 Categories and Brand Extension Concepts**

Having completed the section of the questionnaire which related to impressions of the brand



(regarding the thirty variables and brand trust), respondents were shown the three brand extension concepts in turn and asked to rate the concepts using two semantic differential scales (1 = Low, 7 = High). The brand extension response measures, primarily drawn from previous studies, were trust brand to provide the extension and likely to try the extension. The analyses within the following section has focussed on the use of the 'Likely to try' (LTT) and the 'Trust Brand to Provide' (TTP) brand extension response measures. In addition to analysing means related to each of the levels of extension, in order to consider the role of brand trust from line extension (Ext 1) through to related extension (Ext2) and unrelated extension (Ext 3), analysis also considered aggregated response to the extensions using means of the three different brand extension levels. This aggregated approach was used to gain an overview of the respondents' rating of the three extensions (Ext 1+2+3), and the 'related' through to 'unrelated' extensions (Ext 2+3), for each brand. The brand trust measure used was the 7-point semantic differential scale drawn from the main section of the questionnaire (1 = Low, 7 = High).

The next section of the chapter has taken the same ordering approach as the previous section, firstly considering the data from the Combined Experiment Sample, secondly the Tea Large Sample, and finally the Sub-Sample categories of Coffee, Grocery, Pens and Internet Retail. Table 4.20 restates the brands and dummy brands involved in the various categories, with N/A indicating where a designated brand was not present within a category (see Section 3.8.5, Research Methodology Chapter).

<b>Experiment</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>
<b>Grocery Shops</b>	Sainsbury	Coop	'Dummy Brand L'
<b>Tea</b>	Tetley	Typhoo	'Dummy Brand L'
<b>Pens</b>	Parker	Pilot	N/A
<b>Coffee</b>	Nescafe	Maxwell House	N/A
<b>Internet</b>	Amazon	N/A	'Dummy Brand L'

**Table: 4.23 Experiments and Brand Names**

The analysis within this section of the chapter has attempted to ascertain whether brands with higher brand trust profiles, in terms of mean scores (Brand 1), also had significantly higher brand extension response scores than lower brand trust (Brand 2, Brand 3) same category rival and dummy brand. Essentially, the following section will be concerned with analysis and statistical significance of differences in mean scores between these brand types.

#### **4.3.1 Combined Experiment Sample (CE)**

Since, in the first instance, mean differences between Brand 1 and Brand 2 are compared, the data regarding the Internet Retailer, Amazon.com, have been removed. This was because, as discussed within the Research Methodology Chapter, there was no Brand 2 suitable for inclusion within the Internet Retail category. The analysis has focussed on brand extension



response in terms of the variables 'likely to try' (LTT) and 'trust brand to provide' (TTP) the extensions.

Paired sample 't' tests were conducted on the data from the Combined Experiment sample to test for significant differences in means for 'brand trust' and extension response (LTT and TTP).

n= 164	Brand Trust Mean	Ext1 LTT Mean	Ext2 LTT Mean	Ext 3 LTT Mean	Ext1+2+3 LTT Mean
<b>Brand 1</b>	6.06	4.29	4.55	3.09	3.97
<b>Brand 2</b>	4.90	3.86	3.93	2.70	3.49
<b>t value</b>	<b>10.207</b>	<b>3.907</b>	<b>5.083</b>	<b>3.011</b>	<b>5.597</b>
<b>Sig. (2-tailed)</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>	<b>.003</b>	<b>.000</b>

**Table 4.24: Combined Experiment Brand Trust and 'Likely to Try' Mean Analysis**

The above Table illustrates that there was both a significant difference in the brand trust mean scores (Brand 1 = 6.06 and Brand 2 = 4.90 at p.001) and extension response as measured by LTT between higher trust brands (Brand 1), and moderate trust brands (Brand 2) within the Combined Experiment sample. In detail, the data indicated that Brand 1 had a significantly higher mean score versus Brand 2 in the Extension 1 (Line Extension) at p=.001, the Extension 2 (Related Extension) at p =.001, the Extension 3 (Unrelated Extension) at p=.01, and in the overall response to the three Extensions at p=.001. The data provided unequivocal support for the supremacy of Brand 1 over Brand 2 with regard to the extension response variable 'Likely to Try'.

Table 4.25, further illustrates that high brand trust mean scores were accompanied by high brand extension response scores, with the extension response being measured as 'trust brand to provide the extension' (TTP). The data again showed that Brand 1 had significantly higher mean brand extension response (TTP) scores for Extension 1 (Line), Extension 2 (Related), Extension 3 (Unrelated) and at the overall Extension 1+2+3 combined level at statistically significant levels at .001 in the majority of cases, and .01 in the case of Extension 3.

n= 164	Brand Trust Mean	Ext1 TTP Mean	Ext2 TTP Mean	Ext3 TTP Mean	Ext1+2+3 TTP Mean
<b>Brand 1</b>	6.06	5.37	5.33	4.00	4.89
<b>Brand 2</b>	4.90	4.82	4.63	3.66	4.36
<b>t value</b>	<b>10.207</b>	<b>5.277</b>	<b>6.162</b>	<b>2.722</b>	<b>6.474</b>
<b>Sig. (2-tailed)</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>	<b>.007</b>	<b>.000</b>

**Table 4.25 Combined Experiment Brand trust and 'Trust Brand to Provide' Means**

Both Tables 4.24 and 4.25 illustrated that brand extension response means, for both Brands 1 and 2, showed a pattern of decline, as extensions became less related to the core brand category. For example Brand 1 TTP mean scores started at 5.37 for Extension 1 and moved to means of 5.33 and 4.00 for Extensions 2 and 3 respectively. This result was not surprising given previous research on 'similarity' and 'fit' within the brand extension literature.



### 4.3.2 Introducing the ‘Dummy Brands’ into the Analysis

Still considering the Combined Experiment sample of 204 respondents, attention will next turn to the responses to the ‘dummy’ or fictitious brands (Brand 3). In order to gain a direct comparison of ‘brand trust’ response and ‘brand extension response’ for Brand 1, 2 and 3, analyses have been conducted utilising the categories Grocery Shops and Tea, where all three brands were present, using the 79 interviewees involved in this section of the research. The measure of brand trust used within this piece of analysis was taken from the abbreviated set of scales at the start of each brand within the questionnaire instrument (see Section 3.11.1), to aid comparability with Brand 3, about which respondents could not respond to a full set of 31 response variables.

N=79	Brand Trust Mean	Ext 1 LTT Mean	Ext 2 LTT Mean	Ext 3 LTT Mean	Ext 1+2+3 LTT Mean
<b>Brand 1</b>	5.84	3.72	4.39	2.87	<b>3.64</b>
<b>Brand 2</b>	5.02	3.11	3.53	2.87	<b>3.16</b>
<b>Brand 3</b>	4.43	2.43	2.69	1.89	<b>2.33</b>
<b>t value Brand 1v2</b>	<b>5.327</b>	<b>3.567</b>	<b>5.482</b>	<b>.000</b>	<b>3.939</b>
<b>Sig. (2-tailed) Brand 1v2</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>	<b>1.000</b>	<b>.000</b>
<b>t value Brand 2v3</b>	<b>3.021</b>	<b>4.455</b>	<b>4.781</b>	<b>5.113</b>	<b>5.834</b>
<b>Sig. (2-tailed) Brand 2v3</b>	<b>.003</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>
<b>t value Brand 1v3</b>	<b>7.871</b>	<b>6.211</b>	<b>8.547</b>	<b>5.280</b>	<b>8.776</b>
<b>Sig. (2-tailed) Brand 1v3</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>

Table 4.26 Combined Experiment Sample: ‘Brand Trust’ and LTT, Brands 1,2 & 3

Using paired sample ‘t’ tests, it can be seen from the above Table (4.26), that brand trust and brand extension response (Likely to Try) were significantly lower for Brand 3 than for Brand 2, the ‘moderate trust’ brand, at the .001 level for Extensions 1,2 and 3 separately, and the overall mean of Extension 1,2 and 3 taken together. It can also be seen that Brand 3 scored significantly lower than Brand 1 on brand trust and TTP on all levels of Extension, at the .001 level. Brand 1 had statistically significantly higher mean extension response scores relative to Brand 2 and 3, except in the most distant brand extension category (Extension 3).

The second piece of analysis which considered the response to the ‘dummy’ also found significantly lower brand trust and brand extension responses (Trust Brand To Provide) for the fictitious brand (Brand 3) relative to both Brand 1 and Brand 2, at the .001 level (Table 4.27). The hierarchy of significantly different extension response scores (TTP) from Brand 1 through to Brand 2 and 3 was maintained except for the most distant (unrelated) brand

extension category (Extension 3), where response to Brand 1 was not significantly higher than Brand 2 (with means of 4.24 and 4.02 respectively). This was consistent in this aspect with the result for 'Likely to Try' as the brand extension response measure.

N=79	Brand Trust Mean	Ext 1 TTP Mean	Ext 2 TTP Mean	Ext 3 TTP Mean	Ext 1+2+3 TTP Mean
Brand 1	5.84	5.18	5.06	4.24	4.80
Brand 2	5.02	4.50	4.28	4.02	4.25
Brand 3	4.43	3.20	3.23	2.73	3.05
t value Brand 1v2	5.327	4.394	5.164	1.168	4.643
Sig. (2- tail) Brand 1v2	.000	.000	.000	.247	.000
t value Brand 2v3	3.021	7.188	5.453	5.831	7.120
Sig. (2- tail) Brand 2v3	.003	.000	.000	.000	.000
t value Brand 1v3	7.871	10.689	8.944	8.310	11.278
Sig. (2- tail) Brand 1v3	.000	.000	.000	.000	.000

Table 4.27 Combined Experiment Sample: 'Brand Trust' and TTP for Brands 1,2 & 3

### 4.3.3 Results Summary for Combined Experiment Sample

4.3.3.1 Did brands with higher mean brand trust scores have significantly higher mean brand extension response scores?

The results for the Combined Experiment Sample (n=164) have shown that brands with higher brand trust mean scores had statistically significant, higher brand extension response scores. Using both the 'Trust to Provide' (TTP) and the 'Likely to Try' (LTT) extension response measures, Brand 1 consistently had significantly higher mean scores relative to Brand 2, at the .01 level or higher. Sub-samples of Grocery Retail and Tea responses (n= 79), considering Brand 3 performance relative to Brand 1 and 2, showed that Brand 3 had significantly lower 'brand trust' means relative to Brands 1 and 2 (.001). The same sub-sample analyses also confirmed that Brand 3, with the lowest 'brand trust' profile, had significantly lower brand extension response means, (p=.001), at all levels of extension (line through to related) using both TTP and LTT relative to Brands 1 and 2. The sub-sample analyses, further, showed that Brand 1 had significantly higher mean brand extension response scores (TTP and LTT), at the .001 level, relative to Brands 2 and 3, except for in the most distant extension category (Extension 3) where a significant difference was not achieved. Overall, the results from the Combined Experiment Sample were consistent, and



indicated that brands with higher brand trust mean scores also had significantly higher brand extension scores, thus providing strong support for the Hypothesis H<sub>2</sub>.

#### 4.3.4 Tea - Large Sample (TLS)

Paired sample 't' tests were conducted within the Tea Large Sample of 247 Tetley (Brand 1) and Typhoo (Brand 2) tea drinkers.

N= 247	Brand Trust Mean	Ext1 LTT Mean	Ext2 LTT Mean	Ext 3 LTT Mean	Ext1+2+3 LTT Mean
<b>Brand 1</b>	5.98	3.30	3.50	4.12	3.64
<b>Brand 2</b>	5.35	3.15	3.13	3.65	3.31
<b>t value</b>	<b>7.197</b>	<b>2.113</b>	<b>5.130</b>	<b>5.812</b>	<b>5.724</b>
<b>Sig. (2-tailed)</b>	<b>.000</b>	<b>.036</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>

**Table 4.28 Tea Large Sample: 'Brand Trust' and LTT Extension Response for Brands 1 & 2.**

The mean scores for brand trust were found to be significantly different, at the .001 level, for Brand 1 (Tetley = 5.98) relative to Brand 2 (Typhoo = 5.35) within the large sample for tea. Significant differences (.001) were also found between Brand 1 and Brand 2 for brand extension 1 (line extension, 3.30 versus 3.15), extension 2 (related extension, 3.50 versus 3.13) and extension 3 (unrelated extension, 4.12 versus 3.65) using the brand extension response measure LTT. The mean score differences between Brand 1 and Brand 2 were at the .05 level when using 'Likely to Try' (LTT) for brand extension 1. Means at the overall aggregated extension response level (Ext 1+2+3) were also found to be significantly different (.001) for LTT.

n= 247	Brand Trust Mean	Ext1 TTP Mean	Ext2 TTP Mean	Ext 3 TTP Mean	Ext1+2+3 TTP Mean
<b>Brand 1</b>	5.98	5.19	4.65	4.84	4.56
<b>Brand 2</b>	5.35	4.63	4.21	4.40	4.00
<b>t value</b>	<b>7.197</b>	<b>7.023</b>	<b>5.881</b>	<b>5.881</b>	<b>4.177</b>
<b>Sig.(2-tail)</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>

**Table 4.29 Tea Large Sample: 'Brand Trust' and TTP Extension response for Brands 1 & 2.**

The results for the 'Trust to Provide' (TTP) measure of brand extension response gave a similar clear picture. Brand 1 was given significantly higher TTP scores (.001) for brand extension 1 (line extension, 5.19 versus 4.63), extension 2 (related extension, 4.65 versus 4.21) and extension 3 (unrelated extension, 4.84 versus 4.40).

#### 4.3.5 Results Summary for Tea Large Sample

##### 4.3.5.1 Did brands with higher mean brand trust scores have significantly higher mean brand extension response scores?

The results from the Tea Sample of 247 Tetley and Typhoo tea drinking respondents indicated, unequivocally, that brands with higher mean brand trust scores gained statistically significant, higher brand extension response mean scores. Tetley tea (Brand 1), with a significantly higher (.001) brand trust score relative to Typhoo (Brand 2), also had significantly higher brand extension response scores at the .05

level or higher, using both 'Trust to Provide' and 'Likely to Try' extension response measures.

#### 4.4 Category Level Analysis - Brand Trust and Brand Extension Response Means as Measured by 'Trust Brand to Provide' (TTP)

The analysis has considered mean scores within all five of the product categories, and first looked at extension response as measured by the 'Trust Brand to Provide' (TTP) extension question, then considered extension response in terms of 'Likely to Try' (LTT) the extensions. Paired sample 't' tests were used to measure significant differences in mean values.

##### 4.4.1 The Grocery Shops Category

N= 39	Brand Trust	Ext 1 TTP	Ext 2 TTP	Ext 3 TTP	Ext 2+3 TTP	Ext 1+2+3 TTP
Shops	Mean	Mean	Mean	Mean	Mean	Mean
Brand 1	5.94	5.61	5.52	4.02	4.76	5.05
Brand 2	5.02	5.05	4.47	4.07	4.24	4.52
Brand 3	4.48	3.10	3.07	2.33	2.73	2.85
t value Brand 1v2	4.558	2.531	4.210	-.156	2.306	2.696
Sig.(2-tailed)	.000	.016	.000	.877	.027	.010
t value Brand 2v3	5.087	8.094	4.603	4.638	4.909	6.199
Sig.(2-tailed)	.000	.000	.000	.000	.000	.000
t value Brand 1v3	6.290	9.886	8.552	6.571	9.468	10.539
Sig.(2-tailed)	.000	.000	.000	.000	.000	.000

**Table 4.30 Brand Trust and TTP - Grocery Shops Category**

The Grocery Shops data analysis indicated that the brand trust mean score was significantly higher for Brand 1 (Sainsbury) at 5.94 relative to Brand 2 (Co-op) at 5.02, and Brand 3 (Dummy) at 4.48 (.001). Mean brand extension scores for Brand 1 were significantly higher relative to Brand 2 for Extension 1 (.05), Extension 2 (.001), Extension 2+3 combined (.05), and Extension 1+2+3 aggregated mean (.01). The only level of brand extension with no significant difference between Brand 1 and Brand 2, was for the 'unrelated extension', Extension 3, where the mean scores were nearly identical. The mean of extension 2+3 has been used in this analyses in order to look at 'related and unrelated' extensions as an aggregate. The various analyses confirmed that, in almost all cases within the Grocery Shops Category, Sainsbury (Brand1) gained significantly higher mean brand extension response scores relative to Co-op (Brand 2). Sainsbury was also seen to gain significantly higher (.001) brand extensions response scores (TTP) relative to Brand 3 (Dummy) for Line, Related and Unrelated extensions and the various aggregates (Ext 2+3 and Ext 1+2+3) of extension response. Co-op (Brand 2) extension response means (TTP) were significantly higher (.001) than those for the dummy brand (Brand 3) on all levels of brand extension within the Grocery



Shops category.

#### 4.4.2 The Tea Category (within CES)

The Tea category result (which included Brand 3 only for the 40 respondents used within the Combined Experiment Sample) was similarly clear-cut. Table 4.31 shows that Tetley (Brand 1) gained a significantly higher (.01) brand trust mean at 5.80 relative to Typhoo (Brand 2) at 5.02 and Brand 3 at 4.38. These higher mean brand trust scores were accompanied by significantly higher brand extension response mean scores (TTP) for Brand 1 over Brand 2 for extension 1 (.001), extension 2 (.01), extension 3 (.01), extension 2+3 (.001) and extensions 1+2+3 aggregated (.001). In addition, Brand 1 had significantly higher brand extension response means (.001) relative to Brand 3 for all levels of brand extension and aggregates of extensions. Finally, Table 4.31 shows that Brand 2 had a significantly higher (.001) brand trust mean score at 5.02, relative to Brand 3 at 4.38. Again, the significantly higher brand trust score for Brand 2 relative to Brand 3 was accompanied by higher brand extension response mean scores (TTP), where Brand 2 gained significantly higher mean scores (.01 or higher) relative to Brand 3 for all levels of brand extension (Line, Related, Unrelated and Combined).

Tea N=40	Brand Trust Mean	Ext 1 TTP Mean	Ext 2 TTP Mean	Ext 3 TTP Mean	Ext 2+3 TTP Mean	Ext 1+2+3 TTP Mean
Brand 1	5.80	4.77	4.61	4.46	4.53	4.56
Brand 2	5.02	3.97	4.10	3.97	4.03	4.00
Brand 3	4.38	3.30	3.38	3.12	3.25	3.25
t value Brand 1v2	3.141	3.663	3.132	2.836	3.971	4.177
Sig. (2- tail)	.003	.001	.003	.007	.000	.000
t value Brand 2v3	4.671	2.896	3.092	3.864	3.827	4.120
Sig. (2- tail)	.000	.006	.004	.000	.000	.000
t value Brand 1v3	5.009	5.947	4.693	2.836	5.551	6.273
Sig. (2- tail)	.000	.000	.000	.000	.000	.000

Table 4.31 Brand Trust and TTP - Tea Category

#### 4.4.3 The Pens Category

The results for the Pens category, using the Parker and Pilot pen brands, were not consistent with those for the Grocery Shops and Tea categories. Whilst the Brand 1 (Parker) brand trust mean (6.20) was significantly higher (.001) than Brand 2 (Pilot) mean (4.86), only at the Ext 3 TTP (unrelated brand extension) did Brand 1 have a significantly higher (.05) extension response score at 4.27 versus Brand 2 at 3.75. At an aggregate level (Ext 1+2+3), Brand 1 had a significantly higher (.05) mean score at 5.18 versus Brand 2 at 4.81; and, at extension

2+3, Brand 1, similarly, had a significantly higher response score (.01) relative to Brand 2. Thus, Brand 1 (Parker) had significantly higher extension responses (TTP) relative to Brand 2 (Pilot) for extension 3, extension 2+3, and the aggregated extension 1+2+3. Brand 1 did not, however, have significantly higher extension mean responses for extension 1 (at 5.70 versus 5.52 for Brand 2) and extension 2 (at 5.56 versus 5.18 for Brand 2). These results, which conflict with the main thrust of the findings, will be considered at some length within the Discussion of Findings Chapter (Section 5.3.7).

<b>Pens N=44</b>	<b>Brand Trust Mean</b>	<b>Ext 1 TTP Mean</b>	<b>Ext 2 TTP Mean</b>	<b>Ext 3 TTP Mean</b>	<b>Ext 2+3 TTP Mean</b>	<b>Ext 1+2+3 TTP Mean</b>
Brand 1	6.20	5.70	5.56	4.27	4.92	5.18
Brand 2	4.86	5.52	5.18	3.75	4.46	4.81
Brand 3	N/A	N/A	N/A	N/A	N/A	N/A
<b>t value Brand 1v2</b>	<b>7.079</b>	<b>1.052</b>	<b>1.519</b>	<b>2.139</b>	<b>2.680</b>	<b>2.461</b>
<b>Sig. (2- tail)</b>	<b>.000</b>	<b>.299</b>	<b>.136</b>	<b>.038</b>	<b>.010</b>	<b>.018</b>

**Table 4.32 Brand Trust and TTP - Pen Category**

#### 4.4.4 The Coffee Category

The Coffee Category comprised Brands 1 and 2, but not a Brand 3 (Dummy).

<b>Coffee N=40</b>	<b>Brand Trust Mean</b>	<b>Ext 1 TTP Mean</b>	<b>Ext 2 TTP Mean</b>	<b>Ext 3 TTP Mean</b>	<b>Ext 2+3 TTP Mean</b>	<b>Ext 1+2+3 TTP Mean</b>
Brand 1	6.27	5.36	5.58	3.26	4.42	4.73
Brand 2	4.72	4.70	4.70	2.87	3.79	4.09
Brand 3	N/A	N/A	N/A	N/A	N/A	N/A
<b>t value Brand 1v2</b>	<b>6.187</b>	<b>3.205</b>	<b>4.179</b>	<b>1.615</b>	<b>3.494</b>	<b>3.878</b>
<b>Sig. (2-tail)</b>	<b>.000</b>	<b>.003</b>	<b>.000</b>	<b>.114</b>	<b>.001</b>	<b>.000</b>

**Table 4.33 Brand Trust and TTP - Coffee Category**

The results of the analyses of Nescafé (Brand 1) and Maxwell House (Brand 2) were clear-cut. Nescafé had a significantly higher (.001) brand trust score at 6.27, relative to Maxwell House at 4.72. The Nescafé brand also had significantly higher mean brand extension response scores (TTP) at the extension 1 (.01, Line), extension 2 (.001, Related), the extension 2+3 (.001, Related + Unrelated), and the overall aggregated extension 1+2+3 level (.001, all extensions). Nescafé (Brand 1) did not have a significantly higher brand extension response mean for the extension 3 ('unrelated brand extension'), where scores were 3.26 (Brand 1) and 2.87 (Brand 2).

#### 4.4.5 Internet Category

The Internet category comprised only Amazon.com (Brand 1) and a 'dummy' brand (Brand 3). Amazon.com (Brand 1) had a significantly higher (.001) brand trust rating at 5.92 versus Brand 3 at 4.37. Amazon.com also had significantly higher (.001) brand extension response means for Extension 1 (Line), Extension 2 (Related), Extension 3 (Unrelated), and both



aggregate measures of extension response (Ext 2+3, Ext 1+2+3) for 'trust brand to provide' (TTP), versus Brand 3, the 'Dummy' brand.

Internet N=40	Brand Trust Mean	Ext 1 TTP Mean	Ext 2 TTP Mean	Ext 3 TTP Mean	Ext 2+3 TTP Mean	Ext 1+2+3 TTP Mean
Brand 1	5.92	4.60	4.68	2.89	3.78	4.06
Brand 2	N/A	N/A	N/A	N/A	N/A	N/A
Brand 3	4.37	3.73	3.36	1.89	2.63	3.00
t value Brand 1v3	<b>7.322</b>	<b>3.939</b>	<b>6.157</b>	<b>4.762</b>	<b>6.398</b>	<b>7.089</b>
Sig.	.000	.000	.000	.000	.000	.000

Table 4.34 Brand Trust and TTP - Internet Category

#### 4.4.6 Brand Extension Response as Measured by 'Likely to Try Extensions' (LTT)

##### 4.4.6.1 Grocery Shops

Grocery Shops N=39	Brand Trust Mean	Ext 1 LTT Mean	Ext 2 LTT Mean	Ext 3 LTT Mean	Ext 2+3 LTT Mean	Ext 1+2+3 LTT Mean
Brand 1	5.94	3.82	4.74	2.82	3.78	3.79
Brand 2	5.02	2.89	3.41	2.89	3.15	3.06
Brand 3	4.48	2.00	2.51	1.46	1.98	1.99
t value Brand 1v2	<b>4.558</b>	<b>3.288</b>	<b>5.276</b>	<b>-.227</b>	<b>2.741</b>	<b>3.566</b>
Sig. (2-tailed)	.000	.002	.000	.822	.009	.001
t value Brand 2v3	<b>5.087</b>	<b>3.497</b>	<b>3.059</b>	<b>4.747</b>	<b>4.380</b>	<b>4.545</b>
Sig. (2-tailed)	.000	.001	.004	.000	.000	.000
t value Brand 1v3	<b>6.290</b>	<b>5.115</b>	<b>6.945</b>	<b>4.607</b>	<b>7.330</b>	<b>7.366</b>
Sig. (2-tailed)	.000	.000	.000	.000	.000	.000

Table 4.35 Brand Trust and LTT – Grocery Shops Category

The results within the Grocery Shops category were clear-cut. Using the 'Likely to Try' (LTT) measure, Brand 1 (Sainsbury = 3.82) had a significantly higher (.01) response score for extension 1 (Line) relative to Brand 2 (Co-op = 2.89) and Brand 3 (Dummy = 2.00). Brand 1, at 4.74, also had a significantly higher (.001) extension response score (LTT) for extension 2 (Related) relative to Brand 2, at 3.41, and Brand 3, at 2.51. Whilst Brand 1 also had significantly higher extension response scores (LTT) for the aggregated extension 2+3, at .01, and extension 1+2+3, at .001, the Brand 1 mean was not significant versus Brand 2 for the most distant, 'unrelated', extension concept (Extension 3), where the mean scores were 2.82 (Brand 1) and 2.89 (Brand 2). Apart from this one exception, a hierarchy in brand extension response scores (LTT) between the brand types was maintained, with Brand 2 having significantly higher (.001) extension response scores for extension 1, extension 2, extension 3, and both aggregated measures of extension response, relative to Brand 3.

##### 4.4.6.2 Tea Category

The results within the Tea Category sub-sample of 40 respondents were less clear-cut for the LTT extension response, than was the case for Grocery Shops. Brand 1 (Tetley), at 4.05, had

a significantly higher (.05) extension response only for the 'Related Extension' (Ext. 2) relative to Brand 2, at 3.66, and Brand 3, at 2.87. In all other extension levels, Extension 1 (Line), Extension 3 (Unrelated), Extension 2+3, and Extension 1+2+3, Brand 1 means were not statistically significantly different for the 'Likely to Try' measure. Brand 2 (Typhoo) did have significantly higher extension responses relative to Brand 3 (Dummy) for the Extension 1 (Line), at .05, Extension 2 (Related), at .001, Extension 3 (Unrelated), at .05, and in the two aggregated measures of brand extension response, at the .001 level.

Tea N= 40	Brand Trust Mean	Ext 1 LTT Mean	Ext 2 LTT Mean	Ext 3 LTT Mean	Ext 2+3 LTT Mean	Ext 1+2+3 LTT Mean
Brand 1	5.80	3.62	4.05	2.92	3.45	3.50
Brand 2	5.02	3.32	3.66	2.85	3.22	3.25
Brand 3	4.38	2.85	2.87	2.32	2.57	2.66
<b>t value Brand 1v2</b>	3.141	<b>1.607</b>	<b>2.495</b>	<b>.502</b>	<b>1.744</b>	<b>1.883</b>
<b>Sig. (2-tailed)</b>	.003	<b>.116</b>	<b>.017</b>	<b>.618</b>	<b>.089</b>	<b>.067</b>
<b>t value Brand 2v3</b>	4.671	<b>2.829</b>	<b>3.939</b>	<b>2.444</b>	<b>3.721</b>	<b>3.830</b>
<b>Sig. (2-tailed)</b>	.000	<b>.007</b>	<b>.000</b>	<b>.019</b>	<b>.001</b>	<b>.000</b>
<b>t value Brand 1v3</b>	5.009	<b>4.055</b>	<b>5.718</b>	<b>2.841</b>	<b>5.188</b>	<b>5.918</b>
<b>Sig. (2-tailed)</b>	.000	<b>.000</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>

Table 4.36 Brand trust and LTT – Tea Category

#### 4.4.6.3 Pen Sub-Sample Category

Table 4.37, earlier, indicates that Brand 1 (Parker) had a significantly higher (.001) brand trust mean score relative to Brand 2 (Pilot). The results in Table 4.37 below, using the 'Likely to Try' extension response measure, show only one significant difference (.05) in mean scores between Brand 1, at 3.61, and Brand 2, at 3.06, at the Extension 3 (Unrelated) level. (No Brand 3, Dummy, was present within the Pen category.) This result, inconsistent with the main findings, will be considered within the Discussion of Findings Chapter (Section 5.3.7).

Pens N=44	Brand Trust Mean	Ext 1 LTT Mean	Ext 2 LTT Mean	Ext 3 LTT Mean	Ext 2+3 LTT Mean	Ext 1+2+3 LTT Mean
Brand 1	6.20	5.04	4.47	3.61	4.04	4.37
Brand 2	4.86	5.09	4.65	3.06	3.86	4.27
Brand 3	N/A	N/A	N/A	N/A	N/A	N/A
<b>t value Brand 1v2</b>	<b>7.079</b>	<b>-.251</b>	<b>-.916</b>	<b>2.058</b>	<b>1.038</b>	<b>.722</b>
<b>Sig. (2-tailed)</b>	<b>.000</b>	<b>.803</b>	<b>.365</b>	<b>.046</b>	<b>.305</b>	<b>.474</b>

Table 4.37 Brand Trust and LTT - Pen Category

#### 4.4.6.4 Coffee Sub-Sample Category

The results within the Coffee category were, again, more clear-cut. Using the 'Likely to Try' (LTT) measure, Brand 1 (Nescafe) received statistically significant higher extension response means relative to Brand 2 (Maxwell House), at all levels of extension. For Extension 1



(Line), Brand 1 had a significantly higher (.01) mean score at 4.60 versus Brand 2 at 4.00. For Extension 2 (Related), Brand 1 received a significantly higher (.001) mean score at 4.92 versus Brand 2 at 3.92. For Extension 3 (Unrelated), Brand 1, at 2.97, again had a significantly higher (.001) response score over Brand 2 at 2.00. Brand 1 also had significantly higher means (.001) for both of the aggregated levels of brand extension response relative to Brand 2 (Ext 2+3, Ext 1+2+3 combined).

Coffee N=40	Brand Trust Mean	Ext 1 LTT Mean	Ext 2 LTT Mean	Ext 3 LTT Mean	Ext 2+3 LTT Mean	Ext 1+2+3 LTT Mean
Brand 1	6.27	4.60	4.92	2.97	3.95	4.17
Brand 2	4.72	4.00	3.92	2.00	2.96	3.30
Brand 3	N/A	N/A	N/A	N/A	N/A	N/A
t value Brand 1v2	<b>6.187</b>	<b>2.875</b>	<b>3.637</b>	<b>4.337</b>	<b>4.878</b>	<b>5.026</b>
Sig. (2-tailed)	<b>.000</b>	<b>.006</b>	<b>.001</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>

Table 4.38 Brand trust and LTT - Coffee Category

#### 4.4.6.5 Internet Retailer Sub-Sample Category

The results of the Internet Retailer analysis, using the 'Likely to Try' (LTT) measure of brand extension acceptance, clearly showed Brand 1 (Amazon.com) to have significantly higher brand extension response scores than Brand 3. For Extension 1 (Line), Brand 1, at 3.39 relative to Brand 3 at 2.94, had a significantly higher mean at the .01 level. Brand 1, at 3.89, received a significantly higher mean, at the .001 level, relative to Brand 3, at 2.68, for Extension 2 (Related). For Brand extension 3 (Unrelated) Brand 1 also had a significantly higher (.001) mean extension score (LTT), at 2.10, relative to Brand 3, at 1.60. In line with these results, Brand 1 had significantly higher LTT mean scores for both of the aggregated measures of extension response, at the .001 level, (Ext 2+3, Ext 1+2+3 combined), compared to Brand 3.

Internet N=40	Brand Trust Mean	Ext 1 LTT Mean	Ext 2 LTT Mean	Ext 3 LTT Mean	Ext 2+3 LTT Mean	Ext 1+2+3 LTT Mean
Brand 1	5.92	3.39	3.89	2.10	3.00	3.13
Brand 2	N/A	N/A	N/A	N/A	N/A	N/A
Brand 3	4.37	2.94	2.68	1.60	2.14	2.41
t value Brand 1v3	<b>7.322</b>	<b>3.094</b>	<b>5.492</b>	<b>3.575</b>	<b>5.811</b>	<b>5.764</b>
Sig.	<b>.000</b>	<b>.004</b>	<b>.000</b>	<b>.001</b>	<b>.000</b>	<b>.000</b>

Table 4.39 Brand Trust and LTT - Internet Category

### 4.5 Was Brand Trust or the Correlates of Brand Trust Positively Correlated with Brand Extension Response Measures?

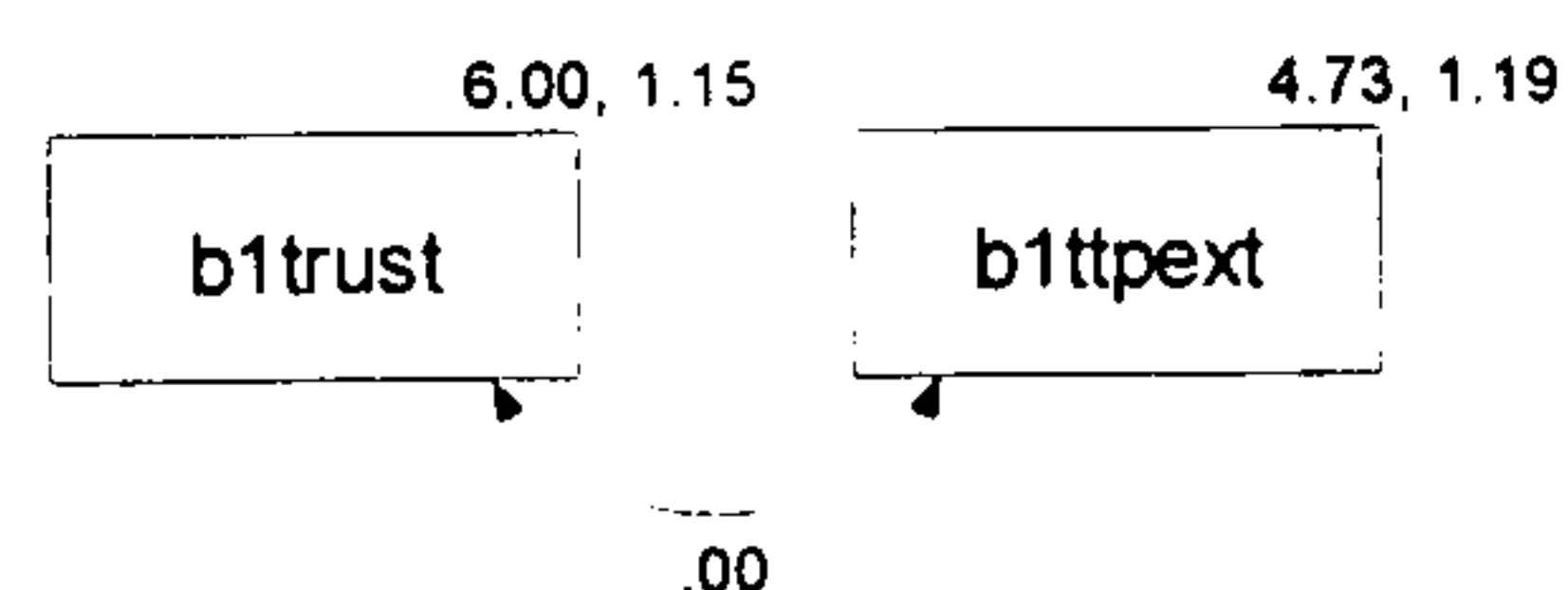
#### 4.5.1 Were the two measures correlated at all?

Statistical tests were conducted to establish whether brand trust and the brand extension response measures (TTP and LTT) were correlated or uncorrelated (independent). In order to test the hypothesis that the two variables were uncorrelated, Amos software (Arbuckle and

Wothke, 1999) was utilised to conduct Chi Square tests (covered within the Research Methodology Chapter, Section 13.13.4.1) with the following results. Analysis was first conducted on the Combined Experiment sample (of 204 respondents), followed by the Tea Large Sample (of 247 respondents).

#### 4.5.1.1 Brand Trust versus Trust to Provide extensions – CES Brand 1

Modelling was undertaken with the use of AMOS software in order to conduct hypothesis testing (Chi Square) that the two variables, Brand 1 brand trust and brand extension response (TTP Ext 1+2+3) were uncorrelated. The aggregated measure of ‘Trust Brand to Provide’ (Ext1+2+3) was used in order to gain an overall response from respondents to the extensions. A feature of the AMOS software which served to limit the variable descriptors to only 8 characters, explains the cumbersome labelling within the model. The AMOS software lifts the variable data (as labelled) straight from, in this case, an SPSS spreadsheet.

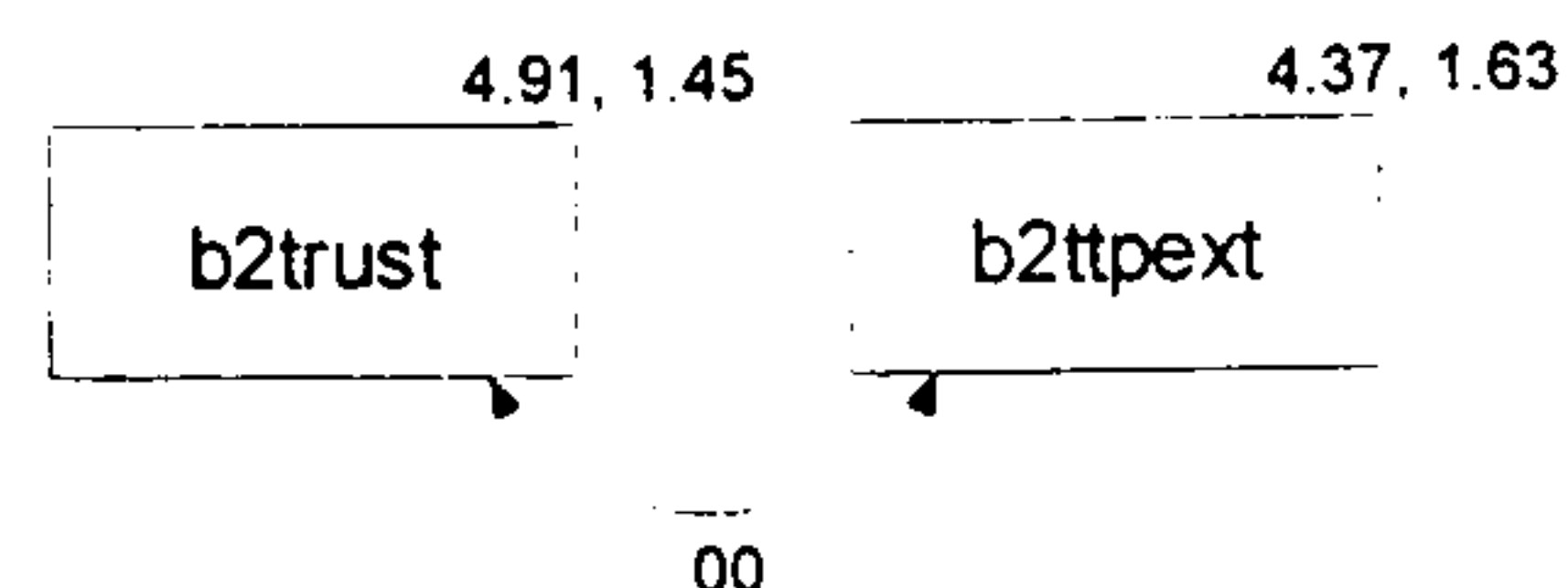


Chi-Square = 31.738  
 Degrees of Freedom = 1  
 Probability Level = 0.000

**Table 4.40 Combined Experiment Sample - Correlation Test Brand 1 Brand Trust Versus ‘Trust to Provide’ Measure of Response**

Table 4.40, indicates the mean values for both variables at 6.00 (b1brand trust) and 4.73 (b1ttext) respectively, in addition to the standard errors at 1.15 and 1.19. The high Chi-Square value, at 31.738 (.001), indicates that the null hypothesis that the two variables are uncorrelated should be rejected. In short, it cannot be stated that the two variables (Brand 1 Brand Trust and Brand 1 TTP Ext 1+2+3 within the Combined Experiment Sample) are uncorrelated or wholly independent.

#### 4.5.1.2 Brand Trust Versus Trust to Provide Extensions – CES Brand 2



Chi-Square = 21.822  
 Degrees of Freedom = 1  
 Probability Level = 0.000

**Table 4.41 C E Sample - Correlation test Brand 2 Brand Trust versus TTP Ext 1+2+3**

Table 4.41 shows the results of a test of the null hypothesis that the Brand 2 Brand trust and Brand 2 ‘Trust Brand to Provide’ Extensions 1+2+3 were uncorrelated, the mean values are



shown for the variables, 4.91 (b2brand trust) and 4.37 (b2ttext), together with the standard errors for each variable, 1.45 (b2brand trust) and 1.63(b2ttext). The Chi-Square value of 21.822 (.001), which indicates that the null hypothesis that the two variables were uncorrelated, should be rejected. This test used the TTP measure within the Combined Experiment Sample.

#### 4.5.1.3 Brand Trust versus 'Likely to Try' (LTT) extensions 1+2+3 – CES Brand 1

The results for Brand 1 using the 'Likely to Try' extensions 1+2+3 aggregated variable showed that the null hypothesis, that Brand 1 Brand Trust (b1brand trust) and Brand 1 'Likely to Try' extensions 1+2+3 (b1tex123) were uncorrelated, should be rejected. The values at the top of Tables 4.40 represent the means and standard error for each of the variables (b1brand trust, 6.00 and 1.15, and b1tex123, 3.82 and 1.88), and the Chi-Square value of 8.976 (.01) indicates that the null hypothesis should be rejected.

6.00, 1.15	3.82, 1.88
b1trust	b1tex123
.00	

Chi-Square = 8.976  
 Degrees of Freedom = 1  
 Probability Level = 0.003

Table 4.42 Combined Experiment Sample - Correlation Test Brand 1 Brand Trust versus LTT

#### 4.5.1.4 Brand trust versus 'Likely to Try' (LTT) Extensions 1+2+3 – CES Brand 2

4.91, 1.45	3.50, 2.10
b2trust	b2tex123
.00	

Chi-Square = 14.952  
 Degrees of Freedom = 1  
 Probability Level = 0.000

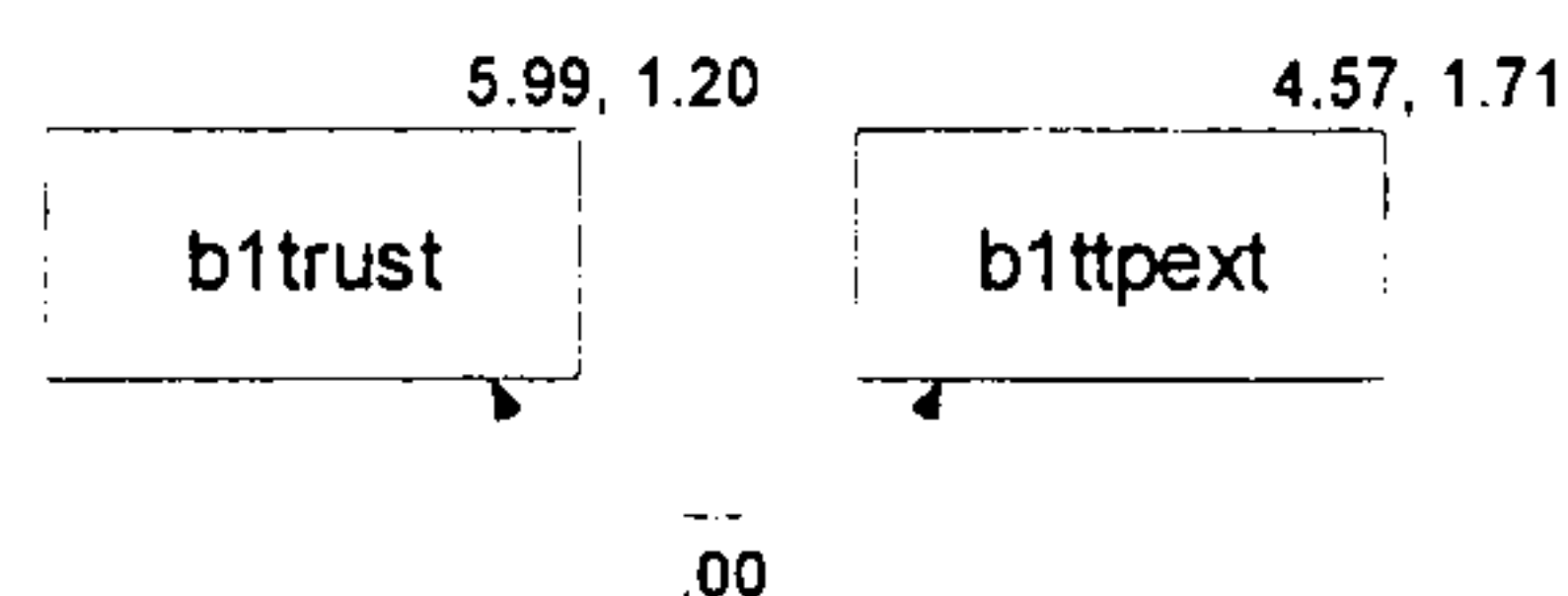
Table 4.43 Combined Experiment Sample - Correlation Test Brand 2 Brand Trust versus LTT  
 Table 4.43 presents the mean values and standard errors for both variables (b2brand trust, 4.91 and 1.45; b2tex123, 3.50 and 2.10), and the Chi-Square value of 14.952 (.001) indicates that the null hypothesis, that the two variables were uncorrelated, should be rejected.

#### 4.5.2 Summary of Results – Combined Experiment Sample

The results concerning the Chi-Square tests for the Combined Experiment Sample have indicated, for both high brand trust (Brand 1) and moderate brand trust (Brand 2) brands and for both brand extension response measures ('Trust Brand to Provide' and 'Likely to Try'), that the null hypothesis that brand trust and Brand Extension Response are uncorrelated, should be rejected, at the .01 level or higher. Partial support for the hypothesis, H3 is claimed.

#### 4.5.2.1 Brand trust Versus Trust to Provide Extensions – T L Sample, Brand 1

Table 4.44 displays the means and standard errors for the two variables under study (b1brand trust, at 5.99 and 1.20; b1ttpext, at 4.57 and 1.71), and also indicates a Chi-Square value of 18.529. The results of this analysis indicate that the null hypothesis, that the two variables (Brand 1 Brand Trust and Brand 1 ‘Trust to Provide’ Extensions 1+2+3) are uncorrelated, should be rejected.



Chi-Square = 18.529  
 Degrees of Freedom = 1  
 Probability Level = 0.000

Table 4.44 Tea Large Sample - Correlation Test Brand 1 versus TTP

#### 4.5.2.2 Brand Trust Versus Trust to Provide Extensions – T L Sample, Brand 2

Table 4.45 shows the mean values and standard errors for the two variables under study (b2brand trust, 5.35 and 1.72; b2ttpext, 4.00 and 1.60). The analysis, using the Tea Large Sample and the Trust to Provide extension response, indicates, via the Chi-Square value of 5.119 (.024), that the null hypothesis that the two variables are uncorrelated, should be rejected.



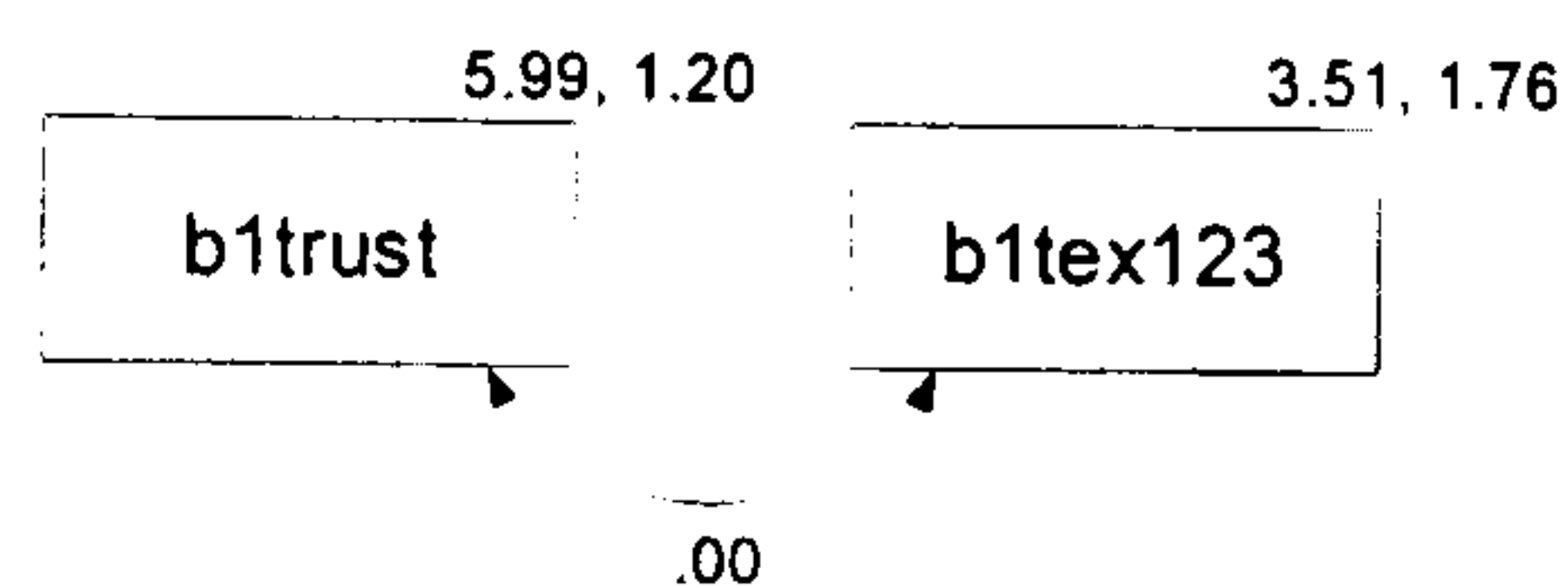
Chi-Square = 5.119  
 Degrees of Freedom = 1  
 Probability Level = 0.024

Table 4.45 Tea Large Sample - Correlation Test Brand 2 versus TTP Extensions

#### 4.5.2.3 Brand Trust versus ‘Likely to Try’ Extensions – TLS, Brand 1

Consistent with earlier hypothesis testing, Table 4.46 indicates, via the Chi-Square value of 10.423 (.001), that the null hypothesis that the two variables (Brand 1 brand trust and Brand 1 ‘Likely to Try’ Extensions 1+2+3) are uncorrelated, should be rejected. As with earlier analyses, the Table provides the mean and standard error values for both variables.



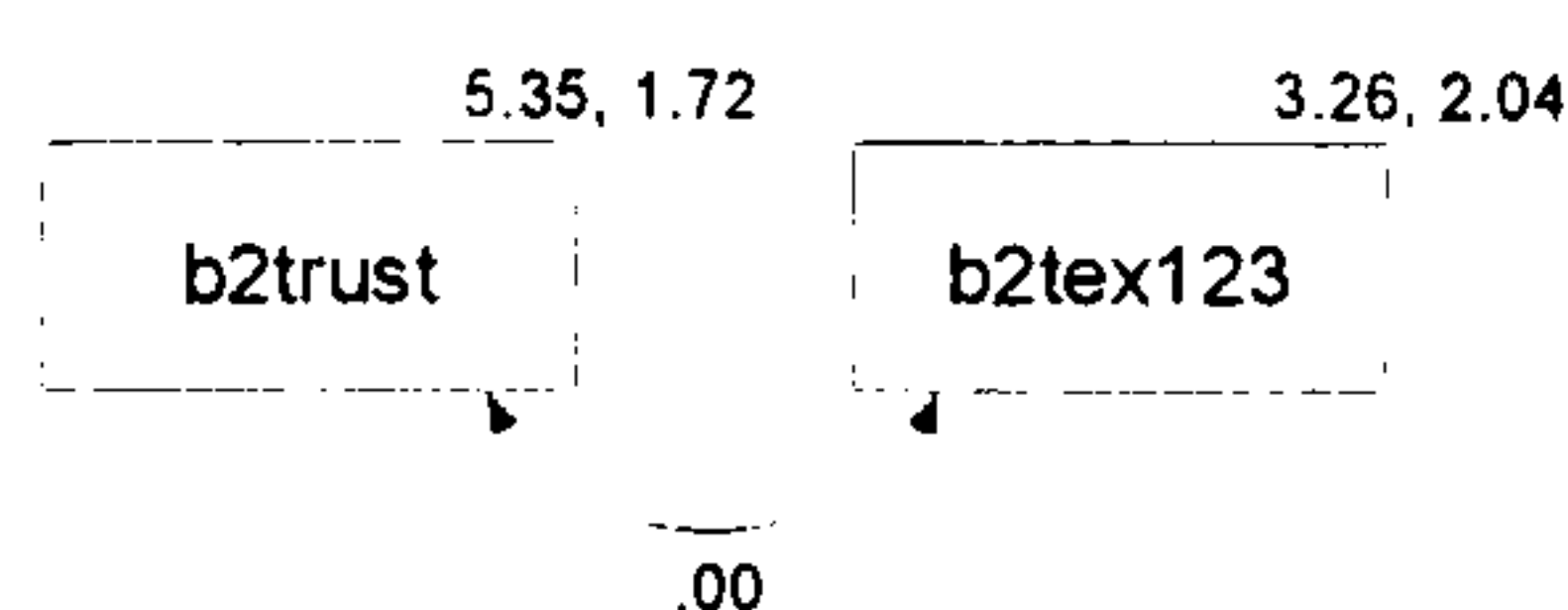


Chi-Square = 10.423  
 Degrees of Freedom = 1  
 Probability Level = 0.001

**Table 4.46 Tea Large Sample - Correlation Test Brand 1 Versus LTT**

#### 4.5.2.4 Brand trust Versus 'Likely to Try' Extensions – TLS Brand 2

Table 4.47 indicates, via a Chi-Square value of 4.826 (.05), that the null hypothesis that the two variables (Brand 2 brand trust and Brand 2 'Likely to Try' Extensions 1+2+3) are uncorrelated, should be rejected.



Chi-Square = 4.826  
 Degrees of Freedom = 1  
 Probability Level = 0.028

**Table 4.47 Tea Large Sample - Correlation Test Brand 2 Versus LTT**

### 4.5.3 Summary of Results – Tea Large Sample

From the hypothesis testing undertaken within the Tea Large Sample, for both high brand trust (Brand 1) and moderate brand trust (Brand 2) brands, and for both brand extension response measures (TTP and LTT), the analyses have indicated that brand trust and brand extension response measures were likely to be closely correlated, thus partial support for the hypothesis is therefore claimed. The next section of this Chapter considers the nature and strength of the association between brand trust and extension response measures.

### 4.6 What was the Strength of the Correlation between Brand Trust, the Dimensions of Brand Trust, and Brand Extension Response Measures?

The next section of the chapter first considers analyses within the Combined Experiment Sample (CES) of 204 respondents, followed by the Tea Large Sample (LTS) of 247 respondents. Analysis for the section will be conducted with the use of standard multiple regression.

#### 4.6.1 Analysis within the Combined Experiment Sample on the Relationship between Brand Trust, the Dimensions of Brand Trust and 'Trust to Provide' Measure of Extensions – Brand 1

N= 204	TTP Ext 1	TTP Ext 2	TTP Ext 3	TTP Ext 1+2+3
Six Dims Adj. R <sup>2</sup>	.210	.232	.027	.215
Sig.	.000	.000	.080	.000
Which Dims Significant	Equity .088	Rel .078	-----	Rel .07
Brand Trust Adj. R <sup>2</sup>	.128	.210	.001	.142
Sig.	.000	.000	.266	.000

Table 4.48 Brand 1 TTP Measure of Extension and 'Dimensions of Brand Trust' Regression

The full sets of multiple regression analysis Tables can be found in appendix 13. Table 4.46 provides a summary of the standard multiple regression results for each level of extension (1, 2, and 3 and combined 1+2+3) using 'Trust to Provide' as a measure, correlated with the six postulated 'dimensions' of brand trust for Brand 1, and, also, a single variable 'brand trust' versus the TTP measure of extensions for Brand 1 as a comparison. The adjusted R<sup>2</sup> figures (of the 'Dimensions of Brand Trust' and 'Brand Trust' as a single variable) are compared within the Table to consider the proposition that a multidimensional measure of brand trust provided a better and richer understanding of the brand trust variable, and, as such, provided higher levels of association with the TTP extension response variable. It was seen that the adjusted R<sup>2</sup> figures for the six dimensions were larger than those for the single variable brand trust: TTP Extension 1 adjusted R<sup>2</sup> was .210 for the six dimensions and .128 for the single variable measure of brand trust; TTP Extension 2's adjusted R<sup>2</sup> was .232 for the six dimensions and .210 for the single variable measure of brand trust; TTP Extension 3's adjusted R<sup>2</sup> was .027 for the six dimensions and .001 for the single variable measure of brand trust; and finally, the aggregated TTP measures (Extension 1+2+3) adjusted R<sup>2</sup> was .215 for the six dimensions and .142 for the single variable measure of brand trust. It has been recognised that the levels of association, although significant at the .000 level, are 'weak', but build on the previous hypothesis testing between Brand Trust and the TTP variable (Table 4.40), and the advice from Wilkinson and Dallal (1981) regarding critical values of R<sup>2</sup> (Section 3.13.2.4, Research Methodology), which concluded that some correlation existed, and that the values of R<sup>2</sup> achieved show that the relationship between the two variables is statistically different from zero. Additionally, the adjusted R<sup>2</sup> figures, moving across the three types of extension from near to far for the Six Dimensions, tended to show a decline as extension concepts became less 'related' by Extension 3 (unrelated extension). The Table also indicates that no variables were significant within the standard multiple regression models at the .05 level, but that the Equity, Reliability and Satisfaction were the most prominent variables at the .10 level.



#### 4.6.2 Analysis Within the Combined Experiment Sample on the Relationship Between Brand Trust, the Dimensions of Brand Trust and 'Trust to Provide' Measure of Extensions – Brand 2

N= 204	TTP Ext 1	TTP Ext 2	TTP Ext 3	TTP Ext 1+2+3
Six Dims Adj. R <sup>2</sup>	.260	.162	.049	.232
Sig.	.000	.000	.033	.000
Which Dims Significant	Equity .069	Rel .093 Sat .090	Equity .096	Equity .08
Brand trust Adj. R <sup>2</sup>	.157	.052	.043	.120
Sig.	.000	.002	.005	.000

**Table 4.49 Brand 2 TTP Measure of Extension versus 'Dimensions of Brand Trust' Regression**

The regression results for Brand 2, within the Combined Experiment sample, also showed a stronger relationship between the 'Brand Trust Dimensions' and extension response measure (TTP) than did the single brand trust variable. TTP Extension 1's adjusted R<sup>2</sup> was .260 for the Six Dimensions and .157 for the single variable measure of brand trust; TTP Extension 2's adjusted R<sup>2</sup> was .162 for the Six Dimensions and .052 for the single variable measure of brand trust; TTP Extension 3's adjusted R<sup>2</sup> was .049 for the Six Dimensions and .043 for the single variable measure of brand trust; and finally, the aggregated TTP measure's (Extension 1+2+3) adjusted R<sup>2</sup> was .232 for the Six Dimensions and .120 for the single variable measure of brand trust. The adjusted R<sup>2</sup> figures were, again, compared within the above Table in order to check the proposition that the multidimensional measure of brand trust provided a better and richer understanding of the 'brand trust' variable, and that, as such, provided higher levels of association with the TTP extension response variable. Additionally, the adjusted R<sup>2</sup> figures, moving across the extensions from near to far, from .260 to .162, and finally to .049, for the Six Dimensions, tended to show a decline as extension concepts became less 'related' at Extension 3 (unrelated extension). Table 4.49 also indicates that no variables were significant within the standard multiple regression models at the .05 level, but that the Equity, Reliability and Satisfaction were pre-eminent, albeit at the .10 level. The results presented here for Brand 2 were consistent with those presented for Brand 1 within the Combined Experiment Sample (Table 4.48).

#### 4.6.3 Analysis within the CES and the Relationship between Brand Trust, 'Dimensions of Brand trust' and Extension Response as Measured by 'Likely to Try' (LTT) Brand 1

Table 4.50 presents the results of standard multiple regression analysis using the 'Likely to Try' 1+2+3 (TTP) aggregated measure of brand extension response and the Six postulated 'Dimensions of Brand Trust'. The Table also shows the results of the single variable measure of brand trust related to the dimensions of brand trust, as a comparison of explanatory power. The results, again, demonstrate that the Six 'Dimensions of Brand Trust' produced higher adjusted R<sup>2</sup> figures than the single variable of brand trust, when regressed with the 'Likely to



Try' (LTT) variable. LTT Extension 1's adjusted  $R^2$  was .055 for the Six Dimensions and .013 for the single variable measure of brand trust; LTT Extension 2's adjusted  $R^2$  was .121 for the Six Dimensions and .089 for the single variable measure of brand trust; LTT Extension 3's adjusted  $R^2$  was .017 for the Six Dimensions and -.003 for the single variable measure of brand trust; and finally, the aggregated LTT measure's (Extension 1+2+3) adjusted  $R^2$  was .089 for the Six Dimensions and .039 for the single variable measure of brand trust.

N= 204	LTT Ext 1	LTT Ext 2	LTT Ext 3	LTT Ext 1+2+3
Six Dims Adj. $R^2$	.055	.121	.017	.089
Sig.	.010	.000	.155	.000
Which Dims Significant	Sat .065	Comm .080	Prob -.020	Sat .09
Brand Trust Adj. $R^2$	.013	.089	-.003	.039
Sig.	.056	.000	.546	.003

**Table 4.50 Brand 1 LTT Measure of Extension versus 'Dimensions of Brand Trust' Regression**

Table 4.50 also shows that the adjusted  $R^2$  figures obtained when using the 'Likely to Try' (LTT) variable were considerably lower than those for the 'Trust to Provide' (TTP) variable (Table 4.48) in the regression analyses. The adjusted  $R^2$  figures for the LTT measure of extension response, significant at the .000 level, were weak, but supported by earlier evidence that a correlation existed between the brand trust and LTT variables. (Table 4.42), and that critical  $R^2$  levels had been reached (Wilkinson and Dallal, 1981, Section 3.13.2.4, Research Methodology). The Table also shows that, consistent with earlier analysis using the TTP variable (Table 4.48), the adjusted  $R^2$  figures (for LTT) tended to decline in magnitude as the brand extension concepts became less 'related', with the Extension 3 (unrelated) producing the lowest adjusted  $R^2$  figure at .017 for the Six Dimensions. The LTT Ext 1+2+3 was provided as an overview measure of the response to the three brand extensions by the consumer-respondents.

#### **4.6.4 Analysis within the CES and the Relationship between Brand Trust, 'Dimensions of Brand Trust' and Extension Response as Measured by 'Likely to Try' (LTT) Brand 2**

Table 4.51, presents the results of standard multiple regression analysis, again using the 'Likely to Try' 1+2+3 (LTT) aggregated measure of brand extension response, and the Six postulated 'Dimensions of Brand Trust'. The single variable measure of brand trust was again provided as a comparison. Whilst the adjusted  $R^2$  figures produced by this analysis, significant at the .000 level, were weak, the levels of association were again better for the 'Dimensions of Brand Trust' rather than the single variable measure of brand trust, when regressed with the 'Likely to Try' (LTT) variable. LTT Extension 1's adjusted  $R^2$  was .152



for the Six Dimensions and .069 for the single variable measure of brand trust; LTT Extension 2's adjusted  $R^2$  was .098 for the Six Dimensions and .063 for the single variable measure of brand trust; LTT Extension 3's adjusted  $R^2$  was .030 for the Six Dimensions and .016 for the single variable measure of brand trust; and finally, the aggregated LTT measure's (Extension 1+2+3) adjusted  $R^2$  was .152 for the Six Dimensions and .082 for the single variable measure of brand trust.

N=204	LTT Ext 1	LTT Ext 2	LTT Ext 3	LTT Ext 1+2+3
Six Dims Adj. $R^2$	.152	.098	.030	.152
Sig.	.000	.001	.095	.000
Which Dims Significant	Comm .028 Sat .069	-----	Sat .098	Sat .039
Brand trust Adj. $R^2$	.069	.063	.016	.082
Sig.	.000	.001	.060	.000

**Table 4.51 Brand 2 'Likely to Try' (LTT) Measure of Extension versus 'Dimensions of Brand Trust' Regression**

The relationship (adjusted  $R^2$ ) between the 'Dimensions of brand trust' and brand extension response (LTT), again tended to decline as extensions became less related to the core brand category, moving from .152 (line) through to .098 (related) and to .030 (unrelated). Levels of association between brand trust (as a single or multidimensional measure) and LTT were again found to be lower than those for the TTP construct (Table 4.49). The Satisfaction and Communication dimensions were emphasised in the equations relating to LTT, rather than Equity and Reliability which were emphasised more in the 'Trust to Provide' (TTP) equations. The results presented for Brand 2 within the Combined Experiment Sample, were consistent with those for Brand 1 when using the 'Likely to Try' brand extension response measure. Detailed discussion of the strength of the associations between the 'Dimensions of Brand trust', brand trust as a single variable, and the two brand extension response variables (LTT and TTP) will be provided within the Discussion of Findings Chapter.

#### **4.6.5 The Four Dimensions and Strength of Associations with Brand Extension Measures – C E Sample**

Consistent with the approach taken for Hypothesis 1, additional analyses have been conducted for Hypothesis 3, this time regressing the four dimension model of brand trust with brand extension response measures TTP and LTT. Tables 4.52 and 4.53 showed comparative adjusted  $R^2$  results for the TTP extension response measure with the six and four dimension models of brand trust.

#### 4.6.5.1 Four Dimensions and TTP Measure

N=204	TTP Ext 1	TTP Ext 2	TTP Ext 3	TTP Ext 1+2+3
Six Dims Adj. R <sup>2</sup>	.210	.232	.027	.215
Sig.	.000	.000	.080	.000
Four Dims Adj. R <sub>2</sub>	.195	.251	.015	.222
Sig.	.000	.000	.137	.000
Brand Trust Adj. R <sub>2</sub>	.128	.210	.001	.142
Sig.	.000	.000	.266	.000

Table 4.52 Brand 1 TTP Measure versus Four Dimensions of Trust, C E Sample

Table 4.52 showed adjusted R<sup>2</sup> levels for the four dimension model of brand trust to be extremely consistent with those generated by the six dimension model. As an illustration, for the aggregated TTP Ext 1+2+3 the six dimensions had an adjusted R<sup>2</sup> of .215 whilst the four dimensions had an adjusted R<sup>2</sup> of .222, both at .000.

N=204	TTP Ext 1	TTP Ext 2	TTP Ext 3	TTP Ext 1+2+3
Six Dims Adj. R <sup>2</sup>	.260	.162	.049	.232
Sig.	.000	.000	.033	.000
Four Dims Adj. R <sub>2</sub>	.270	.173	.059	.241
Sig.	.000	.000	.009	.000
Brand Trust Adj. R <sub>2</sub>	.157	.052	.043	.120
Sig.	.000	.002	.005	.000

Table 4.53 Brand 2 TTP Measure versus Four Dimensions of Trust, C E Sample

Table 4.53 for Brand 2 also showed near identical adjusted R<sup>2</sup> figures for the four and six dimension models of brand trust. The four and six dimension models had adjusted R<sup>2</sup> figures of .241 and .232 respectively for the aggregated TTP Ext 1+2+3, both at the .000 level.

#### 4.6.5.2 Four Dimensions and LTT Brand Extension Response Measure

N=204	LTT Ext 1	LTT Ext 2	LTT Ext 3	LTT Ext 1+2+3
Six dims Adj. R <sup>2</sup>	.055	.121	.017	.089
Sig.	.010	.000	.155	.000
Four Dims Adj. R <sub>2</sub>	.054	.109	.021	.081
Sig.	.005	.000	.087	.000
Brand Trust Adj. R <sub>2</sub>	.013	.089	-.003	.039
Sig.	.056	.000	.546	.003

Table 4.54 Brand 1 LTT versus Four Dimensions of Brand Trust, C E Sample

Table 4.54 for Brand 1 again showed very similar levels of association between the six and four dimension models of brand trust, both higher than those achieved by the single measure of brand trust. For the aggregated LTT Ext 1+2+3 measure, adjusted R<sup>2</sup> s of .089 (.000), .081 (.000) and .039 (.003) were shown for the six, four and single dimension measure of brand trust.



N=204	LTT Ext 1	LTT Ext 2	LTT Ext 3	LTT Ext 1+2+3
Six Dims Adj. R <sub>2</sub>	.152	.098	.030	.152
Sig.	.000	.001	.095	.000
Four Dims Adj. R <sub>2</sub>	.130	.105	.039	.146
Sig.	.000	.000	.036	.000
Brand trust Adj. R <sub>2</sub>	.069	.063	.016	.082
Sig.	.000	.001	.060	.000

**Table 4.55 Brand 2 LTT versus Four Dimensions of Brand Trust, C E Sample**

For Brand 2, Table 4.55 showed adjusted R<sup>2</sup> figures at .152 (.000), .146 (.000) and .082 (.000) for the six, four and single dimension measure of brand trust for extension measure LTT Ext 1+2+3. Both tables illustrated no significant loss in explanatory power related to the use of the four dimensions over the six dimension model of brand trust.

#### 4.6.6 Summary of Results From The Combined Experiment Sample

The main results in this CES section concerned the levels of association for the six 'Dimensions of Brand Trust' using the aggregated TTP variable, with an adjusted R<sup>2</sup> of .215 (Brand 1) and .232 (Brand 2), and using the aggregated LTT variable, with an adjusted R<sup>2</sup> of .089 (Brand 1) and .152 (Brand 2). Levels of association were found to be higher for the six 'Dimensions of Brand Trust' relative to the single measure of 'brand trust' when regressed with the brand extension measurement response variables, and also tended to decline as brand extension concepts became less related to the core brand category (Extension 2 and 3). Analyses conducted in section 4.6.5 indicated that a four dimensional model of brand trust offered similar explanatory power to the six dimensional model of brand trust.

#### 4.7 The Strength of Relationships between Brand Trust, 'Dimensions of Brand Trust' and TTP Extension Response within the Tea Large Sample.

##### 4.7.1 Brand 1- Tea Large Sample

N=247	TTP Ext 1	TTP Ext 2	TTP Ext 3	TTP Ext 1+2+3
Six Dims Adj. R <sub>2</sub>	.224	.101	.104	.198
Sig.	.000	.000	.000	.000
Which Dims Significant	Comm .001 Process -.054	Sat .048	Comm .064	Sat .057 Comm .015
Brand Trust Adj. R <sub>2</sub>	.195	.151	.090	.203
Sig.	.000	.000	.000	.000

**Table 4.56 Brand 1 'Trust to Provide' (TTP) Measure of Extension Versus 'Dimensions of Brand Trust' Regression**

The multiple regression results for Brand 1 within the Tea Large Sample (Table 4.56) showed similar levels of association (as measured by the adjusted R<sup>2</sup>) between the extension 'Trust to Provide' and the 'Six Dimensions' within the Combined Experiment Sample (Table 4.48). Brand 1 within the Tea Large Sample had very similar levels of association between the 'Dimensions of Brand Trust' and the TTP Extension 1+2+3, and the single measure of brand trust with the TTP variable. TTP Extension 1's adjusted R<sup>2</sup> was .224 for the Six Dimensions and .195 for the single variable measure of brand trust; TTP Extension 2's adjusted R<sup>2</sup> was .101 for the Six Dimensions and .151 for the single variable measure of

brand trust; TTP Extension 3's adjusted  $R^2$  was .104 for the Six Dimensions and .090 for the single variable measure of brand trust; and finally, the aggregated TTP measure's (Extension 1+2+3) adjusted  $R^2$  was .198 for the Six Dimensions and .203 for the single variable measure of brand trust. This result has differed from all the other results (using both TTP and LTT) in sections 4.6 and 4.7, where the 'Dimensions of Brand trust' have tended to produce higher association levels than the single variable, brand trust. The strength of association again tended to decline for both brand trust and 'Dimensions of brand trust' as extensions became more unrelated (Ext 2 and 3). The adjusted  $R^2$  for TTP Extension 1 (Line), was .224, but at the 'unrelated' TTP Extension 3, declined to .104 when related to the 'Dimensions of Brand trust', with a similar profile being shown concerning the single brand trust variable. Satisfaction (.048) and Communication (.001, .015) were the significant variables within the regression equations.

#### **4.7.2 Brand 2 – Tea Large Sample**

Table 4.57 presents the results of standard multiple regression for Brand 2, again regressing the 'Trust to Provide' 1+2+3 (TTP) aggregated measure of brand extension response against the Six postulated 'Dimensions of Brand Trust'. The single variable measure of brand trust was again used to provide a comparison. Whilst the adjusted  $R^2$  figures produced by this analysis, significant at the .000 level, were weak, the levels of association were again stronger for the 'Dimensions of Brand Trust', than for the single variable measure of brand trust, when regressed against 'Trust to Provide' (TTP). TTP Extension 1's adjusted  $R^2$  was .255 for the Six Dimensions and .169 for the single variable measure of brand trust; TTP Extension 2's adjusted  $R^2$  was .160 for the Six Dimensions and .098 for the single variable measure of brand trust; TTP Extension 3's adjusted  $R^2$  was .220 for the Six Dimensions and .092 for the single variable measure of brand trust; and finally, the aggregated TTP measure's (Extension 1+2+3) adjusted  $R^2$  was .266 for the Six Dimensions and .152 for the single variable measure of brand trust. The Reliability (.002, .008, .008) and Communication (.007, .033) variables appeared most commonly within equations at significant levels. The Equity variable entered the regression equation significantly negatively correlated with TTP Extension 3, (-.040).



N= 247	TTP Ext 1	TTP Ext 2	TTP Ext 3	TTP Ext 1+2+3
Six Dims Adj. R <sub>2</sub>	.255	.160	.220	.266
Sig.	.000	.000	.000	.000
Which Dims Significant	Rel .002	-----	Comm .007 Rel .008 Equity -.040	Rel .008 Comm .033
Brand Trust Adj. R <sub>2</sub>	.169	.098	.092	.152
Sig.	.000	.000	.000	.000

Table 4.57 Multiple Regression of Brand 2 'Trust to Provide' (TTP) Versus 'Dimensions of Brand Trust'

#### 4.8 The Strength of Association Between Brand Trust, 'Dimensions of Brand Trust' and 'Likely to Try' (LTT) Within the Tea Large Sample

##### 4.8.1 Brand 1 – Tea Large Sample

N=247	LTT Ext 1	LTT Ext 2	LTT Ext 3	LTT Ext 1+2+3
Six Dims Adj. R <sub>2</sub>	.066	.048	.051	.095
Sig.	.001	.007	.005	.000
Which Dims Significant	Comm .028	process .048	Rel. .017	Comm .041 Rel. .061
Brand Trust Adj. R <sub>2</sub>	.039	.045	.038	.072
Sig.	.001	.000	.001	.000

Table 4.58 Multiple Regression for Brand 1 'Likely to Try' (LTT) Measure of Extension versus 'Dimensions of Brand Trust'

Table 4.58 shows that, in common with the regression analyses in the Combined Experiment Sample, the adjusted R<sup>2</sup> measures were considerably lower for both the 'Dimensions of Brand Trust' and the single variable measure of brand trust, when using 'Likely to Try' (LTT) as the measure of extension response (see Table 4.54, CE Sample). Levels of association (adjusted R<sup>2</sup>) for 'Dimensions of Brand trust' were again higher than those for the single variable 'brand trust'. LTT Extension 1's adjusted R<sup>2</sup> was .066 for the Six Dimensions and .039 for the single variable measure of brand trust; LTT Extension 2's adjusted R<sup>2</sup> was .048 for the Six Dimensions and .045 for the single variable measure of brand trust; TTP Extension 3's adjusted R<sup>2</sup> was .051 for the Six Dimensions and .038 for the single variable measure of brand trust; and finally, the aggregated TTP measure's (Extension 1+2+3) adjusted R<sup>2</sup> was .095 for the Six Dimensions and .072 for the single variable measure of brand trust. The levels of association, although significant at the .000 level, were low, and conflicted with other evidence offering support of an association between the TTP aggregated measure and brand trust (Table 4.46). Communication (.028, .041) and Reliability (.017) featured most at significant levels within regression equations. Levels of association between the 'Dimensions of Brand Trust', brand trust, and LTT, did not decline here as brand extensions became 'less related'.

#### 4.8.2 Brand 2 – Tea Large Sample

N=247	LTT Ext 1	LTT Ext 2	LTT Ext 3	LTT Ext 1+2+3
Six dims Adj. R <sub>2</sub> Sig.	.187 .000	.128 .000	.212 .000	.269 .000
Which Dims Significant	Rel .017 Prob -.006 Sat .076	Sat .001 Prob .055	Sat .010 Comm .004 Process -.081	Sat .001 Rel. .059 Prob -.007
Brand Trust Adj. R <sub>2</sub> Sig.	.126 .000	.056 .000	.109 .000	.154 .000

**Table 4.59 Multiple Regression for Brand 2 LTT Extension 1+2+3 versus Dimensions of Brand Trust**

The regression results for Brand 2 ‘Dimensions of Brand Trust’ against LTT (Table 4.59) were significantly higher than those for Brand 1 (Table 4.58). For example, Brand 2 had an adjusted R<sup>2</sup> of .269 for ‘TTP Extensions 1+2+3’ versus .095 for the same measure for Brand 1. The levels of association achieved by the ‘multidimensional’ brand trust approach were markedly higher than those achieved by the single measure of brand trust for Brand 2. LTT Extension 1’s adjusted R<sup>2</sup> was .187 for the Six Dimensions and .126 for the single variable measure of brand trust; LTT Extension 2’s adjusted R<sup>2</sup> was .128 for the Six Dimensions and .056 for the single variable measure of brand trust; TTP Extension 3’s adjusted R<sup>2</sup> was .212 for the Six Dimensions and .109 for the single variable measure of brand trust; and finally, the aggregated TTP measure’s (Extension 1+2+3) adjusted R<sup>2</sup> was .269 for the Six Dimensions and .154 for the single variable measure of brand trust. Satisfaction (.001, 01, .001), Reliability (.017) and Communication (.004) most commonly entered regression equations at significant levels. The Probity (-.006, -.007) variable entered twice as significant, but negatively correlated to LTT Ext 1 and Ext 1+2+3. The result, conflicting with many of the earlier analyses, did not show a decline in association levels (adjusted R<sup>2</sup>) as the brand extensions became ‘less related’.

#### 4.8.3 Introducing the Four Dimension Brand Trust Model into Levels of Association with Brand Extension Response

Consistent with the C E Sample, additional analyses regressing the four dimension model of brand trust with brand extension response measures TTP and LTT within the Tea Large Sample, were conducted. Tables 4.60 and 4.61 show comparative adjusted R<sup>2</sup> results for the TTP extension response measure with the six and four dimension models of brand trust, the twenty-one variables (representing the four dimensions), and the single measure of brand trust. The same approach was taken next for the LTT brand extension measure (Tables 4.62 and 4.63).



#### 4.8.3.1 TTP Brand Extension Response Measure

N=247	TTP Ext 1	TTP Ext 2	TTP Ext 3	TTP Ext 1+2+3
Six Dim's Adj. R <sub>2</sub>	.224	.101	.104	.198
Sig.	.000	.000	.000	.000
Four Dim's Adj. R <sub>2</sub>	.192	.106	.094	.185
Sig.	.000	.000	.000	.000
21 Variables Adj. R <sub>2</sub>	.226	.127	.080	.192
Sig.	.000	.000	.008	.000
Brand Trust Adj. R <sub>2</sub>	.195	.151	.090	.203
Sig.	.000	.000	.000	.000

Table 4.60 Brand 1 TTP versus Measures of Brand Trust, T L Sample

Table 4.60 for Brand 1 showed adjusted R<sup>2</sup> levels for the four dimension model of brand trust to be broadly in line with those for the six dimension model. As an illustration, for the aggregated TTP Ext. 1+2+3 the six dimensions had an adjusted R<sup>2</sup> of .198, the four dimensions had .185, and the twenty-one variables had .192, all significant at the .000 level.

N=247	TTP Ext 1	TTP Ext 2	TTP Ext 3	TTP Ext 1+2+3
Six Dim's Adj. R <sub>2</sub>	.255	.160	.220	.266
Sig.	.000	.000	.000	.000
Four Dim's Adj. R <sub>2</sub>	.255	.158	.200	.258
Sig.	.000	.000	.000	.000
21 Variables Adj. R <sub>2</sub>	.266	.192	.201	.272
Sig.	.000	.000	.000	.000
Brand Trust Adj. R <sub>2</sub>	.169	.098	.092	.152
Sig.	.000	.000	.000	.000

Table 4.61 Brand 2 TTP versus Measures of Brand Trust, T L Sample

Table 4.61 for Brand 2 also showed near identical adjusted R<sup>2</sup> levels for all multidimensional measures of brand trust, where the six dimensions had .266, the four dimensions .258, the twenty-one variables .272, all at the .000 level for the aggregated TTP Ext. 1+2+3 measure. These brand trust measures were all markedly higher than the .152 adjusted R<sup>2</sup> for the single measure of brand trust.

#### 4.8.3.2 LTT Brand Extension Response Measure

N=247	LTT Ext 1	LTT Ext 2	LTT Ext 3	LTT Ext 1+2+3
Six Dim's Adj. R <sub>2</sub>	.066	.048	.051	.095
Sig.	.001	.007	.005	.000
Four Dims Adj. R <sub>2</sub>	.054	.028	.049	.080
Sig.	.002	.030	.003	.000
21 Variables Adj. R <sub>2</sub>	.078	.069	.066	.118
Sig.	.000	.016	.019	.000
Brand Trust Adj. R <sub>2</sub>	.039	.045	.038	.072
Sig.	.000	.000	.000	.000

Table 4.62 Brand 1 Regression of LTT with Measures of Brand Trust, Tea Large Sample

Table 4.62 for Brand 1 again showed very similar levels of association between the six dimensions, four dimensions, and the twenty-one variable (representing the four dimensions) measure of brand trust, with adjusted R<sup>2</sup> of .095, .080 and .118 respectively for the aggregated LTT Ext 1+2+3, all at the .000 level.

N=247	LTT Ext 1	LTT Ext 2	LTT Ext 3	LTT Ext 1+2+3
Six Dim's Adj. R <sub>2</sub>	.187	.128	.212	.269
Sig.	.000	.000	.000	.000
Four Dims Adj. R <sub>2</sub>	.191	.135	.187	.265
Sig.	.000	.000	.000	.000
21 Variables Adj. R <sub>2</sub>	.164	.126	.213	.238
Sig.	.000	.000	.000	.000
Brand Trust Adj. R <sub>2</sub>	.126	.056	.109	.154
Sig.	.000	.000	.000	.000

**Table 4.63 Brand 2 Regression of LTT with Measures of Brand Trust, Tea Large Sample**  
For Brand 2, Table 4.63, adjusted R<sup>2</sup> figures at .269 (.000), .265 (.000) and .238 (.000) for the six dimensions, four dimensions and the twenty-variable measures of brand trust showed consistency across the measures for the aggregated LTT Ext 1+2+3 brand extension measure.

#### 4.8.4 Summary of the Results for the Tea Large Sample

The results for the prior sections, 4.7 and 4.8, consistent in strength and direction with those found for the Combined Experiment Sample (Sections 4.6.3 and 4.6.4), exhibited levels of association between the six 'Dimensions of Brand Trust' and aggregated TTP, with an adjusted R<sup>2</sup> of .198 (Brand 1) and .266 (Brand 2), and the aggregated LTT with adjusted R<sup>2</sup>'s of .095 (Brand 1) and .269 (Brand 2) at the p=.000 level. In the main, levels of association declined as extension concepts became less related. In line with the Combined Experiment Sample, the levels of association for Brand 1 were lower when using the LTT rather than the TTP variable, although Brand 2 association levels were more consistent across both the aggregated TTP and LTT variables. The levels of association of .198 (Brand 1) and .266 (Brand 2) using the aggregated TTP variable, and .095 (Brand 1) and .269 (Brand 2) using the aggregated LTT variable are found to be weak, although, importantly, statistically significantly different to zero levels of association, at p=.000. (Wilkinson and Dallal, 1981). Additional analyses presented in Tables 4.60 and 4.61 for TTP and 4.62 and 4.63 for LTT illustrated that adjusted R<sup>2</sup> association levels were very consistent when regressing the six dimension, four dimension, and the twenty-one variable measures of brand trust against the TTP and LTT brand extension variables.

#### 4.9 The Impact of Demographics on Levels of Association

Whilst detailed analysis of the demographic variables will be focussed on Hypothesis 4, some specifics concerning demographics are provided here to assess the possible differential effect of demographic variables on levels of association between the 'Dimensions of Brand Trust' and the two extension response variables, TTP and LTT. Analysis has been conducted using the gender and age variables, assessing their impact within both the Combined Experiment, and the Tea Large, samples.



#### 4.9.1 The impact of Gender on Correlation levels between ‘Dimensions of Brand Trust’ and Extension Response Variables TTP and LTT within the Combined Experiment Sample

	Brand 1			Brand 2		
	Male N= 67	Female N= 129	Full Sample	Male N=67	Female N= 129	Full Sample
Adjusted R2 Dimensions of Brand Trust vs TTP	.095	.251	.215	.134	.309	.232
Sig.	.062	.000	.000	.088	.000	.000

**Table 4.64 Gender and Dimensions of Brand Trust versus TTP Measure of Extensions 1+2+3.**

	Brand 1			Brand 2		
	Male N= 67	Female N=129	Full Sample	Male N= 67	Female N= 129	Full Sample
Adjusted R2 Dimensions of Brand Trust vs LTT	.004	.122	.089	.179	.164	.152
Sig.	.406	.002	.000	.044	.000	.000

**Table 4.65 Gender and Dimensions of Brand Trust versus LTT Measure of Extensions 1+2+3.**

The results in Tables 4.64 and 4.65, for the Combined Experiment Sample, show how levels of association between the ‘Dimensions of Brand Trust’ and measures of extension response (TTP and LTT) are substantially higher for females than for males in three out of four cases. Using the aggregated TTP Extension 1+2+3 within the Combined Experiment Sample, Brand 1 had an adjusted  $R^2$  of .251 for females versus .095 for males; and Brand 2 had an adjusted  $R^2$  of .309 for females, and .134 for males. Using the aggregated LTT Extension 1+2+3 within the same sample, Brand 1 had an adjusted  $R^2$  of .122 for females, and .004 for males. Brand 2 however, had relatively consistent adjusted  $R^2$  figures for male and female respondents, at .179 and .164 respectively.

#### 4.9.2 The impact of Gender on Correlation levels between ‘Dimensions of Brand Trust’ and Extension Response Variables TTP and LTT (Tea Large Sample)

	Brand 1			Brand 2		
	Male Sample N= 81	Female N=160	Full	Male N= 81	Female N=160	Full Sample
Adjusted R2 Dimensions of Brand Trust vs TTP	.117	.239	.198	.279	.293	.266
Sig.	.019	.000	.000	.000	.000	.000

**Table 4.66 Dimensions of Brand Trust versus TTP Measure of Extensions 1+2+3.**

	Brand 1			Brand 2		
	Male Sample N=81	Female N=160	Full	Male N=81	Female N=160	Full Sample
Adjusted R <sup>2</sup> Dimensions of Brand Trust vs LTT	.103	.090	.095	.197	.298	.269
Sig.	.029	.002	.000	.001	.000	.000

**Table 4.67 Dimensions of Brand Trust versus LTT Measure of Extensions 1+2+3.**

The results in Tables 4.66 and 4.67, for the Tea Large Sample, again show how levels of association between the 'Dimensions of Brand Trust', and measures of extension response (TTP and LTT) were higher for females than males in three out of four cases. Using the aggregated TTP Extension 1+2+3 within the Combined Experiment Sample, Brand 1 had an adjusted R<sup>2</sup> of .239 for females versus .117 for males, and Brand 2 had an adjusted R<sup>2</sup> of .293 for females, and .279 for males. Using the aggregated LTT Extension 1+2+3 within the same sample, Brand 2 had an adjusted R<sup>2</sup> of .298 for females, and .197 for males. Brand 1, however, had a higher adjusted R<sup>2</sup> for male respondents, .103 compared with .090 for females.

The above results, within both the Combined Experiment and the Tea Large Samples, have indicated that gender had a differential effect on levels of association between the 'Dimensions of Brand Trust' and both of the brand extension response measures (TTP and LTT).

#### 4.9.3 The impact of Age on Correlation levels between 'Dimensions of Brand Trust' and Extension Response Variables TTP and LTT (Combined Experiment Sample)

	Brand 1			Brand 2		
	Age ≤40 N= 112	> 40 N= 90	Full Sample	Age ≤40 N=112	> 40 N= 90	Full Sample
Adjusted R <sup>2</sup> Dimensions of Brand Trust vs TTP	.197	.214	.215	.322	.168	.232
Sig.	.000	.000	.000	.000	.004	.000

**Table 4.68 Age and Dimensions of Brand Trust versus TTP Measure of Extensions 1+2+3.**

	Brand 1			Brand 2		
	Age ≤40 N= 112	> 40 N= 90	Full Sample	Age ≤40 N=112	> 40 N=90	Full Sample
Adjusted R <sup>2</sup> Dimensions of Brand Trust vs LTT	.121	.044	.089	.165	.080	.152
Sig.	.003	.189	.000	.002	.064	.000

**Table 4.69 Age and Dimensions of Brand Trust versus LTT Measure of Extensions 1+2+3.**

The differential effect of age has also been investigated within the Combined Experiment Sample. The results in Tables 4.68 and 4.69 show that in three out of four cases the adjusted



$R^2$  for the group aged 40 years or under ( $\leq 40$ ) was higher than that for the over 40 years age group ( $> 40$ ), the only exception being for Brand 1 using the TTP extension measure where the  $\leq 40$  group had .197 and the  $> 40$  group had .214.

#### 4.9.4 The impact of Age on Correlation levels between 'Dimensions of Brand Trust' and Extension Response Variables TTP and LTT (Tea Large Sample)

	Brand 1			Brand 2		
	Age		Full Sample	Age		Full Sample
	$\leq 40$ N=131	$> 40$ N=115		$\leq 40$ N= 131	$> 40$ N= 115	
Adjusted R <sup>2</sup>	.243	.150	.198	.356	.196	.266
Adjusted R <sup>2</sup> Dimensions of Brand Trust vs TTP						
Sig.	.000	.001	.000	.000	.000	.000

**Table 4.70 Age and Dimensions of Brand Trust versus TTP Measure of Extensions 1+2+3.**

	Brand 1			Brand 2		
	Age		Full Sample	Age		Full Sample
	$\leq 40$ N=131	$> 40$ N= 115		$\leq 40$ N= 131	$> 40$ N= 115	
Adjusted R <sup>2</sup>	.103	.079	.095	.399	.134	.269
Adjusted R <sup>2</sup> Dimensions of Brand Trust vs LTT						
Sig.	.003	.021	.000	.000	.001	.000

**Table 4.71 Age and Dimensions of Brand Trust versus LTT Measure of Extensions 1+2+3.**

The results presented in Tables 4.70 and 4.71, consistent with results for the C E Sample, show that in all cases, the younger age group ( $\leq 40$ ) had higher adjusted  $R^2$  association levels than did the over 40 year group ( $> 40$ ), all at the .05 level or higher. Using the TTP aggregated Extension 1+2+3 within the Combined Experiment Sample, Brand 1 had an adjusted  $R^2$  of .243 for the group aged 40 years or under versus .150 for respondents over 40 years, and Brand 2 had an adjusted  $R^2$  of .356 for the group aged 40 years or under, and .196 for respondents over 40 years. Using the LTT aggregated Extension 1+2+3 within the same sample, Brand 1 had an adjusted  $R^2$  of .103 for the group aged 40 years or under, and .079 for respondents over 40 years. Brand 2, had a higher adjusted  $R^2$  for the group aged 40 years or under, .399 against .134 for respondents of over 40 years.

#### 4.10 Were Brand Trust and Brand Extension Mean Responses Significantly Different Based upon Age, Gender and Educational level?

In testing the hypothesis that the demographic variables of age, gender and educational level would lead to significantly different mean responses by sub-groups, a series of ANOVA tests were conducted. One-way ANOVA was used to consider variables individually, age or gender or education, whilst two-way ANOVA was used to consider interaction or

combination effects, age and gender and education. The findings have first been reported on the Combined Experiment Sample and secondly on the Tea Large Sample. The analysis considered each of the six postulated 'Dimensions of Brand trust', brand trust as an individual variable, as well as the two brand extension response variables (TTP and LTT), making nine variables in total.

#### 4.10.1 Combined Experiment Sample - Demographic Sub-groups.

Variable	Sex		Education		Age	
	Female N= 129 Mean	Male N= 67 Mean	Non-Grad N= 94 Mean	Graduate N= 98 Mean	≤ 40 N= 112 Mean	> 40 N=90 Mean
Probity	5.88**	5.58	5.83	5.71	5.77	5.78
Equity	5.45	5.31	5.46	5.31	5.38	5.43
Reliability	5.89**	5.59	5.83	5.72	5.82	5.72
Satisfaction	5.78*	5.28	5.64	5.54	5.69	5.49
Communication	5.76**	5.36	5.63	5.58	5.60	5.63
Process	5.47	5.31	5.54	5.29	5.35	5.51
Brand trust	6.05	5.88	6.04	5.87	6.03	5.94
TTP Ext 1+2+3	4.07*	3.35	3.99	3.61	3.78	3.82
LTT Ext 1+2+3	4.89*	4.46	4.81**	4.58	4.74	4.71

\* Denotes significant difference between means (\*\*= .05 level, \*= .01 level)

**Table 4.72: Brand 1: Mean Values by Demographic Groupings: Gender, Education and Age**

One-way ANOVA tests were conducted (Table 4.72) to assess if there were significant differences in the mean scores of the brand trust measures and brand extension measures between the different gender, educational and age groups using the Combined Experiment Sample (CES). Statistically significant mean differences between gender types were found in the Probity (.05), Reliability (.05), Communication (.05), Satisfaction (.01), TTP (.01), and LTT (.0001) response variables. The Eta squared statistics obtained for the statistically significant gender variables were Probity (.028), Reliability (.029), Satisfaction (.056), Communication (.025), TTP extension (.035) and Trial extension (0.064), which fell into Eta's small to medium effects sizes. These results supported our sub-hypothesis for the gender variable (H4b), with small to medium effect sizes being found.

No significant differences in mean response were found for age, and one variable LTT Ext 1+2+3 was found for education for Brand 1, at the .05 level. Whilst all non-graduate mean scores were higher than scores for graduates, none were statistically significant at the .05 level, thus rejecting our sub-hypothesis H4c (that non-graduates would have higher mean scores than graduates).



Variable	Brand 2.		Sex		Education		Age	
	Female N = 117 Mean	Male N= 41 Mean	Non-Grad N = 83 Mean	Graduate N= 70 Mean	≤ 40 N=86 Mean	> 40 N=77 Mean		
Probity	4.99	4.81	4.93	4.93	4.87	5.03		
Equity	4.91	4.87	4.90	4.89	4.80	5.02		
Reliability	4.92	4.79	4.89	4.85	4.86	4.95		
Satisfaction	4.61	4.69	4.69	4.58	4.62	4.67		
Communication	4.58	4.58	4.66	4.44	4.59	4.57		
Process	4.78	4.73	4.82	4.73	4.75	4.82		
Brand trust	4.91	4.80	4.84	4.95	4.79	5.02		
TTP Ext 1+2+3	3.55	3.36	3.48	3.51	3.53	3.45		
LTT Ext 1+2+3	4.40	4.18	4.34	4.36	4.41	4.31		

**Table 4.73: Brand 2: Mean Values by Demographic Groupings: Gender, Education and Age**

Using one-way ANOVA, for Brand 2 within the Combined Experiment Sample no statistically significant differences were found for gender, education, or age. For gender, seven out of the nine variables measured were higher for females (e.g. Probity at 4.99 for females and 4.81 for males; LTT at 4.40 for females and 4.18 for males), where the other two, Satisfaction and Communication, were similar. By educational levels, means were evenly balanced. Older respondents tended to have slightly higher brand trust and 'Dimensions of Brand Trust' response means (e.g. brand trust at 5.02 for the over 40's, and 4.79 for 40 years or under.), but lower brand extension response means (TTP at 3.45 for the over 40's, and 3.53 for 40 years or under; LTT at 4.31 for the over 40's, and 4.41 for 40 years or under).

Variable	Brand 1				Education	
	CSE & GCSE N= 60 Mean	ONC & A Level N= 34 Mean	Grad N= 73 Mean	Postgrad + Professional N= 24 Mean		
Probity	5.89	5.73	5.68	5.77		
Equity	5.55	5.30	5.30	5.31		
Reliability	5.83	5.84	5.71	5.73		
Satisfaction	5.69	5.56	5.46	5.73		
Communication	5.72	5.45	5.61	5.44		
Process	5.61	5.42	5.22	5.44		
Brand trust	6.08	5.97	5.90	5.75		
TTP Ext 1+2+3	4.70	5.00	4.64	4.44		
LTT Ext 1+2+3	3.73	4.44**	3.70	3.37**		

\* Denotes significant difference between means (\*\*= .05 level, \*= .01 level)

**Table 4.74 Brand 1: Mean Values by Demographic Groupings: Education**

In Table 4.74, one-way ANOVA was used for the four different levels of respondents' highest education attainment. The only significant difference (.016) in means was between ONC/A Level and Postgraduate/Professional respondents for the variable LTT, with mean scores of 4.44 and 3.37 respectively. The Eta Squared for this significant difference was .054, which is classified as a 'medium effect size' (Cohen, 1988). Whilst no other statistically

significant differences were found, the brand trust mean was highest at 6.08 for the lowest educational level, versus 5.75 for the highest, and means for the six 'Dimensions of Brand trust' tended to be highest for the lowest education level (e.g. Probity at 5.89, and Equity at 5.55, for the CSE/GCSE group versus Probity at 5.77, and Equity at 5.31, for the Postgrad. and Professional group) except for the brand extension response means, which were highest for the ONC/A Level group.

Variable	Brand 2 Education			
	CSE & GCSE N= 54 Mean	ONC & A Level N= 29 Mean	Grad N= 49 Mean	Postgrad + Professional N= 20 Mean
Probity	4.99	4.83	4.97	4.88
Equity	4.96	4.78	4.91	4.89
Reliability	4.91	4.85	4.90	4.83
Satisfaction	4.73	4.61	4.55	4.77
Communication	4.63	4.70	4.47	4.42
Process	4.86	4.76	4.75	4.75
Brand trust	4.86	4.79	4.95	5.00
TTP Ext 1+2+3	4.16	4.67	4.43	4.25
LTT Ext 1+2+3	3.17	4.05**	3.71**	3.16

\* Denotes significant difference between means (\*\*= .05 level, \*= .01 level)

**Table 4.75 Brand 2: Mean Values by Demographic Groupings: Education**

The one-way ANOVA tests for Brand 2 (Table 4.75) revealed a consistent picture to that for Brand 1, with one statistically significant difference on the LTT variable ( $p = .024$ , ETA Squared .06), between ONC/A Level (mean = 4.05) and graduate (mean = 3.71) respondents, a medium effect size. Mean scores for the lowest educational group were slightly higher for four of the six 'Dimensions of Brand Trust' (Probity, Equity, Reliability and Process), but again lower, but not statistically different, for extension response variables (TTP and LTT).

One-way ANOVA tests for Brand 1 and for Brand 2, of the five different age groups of respondents within the sample found no significant differences in mean responses for any variable (the results are not displayed).

Two-way ANOVA tests looked for differences in means based upon interaction of demographic variables.

Table 4.76 illustrates the significant mean differences in variables for Brand 1, which related to the gender and age of respondents. Statistically significant differences in mean values relating to gender were found for Probity (.05), Reliability (.05), Satisfaction (.01), Communication (.05), TTP (.01) and LTT (.01). No significant differences were found relating to age, or indeed to any interaction effects between age and gender. The Eta Squared statistics for gender, at between .027 and .069, were classified as of small to medium effect size.



Brand 1		Gender and Age				Sig. Demog Variables	Partial Eta Squared
Variable	Female 20-40 N= 80 Mean	Male 20-40 N=31 Mean	Female 41+ N=48 Mean	Male 41+ N=36 Mean			
Probity**	5.91	5.41	5.83	5.72	Gender .022	.027	
Equity	5.46	5.17	5.44	5.43			
Reliability**	5.93	5.56	5.83	5.63	Gender .023	.027	
Satisfaction*	5.87	5.29	5.63	5.27	Gender .002	.049	
Communication**	5.71	5.34	5.83	5.37	Gender .022	.027	
Process	5.45	5.09	5.49	5.50			
Brand trust	6.12	5.80	5.93	5.94			
TTP Ext 1+2+3*	4.84	4.46	4.96	4.46	Gender .008	.036	
LTT Ext 1+2+3*	3.97	3.21	4.21	3.47	Gender .000	.069	

Denotes significant difference between means [\*\* = p.05, \* = p.01]

Table 4.76 Brand 1: Mean Values by Demographic Groupings: Gender and Age Combined

Use of two-way ANOVA on Brand 2 found no statistically significant differences in means for any of the nine variables, either for main effects or interaction effects between gender and age.

Brand 1		Gender and Education				Sig. Demog Variables	Partial Eta Squared
Variable	Female Non-Grad N=66 Mean	Male Non-Grad N=24 Mean	Female Grad N=56 Mean	Male Grad N=40 Mean			
Probity**	5.94	5.62	5.83	5.52	Gender .023	.028	
Equity	5.48	5.50	5.39	5.16			
Reliability**	5.91	5.72	5.87	5.48	Gender .029	.026	
Satisfaction*	5.86	5.22	5.70	5.27	Gender .001	.060	
Communication**	5.67	5.55	5.84	5.23	Gender .050	.020	
Process**	5.53	5.63	5.40	5.09	Grad .023	.029	
Brand trust	6.10	5.95	5.91	5.80			
TTP Ext 1+2+3**	4.88	4.76	4.86	4.23	Gender .028	.027	
LTT Ext 1+2+3*	4.04	3.86	4.11	2.95	Gender .001	.056	
**					Grad .044	.022	
**					Interact .019	.030	

\* Denotes significant difference between means [\*\* = p.05, \* = p.01]

Table 4.77 Brand 1: Mean Values by Demographic Groupings: Gender and Education Combined

Table 4.77 considers 'combination effects' of gender and education on Brand 1 mean levels for the variables under study. Gender was shown to have a statistically significant main effect in six of the nine variable analysed above, with effects sizes (ranging from .2 to .6) classified as 'small to medium'. Differences in mean values based upon gender were found for Probity (.05), Reliability (.05), Satisfaction, (.01), Communication (.05), TTP (.05), and LTT (.01). Education was significant for two variables, 'Process' (.05) and 'LTT' (.05), with a statistically significant interaction effect between gender and education also being produced for the 'LTT' variable (.05).

In contrast to these results for Brand 1, the analysis for Brand 2 within the Combined Sample produced no statistically significant main or interaction effects for gender and education. The only notable points, none statistically significant, were that male graduates had the lowest mean scores for six of the nine variables measured, and female non-graduates had the highest mean scores for five of the nine variables. (These results are not displayed).

#### 4.10.2 Tea Large Sample - Demographic Effects

Analysis was conducted using one-way ANOVA tests to find differences in mean values between demographic groups.

Variable	Sex		Education		Age	
	Female N= 158 Mean	Male N= 80 Mean	Non-Grad N= 120 Mean	Graduate N= 113 Mean	≤ 40 N= 130 Mean	> 40 N= 113 Mean
Probity	5.79	5.54	5.74	5.66	5.69	5.73
Equity**	5.35	5.07	5.38**	5.11	5.23	5.30
Reliability	5.76	5.53	5.79	5.55	5.64	5.74
Satisfaction*	5.60	5.43	5.72*	5.38	5.54	5.56
Communication	5.56	5.36	5.59	5.39	5.51	5.47
Process	5.19	4.95	5.20	5.00	5.05	5.20
Brand trust	6.01	5.95	6.11	5.84	6.01	5.96
TTP Ext 1+2+3	4.92	4.79	4.98	4.85	4.93	4.81
LTT Ext 1+2+3**	3.78**	3.27	3.78	3.55	3.54	3.70

\* Denotes significant difference between means [\*\* = p.05, \* = p.01]

**Table 4.78: Brand 1: Mean Values by Demog. Groupings: Gender, Education and Age - Tea Sample**

Table 4.78 shows that Brand 1 within the Tea Large Sample had few statistically significant differences between mean scores based upon demographics. Females had higher means for all variables considered, with one variable, 'LTT', reaching statistical significance (.032, Eta squared .036). A similar picture emerged for education, where non-graduates had higher means for all variables, and two achieved statistical significance, Equity (p=.022, Eta .022) and Satisfaction (p=.009, Eta .029). By age there were no significant differences in means.

Brand 2 (Table 4.79) had no statistically significant differences in means for gender, but all means (except Process) were higher for females than for males (e.g. Probity at 5.42 for females and 5.16 for males). For education level, six of the nine means showed significant differences, with non-graduates scoring more highly. The mean differences relating to education were for Equity (.031), Reliability (.042), Satisfaction (.029), Communication (.01), brand trust (.036), and LTT (.021), with Eta squared effect sizes in the .2 to .3 small effect range.



Variable	Brand 2		Sex		Education		Age	
	Female N= 158 Mean	Male N=80 Mean	Non-Grad N= 122 Mean	Grad N= 112 Mean	≤ 40 N= 128 Mean	> 40 N= 115 Mean		
Probity**	5.42	5.16	5.45	5.21	5.20	5.50**		
Equity**	5.08	4.81	5.12**	4.85	4.77	5.25*		
Reliability**	5.39	5.30	5.50**	5.22	5.18	5.59*		
Satisfaction**	5.12	4.95	5.25**	4.91	4.88	5.30*		
Communication**	5.00	4.86	5.12*	4.79	4.79	5.16*		
Process**	4.87	4.90	4.95	4.82	4.70	5.13*		
Brand trust**	5.39	5.22	5.52**	5.16	5.19	5.53**		
TTP Ext 1+2+3	4.41	4.39	4.56	4.33	4.33	4.49		
LTT Ext 1+2+3**	3.40	3.06	3.55**	3.09	3.15	3.45		

\* Denotes significant difference between means [\*\* = p.05, \* = p.01]

**Table 4.79: Brand 2: Mean Values by Demog. Groupings: Gender, Education and Age, Tea Sample**

For age (Table 4.79), there were seven variables with significant difference in mean values, Probity (.021), Equity (.0001), Reliability (.002), Satisfaction (.005), Communication (.004), Process (.001) and brand trust (.047), with the older respondents scoring more highly.

Variable	Brand 1			
	CSE & GCSE N= 78 Mean	ONC & A Level N= 42 Mean	Grad N= 78 Mean	Postgrad + Professional N= 35 Mean
Probity	5.81	5.60	5.69	5.59
Equity**	5.44**	5.25	5.17	4.98**
Reliability	5.84	5.68	5.58	5.48
Satisfaction	5.79	5.58	5.42	5.29
Communication	5.64	5.50	5.39	5.40
Process**	5.24**	5.14	5.07	4.85**
Brand trust	6.19	5.97	5.85	5.80
TTP Ext 1+2+3	5.08	4.78	4.86	4.82
LTT Ext 1+2+3	3.74	3.84	3.59	3.47

\* Denotes significant difference between means [\*\* = p.05, \* = p.01]

**Table 4.80 Brand 1 Mean Values by Demographic Groupings: Education, Tea Large Sample**

Analysis by differential educational attainment levels for Brand 1 (Table 4.80) found two variables, Equity (.05), and Process (.039), with statistically different mean scoring between the lowest educated and the highest educated respondents, the lowest educated scored highest. The remaining seven variables, all scored higher for the lowest educated relative to the highest educated respondents, but not at statistically significant levels.

Variable	Brand 2 Education			
	CSE & GCSE N= 78 Mean	ONC & A Level N= 44 Mean	Grad N= 79 Mean	Postgrad + Professional N= 33 Mean
Probity	5.48	5.39	5.23	5.18
Equity	5.17	5.03	4.89	4.73
Reliability	5.52	5.46	5.24	5.18
Satisfaction	5.31	5.13	4.90	4.92
Communication**	5.20**	4.98	4.75**	4.88
Process	4.99	4.89	4.86	4.70
Brand trust	5.55	5.47	5.20	5.06
TTP Ext 1+2+3	4.60	4.49	4.32	4.34
LTT Ext 1+2+3	3.54	3.56	3.16	2.92

\* Denotes significant difference between means [\*\* = p.05, \* = p.01]

**Table 4.81 Brand 2: Mean Values by Demographic Groupings: Education, Tea**

By educational attainment level, (Table 4.81) for Brand 2 (Typhoo) there was one significant difference in means for Communication (.039). The respondents with the lowest educational attainment scored consistently higher across all variables, but at non-significant levels.

For Brand 1 (Tetley), the five different age groups, using one-way ANOVA, provided no statistically significant differences or particular patterns of results between groups, and the table has thus not been shown for the sake of brevity.

Variable	Brand 2 AGE				
	20 – 30 N= 35 Mean	31 – 40 N= 93 Mean	41-50 N= 58 Mean	51-60 N= 26 Mean	61+ N= 31 Mean
Probity**	5.43	5.11**	5.43	5.39	5.73**
Equity**	5.02	4.68*	5.14	5.14	5.56*
Reliability**	5.42	5.09*	5.51	5.49	5.83*
Satisfaction**	5.19	4.76**	5.26	5.19	5.45**
Communication**	5.04	4.70**	5.12	5.05	5.32**
Process**	4.97	4.59*	5.07	4.98	5.35*
Brand trust**	5.57	5.05**	5.41	5.50	5.77**
TTP Ext 1+2+3	4.33	4.33	4.52	4.64	4.33
LTT Ext 1+2+3	3.36	3.07	3.40	3.94	3.13

Denotes significant difference between means [\*\* = p.05, \* = p.01]

**Table 4.82 Brand 2: Mean Values by Demographic Groupings: Age Split, Tea**

Table 4.82, for Brand 2, again using age splits, shows seven statistically significant differences in mean scores for the 61+ age group, primarily, versus the 31 - 40 year age group, these were: Probity (.04), Equity (.0001), Reliability (.006), Satisfaction (.017), Communication (.013), Process (.002), and brand trust (.05). Compared to the high mean values recorded for the 61+ age group on virtually all variables, their mean score of 3.13 for LTT was one of the lowest. This result was consistent with those from the Combined Experiment Sample. Whilst not statistically significant, the mean scores for brand trust, and 'Brand Trust Dimensions' appeared to follow a U-shaped pattern through the age groups, where means tended to start at slightly higher levels for 20-30 year olds, decline in 30-50



year age groups, prior to increasing for the 61+ group.

Variable	Brand 1				Gender and Age	
	Female 20-40 N= 99 Mean	Male 20-40 N=31 Mean	Female 41+ N=59 Mean	Male 41+ N=49 Mean	Sig. Demog Variables	Partial Eta Squared
Probity	5.76	5.47	5.83	5.59		
Equity	5.29	5.01	5.45	5.11		
Reliability	5.71	5.41	5.85	5.60		
Satisfaction	5.62	5.27	5.58	5.53		
Communication	5.53	5.46	5.60	5.29		
Process	5.12	4.80	5.30	5.04		
Brand trust	6.01	6.03	6.03	5.89		
TTP Ext 1+2+3	4.99	4.75	4.82	4.81		
LTT Ext 1+2+3**	3.63	3.24	4.05	3.29	Gender .022	.040

\* Denotes significant difference between means [\*\* = p.05, \* = p.01]

**Table 4.83 Brand 1 Mean Values by Demographic Groupings: Gender and Age Combined -Tea Sample**

Two-way ANOVA analysis was again conducted to seek combination effects between demographic variables. Table 4.83 considers gender and age variables for Brand 1 (Tetley). One statistically significant 'main effect' was found for gender, for 'LTT' (.05), at a small effect size. No statistically significant interaction effects were found between variables.

Variable	Brand 2				Gender and Age	
	Female 20-40 N= 97 Mean	Male 20-40 N= 30 Mean	Female 41+ N= 60 Mean	Male 41+ N=50 Mean	Sig. Demog Variables	Partial Eta Squared
Probity** **	5.25	5.03	5.69	5.25	Gender .050 Age .023	.033 .022
Equity** *	4.83	4.61	5.49	4.93	Gender .013 Age .000	.045 .057
Reliability*	5.19	5.14	5.73	5.40	Age .007	.031
Satisfaction*	4.94	4.66	5.40	5.12	Age .006	.032
Communication*	4.84	4.65	5.26	4.99	Age .006	.032
Process*	4.71	4.65	5.14	5.06	Age .003	.037
Brand trust	5.20	5.16	5.71	5.26		
TTP Ext 1+2+3	4.37	4.22	4.49	4.49		
LTT Ext 1+2+3	3.23	2.91	3.68	3.16		

[\*\* = p.05, \* = p.01]

**Table 4.84 Brand 2: Mean Values by Demographic Groupings: Gender and Age Combined**

The analysis for Brand 2, also using two-way ANOVA, produced several statistically significant differences between the means based on gender and age variables (Table 4.84). Age was a statistically significant main effect relating to six of the nine variables: Probity (.05), Equity (.01), Reliability (.01), Satisfaction (.01), Communication (.01), and Process (.01). Gender was a main effect for two variables, Probity (.05) and Equity (.05), at statistically significant levels, with small to medium effect size. No statistically significant interaction effects were found between gender and age.

**Brand 1                      Gender and Education**

Variable	Female Non-Grad N= 90 Mean	Male Non-Grad N=29 Mean	Female Grad N= 60 Mean	Male Grad N= 49 Mean	Sig. Demog Variables	Partial Eta Squared
Probity	5.84	5.43	5.72	5.56		
Equity	5.45	5.13	5.20	4.97		
Reliability	5.84	5.59	5.62	5.45		
Satisfaction**	5.75	5.60	5.39	5.34	Grad .030	.021
Communication	5.64	5.42	5.48	5.28		
Process	5.25	5.04	5.11	4.83		
Brand trust**	6.08	6.20	5.91	5.75	Grad .050	.017
TTP Ext 1+2+3	5.02	4.91	4.91	4.74		
LTT Ext 1+2+3**	3.87	3.54	3.81	3.19	Gender .048	.034

\* Denotes significant difference between means [\*\* = p.05, \* = p.01]

**Table 4.85 Brand 1: Mean Values by Demographic Groupings: Gender and Education Combined**  
For Brand 1, using Two-way ANOVA, education was found to have a statistically significant 'main effect' concerning Satisfaction (.05) and brand trust (.05) variables, whilst gender was a significant 'main effect' for 'LTT' (.05). Whilst no more statistically significant main effects were found, the female non-graduates scored all variables highest, except for brand trust, whilst the male graduates scored all variables lowest, except for 'Probity'. No statistically significant interaction effects were found.

**Brand 2                      Gender and Education**

Variable	Female Non-Grad N= 91 Mean	Male Non-Grad N=30 Mean	Female Grad+ N= 60 Mean	Male Grad N= 48 Mean	Sig. Demog Variables	Partial Eta Squared
Probity	5.53	5.19	5.27	5.09		
Equity	5.18	4.90	4.93	4.70		
Reliability	5.52	5.43	5.22	5.17		
Satisfaction**	5.25	5.22	4.94	4.80	Grad .033	.060
Communication**	5.11	5.12	4.86	4.66	Grad .013	.020
Process	4.94	4.93	4.77	4.81		
Brand trust	6.08	6.20	5.91	5.75		
TTP Ext 1+2+3	4.54	4.71	4.37	4.20		
LTT Ext 1+2+3*	3.54	3.62	3.27	2.79	Grad .010	.029

\* Denotes significant difference between means [\*\* = p.05, \* = p.01]

**Table 4.86 Brand 2: Mean Values by Demographic Groupings: Gender and Education Combined**  
Two-way ANOVA analysis on Brand 2 (Table 4.86) revealed several main effects, three at statistically significant levels, for education: Satisfaction (.05), Communication (.05), and LTT (.01). The results, which mirrored those for Brand 1 (Table 4.85), showed that female non-graduates tended to have the highest mean value scores; whilst male graduates tended to have the lowest, but not at statistically significant levels. No statistically significant interaction effects were found.



#### 4.11 Data Analysis and Results Chapter – SUMMARY & CONCLUSIONS

The Data Analysis and Results Chapter has been structured around the research hypotheses generated for the study. The summary and conclusions have followed the same protocol – the evidence concerning each hypothesis will be discussed in detail in the next Chapter.

##### 4.11.1 Hypothesis 1

Brand Trust can be shown to be associated with a number of key ‘associative variables’- which form a ‘model’ of the construct, in that:

Brand Trust will be positively correlated with the six dimensions overall and with each of the six ‘Dimensions’ (Probity, Equity, Reliability, Satisfaction, Brand Communication and Process) for both ‘Brand 1’ and ‘Brand 2’ within the full samples (Combined and Tea Large) and at product category level.

A postulated model of the correlates of brand trust was presented and tested using standard multiple regression on a C E Sample, a T L sample, and individual category and brand analyses from sub-samples of the Combined Experiment Sample (Grocery Shops, Pens, Coffee, and Internet Retail). In all, eleven separate regression analyses were conducted. No single regression analysis found all six ‘Dimensions of Brand trust’ to be positively correlated with brand trust, the maximum number of dimensions appearing in any one equation being three.

Sample	N= 204 CES		N= 249 TLS		N= 39 Sainsbury	N=39 Co-op	N=44 Parker	N=44 Pilot	N=41 Nescafé	N=41 Maxwell House	N=41 Amazon
	B1	B2	B1	B2							
Probity		✓**			✓**				✓*		
Equity	✓* ✓*		✓* ✓*			✓**	✓*			✓**	✓*
Reliability	✓* ✓**		✓* ✓*			✓**		✓**			
Satisfaction				✓*							✓**
Process	(✓)**		(✓)*(✓)*					(✓)**	(✓)*		
Brand Communication											
Six Dim Adjusted R <sup>2</sup>	.603	.679	.524	.700	.624	.716	.434	.695	.763	.672	.712
Four Dim Adjusted R <sup>2</sup>	.590	.676	.504	.689	.625	.695	.427	.660	.600	.690	.709

\* Denotes significance level [\*\* = p.05, \* = p.01]. [B = Brand, CES= Combined Experiment Sample, TLS= Tea Large Sample].

**Table 4.87 Summary Multiple Regression Results – Samples and ‘Dimensions of Brand Trust’**

Table 4.87, which summarised the results, showed the variables significantly correlated with brand trust within the six dimension regression analyses, the overall adjusted R<sup>2</sup> for the six dimensions, and also, as a direct comparison, the adjusted R<sup>2</sup> for the four dimension model of brand trust. Table 4.87 also showed the specific brand trust Dimensions which correlated positively with brand trust at statistically significant levels within regression equations (using the six dimension model), using a tick, with the tick being bracketed where statistically



significant negative correlations occurred. In the above results, Equity appeared eight times within equations, Reliability six times, Probity three times and Satisfaction twice. Brand Communication did not enter any regression equations, positively or negatively, whilst Process entered the various equations five times as statistically significant, but negatively correlated. Clearly, not all of the six 'Dimensions of Brand Trust' were found to be positively correlated with brand trust, but four of the six dimensions did feature consistently within the various regression equations - Probity, Equity, Reliability and Satisfaction. The adjusted  $R^2$  values, denoting the explanatory power of the 'model', may be characterised as strong, with four of eleven equations having an adjusted  $R^2$  in excess of .7, nine of eleven over .6, ten out of eleven over .5, and the lowest at .434(Parker). Regression analyses which focussed on the four dimensions of Probity, Equity, Reliability and Satisfaction with the single measure of brand trust, as a direct comparison with association levels for the six dimension model of brand trust, illustrated that the four dimensional model produced adjusted  $R^2$  values near identical to those for the six dimensional model of brand trust. The only exception to these results was found for the Nescafe brand within the coffee category, where the adjusted  $R^2$  value fell from .763 for the six dimensions, down to .600 for the four dimensions (Table 4.87).

The Hypothesis was thus strongly, albeit partially, supported.

#### **4.11.2 Hypothesis 2**

Brands with higher brand trust levels will be more likely to succeed in extension categories (particularly distant extension categories), with success measured by 'likelihood to try' or 'trust to provide extension', in that:

- a) Brand 1 (the higher trust brand) will outperform brand 2 (the moderate trust brand) in extension 1, 2 and 3 (in total and split sample).
- b) Brand 1 (the higher trust brand) will outperform brand 3 (the lower trust fictitious brand) in extension 1, 2 and 3 (in total and split sample).
- c) Brand 2 (the moderate trust brand) will outperform brand 3 (the lower trust fictitious brand) in extension 1, 2 and 3 (in total and split sample).

Mean brand trust and brand extension response means (TTP and LTT) were showed statistically (.01) significant differences between Brand 1 and Brand 2, when analysed within both the Combined Experiment and Tea Large Samples. The results at the individual brand level, using sub-samples from within the Combined Experiment sample found support for the hypothesis in the Grocery Shops, Tea, Coffee and Internet Retail samples, and limited support for the hypothesis with the Pens sample. Brand 3, the 'dummy' brand, had brand trust measures and extension response measures which were lower at statistically significant (.001) levels, than those for the real brands, again supporting the hypothesis.



### 4.11.3 Hypothesis 3

Brand Trust or the 'Dimensions of Brand Trust' will be positively correlated with brand extension response measures.

The results from Chi-Square tests showed that, for Brands 1 and 2 in both the Combined Experiment and Tea Large samples, the null hypothesis that brand trust and brand extension response measures (TTP and LTT) were independent variables, was rejected in all cases, mainly at the .01 level or higher (Tables 4.40 to 4.47).

Further, standard multiple regression, for Brand 1 and Brand 2 within the Combined Experiment and Tea Large Samples, of the six 'Dimensions of Brand Trust' with brand extension aggregated response measures (TTP and LTT) showed higher correlations than did the single variable brand trust, with the correlations statistically significant, but weak. The results for correlations of the six 'Dimensions of Brand trust' versus the brand extension responses (Ext 1+2+3 TTP and Ext 1+2+3 LTT) tended to show an adjusted  $R^2$  of around .2 for the 'Trust to Provide' (TTP) measure, and an adjusted  $R^2$  of around .1 for the 'Likely to Try' LTT measure. Comparison of the results for both TTP and LTT showed that correlation levels tended to decline as brand extension activities moved from related to unrelated constructs. Additional analyses related to the four dimensions of brand trust (Probity, Equity, Reliability and Satisfaction) in Table 4.87 earlier, showed that levels of association with TTP and LTT aggregated measures for both the C E and T L Samples, were near identical for the six dimension and four dimensional models of brand trust.

The results, therefore, offered strong, but partial, support to the above Hypothesis. Analyses using the four dimensional model of brand trust gave similar levels of association to those of the six dimensional model at significant levels, but with increased parsimony.

### 4.11.4 Hypothesis 4

Differences in the level of brand trust, in the six hypothesised 'Dimensions of Brand Trust', and in brand extension acceptance (TTP and LTT) will occur according to gender, age and educational level such that:

- a) Older respondents will score the above at higher levels than will younger respondents.
- b) Females will rate the above at higher levels than will males.
- c) More highly educated respondents will rate the above at lower levels than will those respondents of lower education.

A series of one-way and two-way ANOVA tests were conducted to examine the hypothesised differences in mean brand trust, 'Dimensions of Brand Trust' and Brand Extension

measurement responses (TTP and LTT) based upon age, gender, educational level, and a combination of these demographic variables. While there was inconsistency in the results, a pattern of statistically significant differences in brand trust, 'Dimensions of Brand Trust', and brand extension measurement responses was found, particularly for gender, using both one-way and two-way ANOVA analyses. Females tended to have higher brand trust, 'Dimensions of Brand Trust', and brand extension response (TTP and LTT) mean scores. Differences in mean values were also found for age and educational level, where older respondents tended to have higher mean scores for brand trust and 'Dimensions of Brand Trust', although not for brand extension response measures (TTP and LTT). Those respondents, with a lower educational level, tended to have higher mean scores for brand trust, the 'Dimensions of Brand Trust', and brand extension response measures (TTP and LTT).

Lastly, the impact of demographic variables on correlations between measures of brand trust (brand trust and the 'Dimensions of Brand Trust') and measures of brand extension response (TTP and LTT), was considered. The results indicated that correlations between the two measures tended to be substantially higher for females than males. Six out of eight regression equations for Brand 1 and Brand 2, using the Combined Experiment and Tea Large Samples, showed higher correlations for females over males. Additionally, by age, correlations between the two sets of measures were found to be higher in seven out of eight analyses for respondents aged up to 40 years relative to respondents aged over 40 years.

The results gave statistically significant support to the above hypothesis, and especially that female, older, less educated respondents tended to have higher mean scores for brand trust, 'Dimensions of Brand Trust', and brand extension response measures (TTP and LTT). The only caveat was that older respondents tended to have lower brand extension responses (TTP and LTT) relative to their younger counterparts, this is discussed within the next Chapter (Sections 5.5.1.2 and 5.5.2.2).

Detailed discussion of the research hypotheses and the supporting evidence will be provided within the following Discussion of Findings Chapter. The conceptual model of brand trust, each of the research hypotheses, and issues raised by this Chapter will be examined in next Chapter, and considered in light of the academic literature review and the earlier exploratory pilot stages. Finally, the Summary and Conclusions Chapter will: revisit the focus of the research; consider the academic and qualitative research underpinning to the concept and modelling of 'Brand Trust'; evaluate the findings for each of the research hypotheses, consider the managerial implications; and the limitations to the study and directions for future research.



## CHAPTER 5 DISCUSSION OF FINDINGS AND IMPLICATIONS

### 5.1 Introduction

Chapter 5 will re-introduce the research hypotheses and conceptual model of brand trust. The research hypotheses and conceptual model will be examined in the light of the data analysis conducted, the academic literature review undertaken, and the earlier pilot exploratory stages of qualitative and quantitative research. The Chapter will integrate these various information sources, interpret the data analyses, and discuss the findings.

### 5.2 Hypothesis 1

Brand trust can be shown to be associated with a number, of key ‘associative variables’- which form a ‘model’ of the construct, in that:

Brand trust will be positively correlated with the six dimensions overall and with each of the six ‘Dimensions’ (Probity, Equity, Reliability, Satisfaction, Brand Communication and Process) for both ‘Brand 1’ and ‘Brand 2’ within the full samples (Combined and Tea Large) and at product category level.

A brief review of the results from the various samples is presented prior to a full discussion.

Dependent variable: Level of Brand Trust N=204

Independent variables: Six Postulated Dimensions of Brand Trust

Variable	Brand 1		Unstandardised			Standardised		
	B	SEB	Beta	T	Sig T			
Probity	.154	.104	.124	1.486	.139			
Equity	.382	.103	.302	3.700	.000*			
Reliability	.603	.138	.465	4.371	.000*			
Satisfaction	.129	.078	.120	1.651	.100			
Communication	-.058	.050	-.064	-1.177	.241			
Process	-.190	.076	-.166	-2.504	.013**			
Multiple R	.784					Analysis of Variance [*= p.01, **= p.05]		
R Square	.615		DF	Sum of Squares	Mean Square			
Adj. R Square	.603	Regression	6	141.68	23.61			
Standard Error	.677	Residual	193	88.67	.459			
		F=	51.39	Sign F= .000				

Table 5.1: Multiple Regression – Combined Experiment Sample Brand 1

Dependent variable: Level of Brand Trust N=204

Independent variables: Six Postulated Dimensions of Brand Trust

Variable	Brand 2		Unstandardised			Standardised		
	B	SEB	Beta	T	Sig T			
Probity	.264	.115	.224	2.303	.023**			
Equity	.620	.125	.475	4.958	.000*			
Reliability	.285	.141	.239	2.029	.044**			
Satisfaction	.094	.085	.094	1.168	.244			
Communication	-.057	.082	-.051	-.707	.481			
Process	-.160	.102	-.122	-1.580	.116			
Multiple R	.832					Analysis of Variance [*= p.01, **= p.05]		
R Square	.691		DF	Sum of Squares	Mean Square			
Adj. R Square	.679	Regression	6	160.91	26.81			
Standard Error	.682	Residual	154	71.79	.466			
		F=	87.52	Sign F= .000				

Table 5.2: Multiple Regression – Combined Experiment Sample Brand 2.

#### 5.2.1 Combined Experiment Sample

The results from the combined experiment sample for both Brands 1 and 2 give partial

support to the hypothesis concerning positive correlation between all of the 'six dimensions' and brand trust (Tables 5.1 and 5.2). The six dimension models produced for Brand 1 and Brand 2 did have good explanatory power with regard to the dependent variable brand trust, showing an adjusted  $R^2$  of .603 and .679, respectively, for Brands 1 and 2. The equations generated by standard multiple regression analysis produced two statistically significant positive correlates for Brand 1, Reliability (Beta .465 and .000) and Equity (Beta .302 and .000), and three significant positive correlates for Brand 2 Equity (Beta .475 and .001), Reliability (Beta .239 and .05), and Probity (Beta .224 and .05) when regressed against brand trust. The Brand 1 equation produced Process (Beta -.166 and .05) as a statistically significant but negative correlate with the dependent variable, brand trust. Within the equations for either Brand 1 or Brand 2 thus, there were statistically significant correlates of brand trust concerning Probity, Equity, Reliability and Satisfaction. Further analyses results for Brand 1 using a four dimensional model (Table 4.5, Data Analysis Chapter), showed an adjusted  $R^2$  of .590 ( $F=73.99$ ; Sig.  $F=.000$ ), where two variable showed a statistically significant correlation with brand trust, Equity (.006) and Reliability (.000). For Brand 2 (Table 4.6, Data Analysis Chapter), the four dimensional model explained almost 68% of the variance in the dependent variable (adjusted  $R^2$  of .676;  $F=85.55$ ; Sig.  $F=.000$ ), where two variables had a statistically significant correlation with brand trust, Probity (.037) and Equity (.000). These adjusted  $R^2$  figures were near identical to the levels of association achieved by the six dimensional models for Brand 1 (adjusted  $R^2$  .603, Table 5.1) and Brand 2 (adjusted  $R^2$  .679, Table 5.2), but offered greater model parsimony.

### 5.2.2. Tea Large Sample

Dependent variable: Level of Brand Trust N=247  
 Independent variables: Six Postulated Dimensions of Brand Trust

Variable	Brand 1		Unstandardised			Standardised		
	B	SEB	Beta	T	Sig T	B	SEB	Beta
Probity	.001	.101	.001	.011	.991			
Equity	.558	.104	.448	5.378	.000*			
Reliability	.375	.126	.324	2.969	.003*			
Satisfaction	.111	.092	.100	1.202	.231			
Communication	.143	.098	.102	1.462	.145			
Process	-.276	.080	-.243	-3.464	.001*			
Multiple R	.732					Analysis of Variance [*= p.01, **= p.05]		
R Square	.536					DF	Sum of Squares	Mean Square
Adj. R Square	.524	Regression	6	156.43	26.073			
Standard Error	.756	Residual	237	135.547	.572			
		F=	45.58	Sign F=	.000			

Table 5.3: Multiple regression –Tea Large Sample Brand 1 (Tetley)

The results from the Tea Large Sample for Brand 1 and Brand 2 also gave partial support to the hypothesis concerning the positive correlation between the 'six brand trust dimensions' and the dependent variable brand trust (Table 5.3). The equation for Brand 1 (Tetley) showed two variables, Equity (Beta .448 and .001) and Reliability (Beta .324 and .01) as statistically significant positive correlates of brand trust. Satisfaction and Communication variables were







correlated with brand trust (Sincere, .000; Delivery .000; Confidence .005; and Personal Experience, .039), and one variable, 'Shows Concern' (.002) was significantly, negatively, correlated with brand trust. The adjusted  $R^2$  results for Brand 1 (.582) and Brand 2 (.765) using the twenty-one variables compared favourably with the adjusted  $R^2$  figures produced using the four dimension approach, where Brand 1 had .504 (Table 4.9) and Brand 2 had .689 (Table 4.10), and with the six dimension approach where Brand 1 had .524 (Table 5.3) and Brand 2 had .700 (Table 5.4).

### 5.2.3 Individual Category Analysis

Examining the results for the individual product categories of coffee, pens, Internet and grocery retail, the hypothesis of a correlation between all of the 'six dimensions' and brand trust can be partially supported. The explanatory power of the equations for the various brands was generally strong, with adjusted  $R^2$  figures ranging from .624 (Sainsbury) to .763 (Nescafé), except for Parker pens, which still showed an adjusted  $R^2$  of .434, a statistically significant and strong result.

Dependent Variable: Level of Brand Trust

Independent Variables: Six Postulated Dimensions of Brand Trust

Brand	Adjusted $R^2$	Statistically significant Variables in Equation	Significance of equation
Sainsbury	.626	Probity	.000
Co-op	.716	Equity, Reliability	.000
Parker	.434	Equity	.000
Pilot	.695	Reliability (Process)	.000
Nescafé	.763	Probity (Process)	.000
Maxwell House	.672	Equity	.000
Amazon	.712	Equity, Satisfaction	.000

**Table 5.5: Summary Results of Multiple Regression - Split by Brand**

The individual equations relating to the seven brands showed a maximum of two variables in any one equation, with Probity, Equity, Reliability and Satisfaction represented in at least one of the seven equations. Equity appeared four times, Reliability and Probity twice, and Satisfaction on one occasion, all statistically significant. Across the seven brands Communication (again) appeared in none of the equations, whilst Process appeared in two equations, both statistically significant and negatively correlated with brand trust.

In discussing the results and relating these to the research hypothesis (H1), an overview is provided of all of the findings for main samples and sub-samples. Table 5.6 (a repeat from the previous Chapter) clearly shows that Process and Communication variables were not positively correlated with brand trust in any of the samples using the six dimension regression analyses. In five of eleven equations, Process was negatively correlated with brand trust at a statistically significant level (at .05 level or higher). Communication did not appear as a statistically significant variable in any equation.

For four of the six brand trust dimensions, Probity, Equity, Reliability and Satisfaction, the



picture with regard to Hypothesis 1 is clear and positive. Table 5.6 shows that Equity appeared on eight occasions as a statistically significant variable (.05 or higher). Reliability six times, Probity three times and Satisfaction twice. Table 5.6 also illustrates that that levels of association using the four dimensions were very similar to those using the six dimension model equations. In most cases levels of association were maintained (e.g. Sainsbury .625 and .626), and in only one case, Nescafe, did the level of association drop substantially when using the four dimensional model (.763 to .600). Consistent with the C E and Tea Large Samples, the four dimensional model tended to maintain adjusted R<sup>2</sup> association levels, whilst providing more parsimony.

Sample	N= 204 CES		N= 249 TLS		N= 39 Sainsbury	N=39 Co-op	N=44 Parker	N=44 Pilot	N=41 Nescafé	N=41 Maxwell House	N=41 Amazon
	B1	B2	B1	B2							
Probity		✓**			✓**				✓*		
Equity	✓*	✓*	✓*	✓*		✓**	✓*			✓**	✓*
Reliability	✓*	✓**	✓*	✓*		✓**		✓**			
Satisfaction				✓*							✓**
Process	(✓)**		(✓)*(✓)*					(✓)**	(✓)*		
Brand Communication											
Six Dim's Adjusted R <sup>2</sup>	.603	.679	.524	.700	.626	.716	.434	.695	.763	.672	.712
Four Dim's Adjusted R <sup>2</sup>	.590	.676	.504	.689	.625	.695	.427	.660	.600	.690	.709

\* Denotes significant difference between means [\*\* = p.05, \* = p.01]. [B = Brand, CES= Combined Experiment Sample, TLS= Tea Large Sample].

**Table 5.6 Summary Multiple Regression Results – Samples and ‘Dimensions of Brand Trust’**

From the above analysis, the evidence across the various samples gives strong, but partial, support for the hypothesis (H1), in that four of the six variables appeared several times at statistically significant levels within full and sub-sample equations, and a four dimension model was shown to deliver similar levels of explanatory power to a six dimension model, but with increased parsimony.

#### 5.2.4 Examining the Significant Negative Correlation of Process

To interpret the statistically significant but negative correlation of Process with brand trust, additional analyses were conducted. These analyses covered both of the main data samples (CES and TLS), and the mean scores were plotted for the Process dimension and for each of the three Process ‘variables’ (Personnel Skills, Customer Service, and Issue handling) against the ascending mean brand trust scores as recorded by respondents. Tables 5.7 and 5.8 concerning Brands 1 and 2 within the Combined Experiment Sample, show that Process and the Process ‘variables’ did broadly increase as levels of brand trust increased. The mean value for the Process dimension (2.33 and 3.73 respectively) and the three Process ‘variables’ were at their lowest where brand trust mean scores were only at a value of 1 or 2, and at their highest (e.g. Process 5.72 and 6.04 respectively) where Brand trust was at a maximum of 7.

The increase in scores for Process and the related Process 'variables' was, however, erratic, and clearly not linearly related to brand trust.

N=204                      Level of Brand Trust – Brand 1

Variable	Full Sample	1 N= 1	2 N= 3	3 N= 3	4 N= 10	5 N= 24	6 N= 90	7 N= 67
*	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean
Personnel Skill	5.41	3.00	1.66	3.66	5.60	4.95	5.55	5.65
Customer Service	5.67	3.00	3.00	3.66	5.66	5.17	5.73	6.01
Issue Handling	5.18	3.00	2.33	4.00	5.00	4.95	5.22	5.44
<b>Process</b>	5.43	3.00	2.33	3.78	5.40	5.04	5.50	5.72

\* 7-point Semantic Differential Scale (1= Low, 7= High)

**Table 5.7 Process Variables Related to the Level of Brand Trust – C E Sample Brand 1**

N=163                      Level of Brand Trust – Brand 2

Variable	Full Sample	1 N= 0	2 N= 5	3 N= 15	4 N= 36	5 N= 55	6 N= 35	7 N= 15
*	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean
Personnel Skill	4.81		4.00	3.53	4.47	4.90	5.20	5.93
Customer Service	4.80		3.40	3.73	4.36	4.88	5.20	6.13
Issue Handling	4.74		3.80	4.07	4.40	4.74	4.94	6.06
<b>Process</b>	4.79		3.73	3.77	4.41	4.86	5.11	6.04

\* 7-point Semantic Differential Scale (1= Low, 7= High)

**Table 5.8 Process Variables Related to the Level of Brand Trust – C E Sample Brand 2**

Similarly, Tables 5.9 and 5.10 relate the results for Process against brand trust for Brands 1 and 2 within the Tea Large Sample, which were consistent with the results from the Combined Experiment Sample.

N=247                      Level of Brand Trust – Brand 1

Variable	Full Sample	1 N= 1	2 N= 1	3 N= 5	4 N= 19	5 N= 35	6 N= 88	7 N= 95
*	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean
Personnel Skill	5.17	3.00	2.00	4.00	4.89	4.62	5.25	5.47
Customer Service	5.24	3.00	2.00	3.80	4.78	4.58	5.31	5.64
Issue Handling	4.92	3.00	4.00	3.40	4.68	4.51	4.88	5.26
<b>Process</b>	5.11	3.00	2.66	3.73	4.78	4.59	5.15	5.45

\* 7-point Semantic Differential Scale (1= Low, 7= High)

**Table 5.9 Process Variables Related to the Level of Brand Trust – T L Sample Brand 1**

The Process dimension and the three related Process 'variables' had mean scores which increased broadly in line, although not linearly, with brand trust. Again, the lowest values for the Process dimension (2.66 and 3.33 respectively) and the three Process 'variables' were found at mean values of 1 or 2 for the Brand trust variable. The highest recorded mean values for the Process dimension (5.45 and 5.78 respectively) and the three Process 'variables' (for



both Brand 1 and 2) were found at the maximum brand trust mean score of 7. The increase in value of the Process dimension and the three related Process 'variables' was, however, erratic, and thus clearly not linearly related to brand trust.

		N=247 Level of Brand Trust – Brand 2						
Variable	Full Sample	1 N= 2	2 N= 5	3 N= 13	4 N= 42	5 N= 57	6 N= 74	7 N= 51
*	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean
Personnel Skill	4.98	4.00	3.80	3.92	4.52	4.70	5.20	5.80
Customer Service	4.95	4.00	3.40	3.69	4.33	4.73	5.12	5.98
Issue Handling	4.75	4.00	2.80	3.84	4.34	4.54	4.90	5.56
Process	4.90	4.00	3.33	3.82	4.40	4.66	5.07	5.78

\* 7-point Semantic Differential Scale (1= Low, 7= High)

**Table 5.10 Process Variables Related to the Level of Brand Trust – T L Sample Brand 2**

The results as presented and discussed indicate that the statistically significant negative correlations of Process with brand trust were not influenced by any particular Process 'variable'. Rather, the result emanated from weakness in the linear relationship with brand trust, due to the Process dimension and three variables commencing with relatively high mean scores, and not progressing linearly thereafter. Process was, however, seen to increase in mean values broadly but erratically in line with brand trust. The relationship between brand trust and the four significant positive correlates, Equity, Probity, Reliability, and Satisfaction, conversely, was one of clear linear relationship between increases in levels of brand trust and increases in levels of the correlates. It is the difference in the patterns of linearity or lack of linearity that appears to have influenced the results in the equations.

## 5.2.5 Hypothesis 1

### 5.2.5.1 Interpretation of Analyses

An initial observation about the data analysis and results is that the explanatory power of the 'multi-dimensional model' of brand trust was generally strong. To put the adjusted  $R^2$  results into context, Selnes (1998) used five antecedents in predicting brand trust in a business to business context, four of which were significant (communication, commitment, conflict handling and satisfaction) and served to explain only 54% of the variance in trust (or adjusted  $R^2$  of .54). The Selnes result may be compared with the overall comparative results in this study (Table 5.6), where for the six dimension model of brand trust, four of eleven equations have an adjusted  $R^2$  in excess of .7, nine of eleven over .6, ten out of eleven over .5, and the lowest has .434(Parker), and for the four dimensional model of brand trust eight of eleven equation have an adjusted  $R^2$  in excess of .6, ten out of eleven over .5, and the lowest, again Parker, has .427.

### 5.2.5.2 The Number of Dimensions

It would appear from the results that, for the product and service categories selected, a six dimension model of brand trust is not supported. The results appear to support the concept of a model of brand trust which is multidimensional, which reflects both the 'affective' (Probity and Equity) and 'cognitive' (Reliability and Satisfaction) aspects of brand trust, and which is split across four dimensions - Probity, Equity, Reliability and Satisfaction. All of these dimensions were shown to have very good scale reliability (Cronbach's alpha), with the alpha scores repeated here from the Research Methodology Chapter (section 3.13.2.1) for Brand 1 as an illustration.

		Probity	Equity	Reliability	Satisfaction	Communication	Process
C	E	.845	.847	.893	.828	.744	.855
Sample							
N = 204							
T	L	.858	.843	.917	.847	.780	.864
Sample							
N = 247							

**Table 5.11: Cronbach Alpha – Scale Reliability Results. Brand 1**

The four dimensions (Probity, Equity, Reliability and Satisfaction), which received support across various of the eleven equations, and were subsequently analysed in more depth, were the four dimensions initially developed and tested in both the qualitative and quantitative pilot phase of research.

### 5.2.5.3 Integration of Findings from Exploratory Qualitative Focus Groups

The exploratory qualitative consumer research focus groups, conducted at the early stages of this research, considered variables related to brand trust drawn from the academic literature (see section 3.5.2 within the Research Methodology Chapter). Consumers provided their responses to a set of twenty-two variables related to the Probity, Equity, Reliability and Satisfaction dimensions. At the initial stage of the focus groups, the variables were not ordered into any groupings. Respondents were, firstly, asked about the relevance of each variable and then asked to consider how the variables might be grouped, and were shown some potential groupings prepared prior to the focus groups. Wide support was found for the variables related to the four dimensions of brand trust - Probity, Equity, Reliability and Satisfaction (see section 3.5.2).

In addition to discussion about the specific variables and the groupings of the variables, discussion also took place about the labelling of the groups of variables. The Probity variable was operationalised as 'Honesty and Standing', Equity was labelled as 'Fair-Minded and Reasonable', and 'Reliability' and 'Satisfaction' were accepted without any need to change descriptors. There was debate within the four focus groups about the extent to which the softer, 'affective', variables could be applicable to companies and to brands. Whilst the



majority of respondents felt that the variables could be applicable to companies and brands, and spontaneously used such variables to describe companies they trusted, a minority of respondents had difficulties relating the Equity variables to companies and brands (see section 3.5.2).

This debate is interesting given that in retrospect it was the Equity dimension that appeared in eight of eleven equations as being positively correlated with brand trust. One of the final elements of each of the focus groups was a gathering of respondents' attitudes towards the grouping of variables, and whether they would be important in building or destroying brand trust in companies and brands. Most interviewees agreed that the four groupings of variables would be important in influencing levels of brand trust.

#### 5.2.5.4 Integration of Findings from Quantitative Pilot Stage

The pilot quantitative research stage (Michell, Reast and Lynch, 1998) found a high correlation between brand trust and variables representing the four dimensions of Probity, Equity, Reliability and Satisfaction (adjusted  $R^2$ .787,  $F=143.89$ , Significance  $F=.0000$ ). The methodology used at the pilot stage (See section 3.6.5 of the Research Methodology Chapter) was slightly different to that employed to obtain the data for the main study in 2001. The pilot quantitative stage used multiple regression on the twenty-two variables related to the four brand trust dimensions. The analysis found that fifteen of the twenty-two variables appeared as being positively correlated with brand trust in either the main sample or within sub-samples of individual companies (Barclays, TSB, Marks and Spencer, Littlewoods, Hoover, Phillips). The four 'brand trust dimensions' were all represented within the results of the regression analysis. The adjusted  $R^2$  obtained for the overall sample at .787 ( $F=143.89$ , sig. .0000) provided a very similar result to those obtained for the 2001 Combined Experiment Sample (.603 and .679) and within the Tea Large Sample (.524 and .700). Whilst some of the dimensions were refined and variables updated between the pilot quantitative stage and the 2001 full sample, with sixteen of the original twenty-two variables retained (as documented within Research Methodology Chapter, Section 3.7) the results were consistent between the studies. To emphasise this consistency, and to illustrate that the model revisions have maintained the explanatory power, the 2001 data samples have been reanalysed using the same regression analysis approach as that utilised for the pilot quantitative sample.

	N=106 Pilot 22 Variables Adj $R^2$	N = 204 [21 Variables] Combined Experiment		N= 247 [21 Variables] Tea Large	
		Brand 1 Adj $R^2$	Brand 2 Adj $R^2$	Brand 1 Adj $R^2$	Brand 2 Adj $R^2$
21/22 Variables	.787	.720	.754	.582	.765
30 Variables	N/A	.733	.730	.603	.773

Table 5.12 Comparative Explanatory Powers (Adjusted  $R^2$ ) Pilot and Main samples



The regression analysis above utilised the 21 variables representative of the four dimensions Probity, Equity, Reliability and Satisfaction, whilst the 30 variables also included the additional variables representative of the Brand Communication and Process dimensions. It can be seen that the explanatory power of the four dimensional model in the pilot and in its revised form in the 2001 samples are actually very consistent when analysed in the same way, adding increased weight to the robustness of the findings.

#### **5.2.5.5 Integration of the Literature Review**

The finding that brand trust appears to be multi-dimensional in nature has been well supported within the literature, as well as in the earlier qualitative and quantitative pilot exploratory phases of this research (Morgan and Hunt, 1994; Ganesan, 1994; McAllister, 1995; Smith and Barclay, 1997; Grossman, 1998). There also appears to have been broad agreement within the academic literature that trust may be split into two main areas, 'affective' and 'cognitive'. For example, McAllister (1995) regarded 'cognitive' trust as being related to reliability and dependability, whilst 'affective' trust related to reciprocal interpersonal care and concern.

Johnson-George and Swap (1982) had identified two dimensions of trust, which they labelled 'reliableness' and 'emotional trust'. Ganesan (1994) put forward the notion of two dimensional trust concept, with a benevolence (affective) and a credibility dimension (cognitive). Smith and Barclay (1997) proposed a three dimensional model, embodying 'character' (similar to probity), 'role competence' (similar to reliability/satisfaction), and 'judgement' (similar to equity). Essentially, the 'character' and 'judgement' dimensions may be categorised as affective, and role competence cognitive in nature. Further discussion concerning the various versions of multi-dimensional trust models can be found within the Literature Chapter (section 2.6). The range of multi-dimensional models have included a two dimension model (Ganesan, 1994), three and four dimensional models (Smith and Barclay, 1997; McAllister, 1995), and have included a variety of variables. One common feature of each of the studies has been that none has utilised end-user customer perceptions, and all have used business to business and /or organisational trust as the research domain. The literature has, however, provided support for the notion of consumers' 'trusting' brands, with several recent publications focusing on the consumer's 'relationship' with brands (Aaker, 1997; Fournier, 1998; Garbarino and Johnson, 1999). Discussion now focuses on the 'Process' and 'Communication' dimensions.

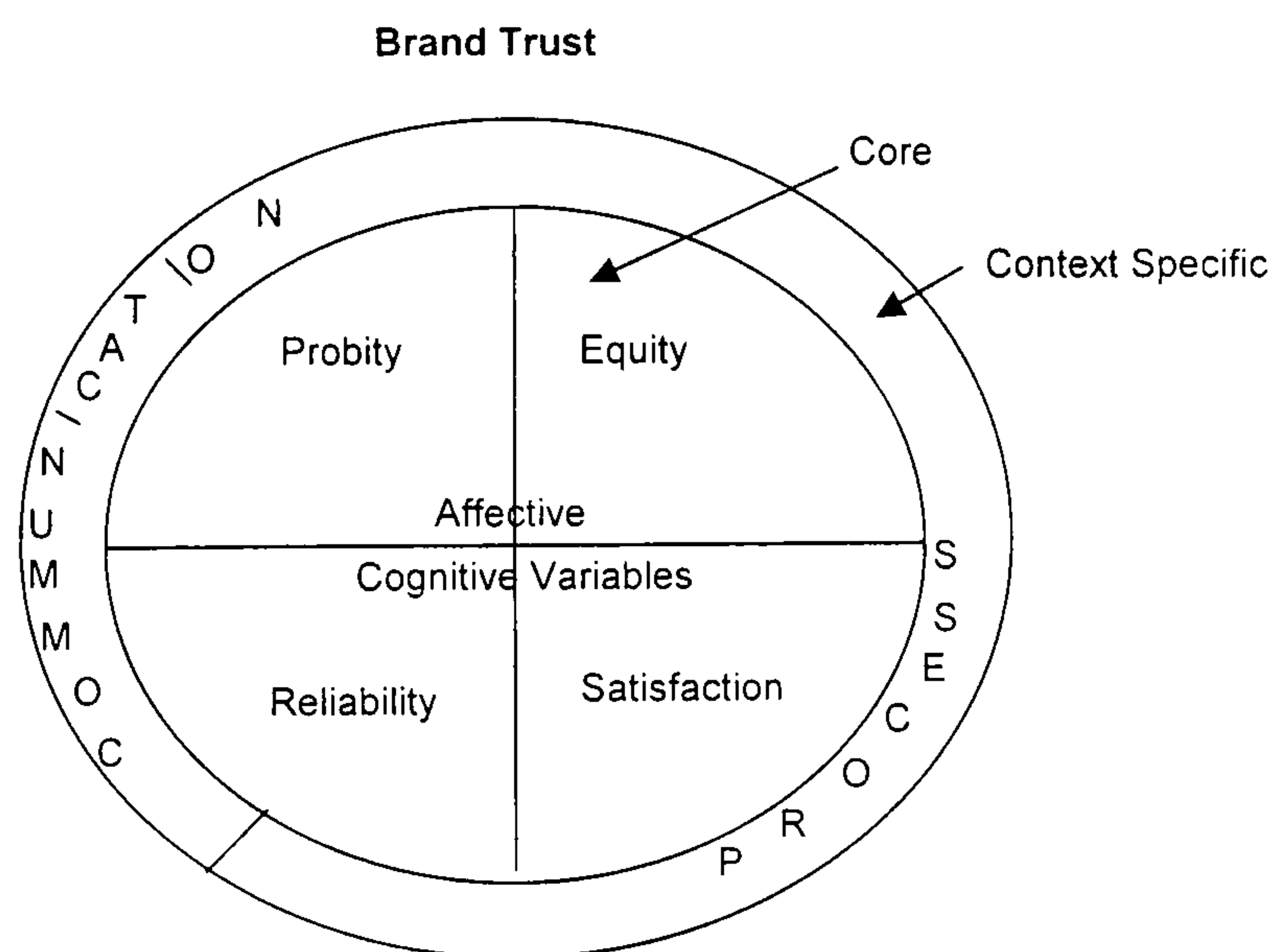
#### **5.2.5.6 The Process and Communication Dimensions**

The Process and Communication dimensions were either negatively correlated with or shared little correlation with trust within the product categories. Nevertheless, the majority of the variables included within these dimensions of the model were embedded in the literature (see



Section 2.11 of the Literature Chapter). For example, 'skilled personnel' within the Process dimension, had received wide support in various studies (c/f Moorman, Deshpandé and Zaltman, 1993; Smith and Barclay, 1997). Whilst anchored to the literature, the variables in the Brand Communication dimension have appeared less frequently in the literature than the other variables in the model, with most support being drawn from brand equity research (c/f Dyson, Farr and Hollis, 1996). However, almost all the variables within the model, have been researched primarily in a business to business context. For example, the work of Selnes (1998), the source of several 'Process' variables, was based on research within the Norwegian business to business catering industry. Within the thorough literature review conducted for this study, there was a relative dearth of articles relating to trust and relationships in a consumer context. It may thus be that the findings in this study do not challenge the relevance of the 'Brand Communication' and 'Process' dimensions, but point to them being dimensions in other marketing contexts. In support, several authors in relationship marketing have pointed to the many different types of relationships existing in the consumer context (c/f Christy, et al., 1996; Webster, 1994). The categories used in this research (Tea, Coffee, Pens, Grocery Shops, and Internet Retail) fell primarily within the Fast Moving Consumer Goods (FMCG) or related areas, as a natural consequence of a research strategy requiring the selection of categories to which consumer/respondents had contact and opportunity to form opinions about their interactions with providers. Christy, et al. (1996) suggested various types of consumer markets where relationship marketing might have been more likely to flourish: high involvement categories; categories which had a high degree of customer uncertainty; an ability and willingness to pay for differentiated products; the ability to customise the product or service; high purchase frequency; the existence of high switching or termination costs; or categories requiring training for customers. There are various product/market examples which would fit the profile of the above listing, where a fuller range of variables included in the 'model' might be particularly relevant. For example, Crutchfield (2001) has provided a strong case for the importance of trust in patient retention in the patient-obstetrician professional services context, clearly a high risk/high uncertainty context. Hart and Johnson (1999) likewise provided support for the role of trust within the consumer-independent financial adviser context. Illingworth (1991) showed the relevance of trust within relationship marketing at Lexus. Ramsey and Sohi (1997) supported the relevance of relationships within the consumer-car retail context, with perceptions of sales representatives' key skills being found to influence trust levels. Christy, et al. (1996) discussed 'open' and 'closed' consumer marketing relationships, where a 'regular diner' built up a special relationship (open), whilst a book club member's interaction was much more limited and based upon a series of transactions (closed).

One key aspect of the area of trust and its associated variables may thus be that the respondent's ability to judge a brand or company would vary by type of respondent and context. Indeed, respondents in this study indicated that some more intangible variables might be more easily judged in a "service-based situation and where there was a great deal of ongoing interpersonal contact". One finding from the qualitative pilot stage was that some variables appeared to be more likely to be applicable to some organisational contexts or brands than others. A model could be envisaged where the Probity, Equity, Reliability and Satisfaction dimensions formed core, or generic, 'indicators' of brand trust, while Process and Brand Communication were context specific measures, as below:



**Figure 5. 1 Consumer-Brand Trust**

Further support for the notion that the product/service context may impact upon the importance of specific dimensions of brand trust was provided by Sirdeshmukh, et al. (2002). Sirdeshmukh, et al. found that the relevance of two separate dimensions of trust ('Front-line employees', and 'Management Practices and Policies') varied by context. The 'front-line employee' based trust was more important in a clothing retail context, whilst 'management practices and policies' were more emphasised in an airline context. Both categories chosen by these authors were service based contexts, one of the dimensions of 'trustworthiness' used by the authors was 'problem solving orientation', and one of the two dimensions of trust used was trust in 'front-line personnel'. These dimensions used by Sirdeshmukh, et al. were very similar to the 'issue handling' and 'skill of personnel' variables proposed within the Process dimension within this study. The Sirdeshmukh, et al. research does appear to reinforce the importance of context (e.g. high contact service versus FMCG) within results.

### 5.3 Hypothesis 2

Brands with higher brand trust levels will be more likely to succeed in extension categories (particularly distant extension categories), with success measured by 'likelihood to try' or



‘trust to provide extension’, in that:

- a) Brand 1 (the higher trust brand) will outperform brand 2 (the moderate trust brand) in extension 1, 2 and 3 (in total and split sample).
- b) Brand 1 (the higher trust brand) will outperform brand 3 (the lower trust fictitious brand) in extension 1, 2 and 3 (in total and split sample).
- c) Brand 2 (the moderate trust brand) will outperform brand 3 (the lower trust fictitious brand) in extension 1, 2 and 3 (in total and split sample).

Analysis was conducted on the data within the Combined Experiment Sample, the Tea Large Sample, and on the individual small sample categories. A brief summary of the research results is provided prior to a full discussion of the findings and implications.

### 5.3.1 Combined Experiment Sample - Real Brands

The results from the Combined Experiment Sample, using paired sample ‘t’ tests, showed that the mean brand trust scores were significantly higher ( $t = 10.207$ , sig.  $.000$ ) for Brand 1 at 6.06, compared with Brand 2 at 4.90. This result also verified the procedures used in the selection of the brands for the experiments. Analyses was conducted relating to brand extension measurement response in terms of ‘Likely to Try’ (LTT), and ‘trust brand to provide’ (TTP) the brand extensions.

n= 164	Trust Mean	Ext1 LTT Mean	Ext2 LTT Mean	Ext 3 LTT Mean	Ext1,2,3 LTT Mean
Brand 1	6.06	4.29	4.55	3.09	3.97
<b>Brand 2</b>	4.90	3.86	3.93	2.70	3.49
<b>t value</b>	<b>10.207</b>	<b>3.907</b>	<b>5.083</b>	<b>3.011</b>	<b>5.597</b>
<b>Sig. (2-tailed)</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>	<b>.003</b>	<b>.000</b>

**Table 5.13 Combined Experiment Brand Trust and ‘Likely to Try’ Mean Analysis**

Further ‘t’ tests showed that Brand 1 had statistically significant higher mean response levels (at .01 levels or higher) for all types of brand extension (line, related and unrelated) when compared with responses to Brand 2, for both ‘LTT’ and ‘TTP’ response measures.

n= 164	Trust Mean	Ext1 TTP Mean	Ext2 TTP Mean	Ext3 TTP Mean	Ext1,2,3 TTP Mean
Brand 1	6.06	5.37	5.33	4.00	4.89
<b>Brand 2</b>	4.90	4.82	4.63	3.66	4.36
<b>t value</b>	<b>10.207</b>	<b>5.277</b>	<b>6.162</b>	<b>2.722</b>	<b>6.474</b>
<b>Sig. (2-tailed)</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>	<b>.007</b>	<b>.000</b>

**Table 5.14 Combined Experiment Brand Trust and ‘Trust Brand to Provide’ Mean Analysis**

These results were highly significant and illustrate that high mean scores for brand trust in this study tended to be accompanied by higher brand extension measurement response scores, both in terms of ‘Trust Brand to Provide’ an extension, and ‘Likely to Try’ an extension. A potential criticism of some previous brand extension studies (e.g. Broniarczyk and

Alba, 1994) might be where only a single brand was included in each category of the research protocol, so that it will be impossible to disentangle brand effect from category effect. It is believed the inclusion of matched pairs of brands from the same product categories within the methodology of this study, in addition to 'dummy' brands enables the 'effects' measured between the two real brands to be related to brand effect, rather than simply to a category level response. The results obtained for the combined experiment sample at an aggregate level appeared to be very robust. The 't' values ranged from 10.207 (brand trust) to 3.011 (Extension 3 LTT) or 2.722 (Extension 3 TTP), with all significance levels at .01 (Tables 5.13 and 5.14).

The Combined Experiment Sample results have clearly supported the hypothesis (H<sub>2</sub>), with extension response measures at the aggregate level (Extension 1+2+3) being almost 14% higher for Brand 1 (mean = 3.97), using the 'Likely to Try' measure, compared to Brand 2 (mean = 3.49), and 12% higher for Brand 1 (mean = 4.89), using the 'Trust Brand to Provide' measure, compared to Brand 2 (mean = 4.36).

### 5.3.2 Combined Experiment Sample - Dummy Brands

'Brand 3' constituted dummy brands included within the research with the object of removing extraneous influences which may be associated with real brands in each category. The level of brand trust was manipulated experimentally via the 'consumer reports' of briefing information about the fictitious brand. The 'brand trust' score for Brand 3 (mean = 4.43) within the Combined Experiment Sample (Shops and Tea categories only) was significantly lower (.000) than that for Brand 1 (mean = 5.84), and for Brand 2 (mean = 5.02).

n=79	Brand Trust Mean	Ext 1 LTT Mean	Ext 2 LTT Mean	Ext 3 LTT Mean	Ext 1+2+3 LTT Mean
Brand 1	5.84	3.72	4.39	2.87	3.64
Brand 2	5.02	3.11	3.53	2.87	3.16
Brand 3	4.43	2.43	2.69	1.89	2.33
t value Brand 1v2	5.327	3.567	5.482	.000	3.939
Sig. (2-tail) Brand 1v2	.000	.000	.000	1.000	.000
t value Brand 2v3	3.021	4.455	4.781	5.113	5.834
Sig. (2-tail) Brand 2v3	.003	.000	.000	.000	.000
t value Brand 1v3	7.871	6.211	8.547	5.280	8.776
Sig. (2-tail) Brand 1v3	.000	.000	.000	.000	.000

Table 5.15 Combined Experiment Sample: 'Brand Trust' and LTT for Brands 1,2 and 3

Brand 3 also had significantly lower mean brand extension measurement response scores for 'Likely to Try' Extension 1 (.000), Extension 2 (.000) and Extension 3 (.000), in addition to



the combined measure LTT Ext 1+2+3 (.000) (Table 5.15). Consistent with the results using the LTT measure, Brand 3 also had significantly lower 'Trust Brand to Provide' response scores on each of the individual Extensions 1,2 and 3, and on the aggregated Ext 1+2+3 combined measure, relative to Brand 1 and Brand 2 (Table 5.16). All 't' values relating to these TTP differences were at 7.81 or above, and all significance levels were at the .000 level.

N=79	Initial Brand trustworthy Mean	Ext 1 TTP Mean	Ext 2 TTP Mean	Ext 3 TTP Mean	Ext 1+2+3 TTP Mean
<b>Brand 1</b>	5.84	5.18	5.06	4.24	4.80
<b>Brand 2</b>	5.02	4.50	4.28	4.02	4.25
<b>Brand 3</b>	4.43	3.20	3.23	2.73	3.05
<b>t value Brand 1v2</b>	<b>5.327</b>	<b>4.394</b>	<b>5.164</b>	<b>1.168</b>	<b>4.643</b>
<b>Sig. (2-tail) Brand 1v2</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>	<b>.247</b>	<b>.000</b>
<b>t value Brand 2v3</b>	<b>3.021</b>	<b>7.188</b>	<b>5.453</b>	<b>5.831</b>	<b>7.120</b>
<b>Sig. (2-tail) Brand 2v3</b>	<b>.003</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>
<b>t value Brand 1v3</b>	<b>7.871</b>	<b>10.689</b>	<b>8.944</b>	<b>8.310</b>	<b>11.278</b>
<b>Sig. (2-tail) Brand 1v3</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>

**Table 5.16 Combined Experiment Sample: 'Brand Trust' and TTP for Brands 1,2 and 3**

The role of the dummy brand was to represent a 'category level response' from respondents to an unknown brand within the product category, and was thus expected to have been compared unfavourably with the two real brands. The results for Brand 3 relative to Brands 1 and 2 have served to support the hypothesis that brands with higher mean scores for brand trust will tend to have higher brand extension measurement response mean scores.

### **5.3.3 Tea Large Sample**

The results using paired sample 't' tests within the Tea Large Sample (Table 5.17) supported the results reported for the Combined Experiment Sample. Mean scores for brand trust were significantly higher ( $t = 7.197$ , sig. .000) for Brand 1 (mean = 5.98) compared to Brand 2 (mean = 5.35).

#### **5.3.3.1 Extension Measurement Response Means**

Brand 1 and Brand 2 were found, comparatively, to have statistically significant differences in brand extension measurement response means at each level of 'Likely to Try' extension (line, related, unrelated) and each level of 'Trust Brand to Provide' extension (line, related and unrelated), as shown in Tables 5.17 and 5.18.

N= 249	Trust Mean	Ext1 LTT Mean	Ext2 LTT Mean	Ext 3 LTT Mean	Ext1,2,3 LTT Mean
Brand 1	5.98	3.30	3.50	4.12	3.64
<b>Brand 2</b>	5.35	3.15	3.13	3.65	3.31
<b>t value</b>	<b>7.197</b>	<b>2.113</b>	<b>5.130</b>	<b>5.812</b>	<b>5.724</b>
<b>Sig. (2-tailed)</b>	<b>.000</b>	<b>.036</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>

**Table 5.17 T L Sample: ‘Brand Trust’ and LTT Extension Response Means for Brands 1 & 2.**

The results (Table 5.17) were consistent with those reported for the Combined Experiment sample, both in terms of Brand 1 having significantly higher response means, and also the robustness of the results in terms of ‘t’ values and significance levels at the aggregate level (Extension 1+2+3 combined). There was a statistically significant difference between Brand 1 and Brand 2 mean scores ( $t = 5.724$ , sig. .000). Brand 1 (mean = 3.64) had mean scores 9% higher than Brand 2 (mean = 3.31) for the ‘Likely to Try’ measure. For ‘Trust to Provide’ (Table 5.18), Brand 1 (mean = 4.56) had a significantly higher mean score at the aggregate level (Extension 1+2+3 combined), 14.5% higher than that of Brand 2 (mean = 4.00).

n= 247	Trust Mean	Ext1 TTP Mean	Ext2 TTP Mean	Ext 3 TTP Mean	Ext1,2,3 TTP Mean
Brand 1	5.98	5.19	4.65	4.84	4.56
<b>Brand 2</b>	5.35	4.63	4.21	4.40	4.00
<b>t value</b>	<b>7.197</b>	<b>7.023</b>	<b>5.881</b>	<b>5.881</b>	<b>4.177</b>
<b>Sig. (2-tailed)</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>

**Table 5.18 T L Sample: ‘Brand Trust’ and TTP Extension Response Means for Brands 1 & 2.**

### 5.3.4 Product Category Level Analysis

The next section will consider the individual category experiments and the results in terms of means and significance levels, but for the sake of brevity, the original data and results Tables (Section 4.4 of Data Analysis and Results Chapter) will not be repeated.

#### 5.3.4.1 Grocery Shops Category

##### Brands 1 and 2

The results for the Grocery Shops category, overall, supported the hypothesis (H<sub>2</sub>) that brands with higher mean scores for brand trust would have higher brand extension measurement response mean scores (see sections 4.4.1 for TTP and 4.4.6.1 for LTT, Data Analysis and Results Chapter). Brand trust was significantly higher for Brand 1 (mean = 5.94) versus Brand 2 (mean = 5.02) at the .000 level, with brand extensions 1 and 2 having significantly higher mean scores for Brand 1, as measured by both ‘Likely to Try’ (.01 and .0001 respectively) and ‘Trust Brand to Provide’ (.01 and .0001 respectively) than for Brand 2. Brand 1 (Sainsbury) also had higher means scores (.01) for the aggregated measures of ‘Likely to Try’ extensions 2 and 3 combined (Brand 1 mean = 3.78) and extensions 1+2+3



combined (Brand 1 mean = 3.79), compared with Brand 2 (Co-op), with means of 3.15 and 3.06 respectively. The only extension level where Brand 1 failed to reach a significantly higher mean score was Extension 3 (Legal Advice), an unrelated product-brand extension concept.

Brand 3 was also present within the Grocery Shops category experiment, and had a significantly lower mean score (.0001) for brand trust than Brand 1 (Sainsbury) or Brand 2 (Co-op). Brand 3 also had significantly lower Brand Extension measurement response means (.0001) for each level of extension (line, related and unrelated) as measured by both 'Trust Brand to Provide' (TTP) and 'Likely to Try' (LTT). These results were consistent with those obtained at the aggregated level of shops and tea categories combined, concerning the brand extension mean responses for Brands 1, 2 and 3. Brand 1 (mean = 5.05) had an overall brand extension response 11% higher than that for Brand 2 (mean = 4.52) for Extensions 1+2+3 (combined), using the TTP brand extension measurement response, and a 24% higher mean score than Brand 2 (mean = 3.06) for the LTT Extension 1+2+3 combined (Brand 1 mean = 3.79).

Brand 2 (mean = 4.52), in turn, had a 58% higher overall extension measurement response mean than Brand 3 (mean = 2.85) for 'Trust to Provide' extensions 1+2+3 (combined), and Brand 2 (mean = 3.06) had a 53% higher response mean for 'Likely to Try' Extensions 1+2+3 (combined) than did Brand 3 (mean = 1.99).

#### **5.3.4.2 Tea Category**

The results for the Tea category (see section 4.4.2 for TTP and 4.4.6.2 for LTT) were largely supportive of the research hypothesis (H2). Brand 1 (Tetley) had a significantly higher mean score for brand trust (5.80,  $t = 4.558$ , sig. .000) than Brand 2 (Typhoo, mean = 5.02). Using the TTP measurement of brand extension response, Brand 1 had statistically significant higher brand extension response measures (.01 or higher) for each level (line, related and unrelated) of brand extension; Brand 1 had a mean of 4.77 for Ext. 1, 4.61 for Ext. 2 and 4.46 for Ext. 3, compared to Brand 2 with mean of 3.97, 4.10, and 3.97 for the extensions 1, 2 and 3 respectively. For 'Likely to Try', Brand 1 had a significantly (.05) higher mean score only at the Ext 2 level, the related extension (Brand 1 Mean = 4.05, Brand 2 Mean = 3.66).

Consistent with results for the Grocery Shops category, Brand 3 had significantly lower brand extension response means (.01) using both the 'Trust to Provide' (Brand 3: Ext. 1 Mean 3.30, Ext. 2 mean 3.38, Ext. 3 mean 3.12) and 'Likely to Try' measures (Brand 3: Ext. 1 mean 2.85, Ext. 2 2.87, Ext. 3 2.32) of brand extension measurement response. Brand 1 had a 14% higher 'TTP' mean score for Extensions 1+2+3 combined than did Brand 2, and a 7.7% higher 'Likely to Try' mean score for Extensions 1+2+3 combined than did Brand 2. Brand 2 received a 23% higher 'TTP' mean score for Ext 1+2+3 (combined) than did Brand



3, and a 22% higher 'Likely to Try' mean score for Ext 1+2+3 (combined) than did Brand 3.

#### **5.3.4.3 Pens Category**

The Pens category (see section 4.4.3 for TTP and 4.4.6.3 for LTT), conversely, provided little support for the hypothesis (H<sub>2</sub>) that brands with higher mean scores for brand trust will also have higher mean scores for brand extension measurement response. In the Pens experiment Brand 1 (Parker, mean 6.20) had a significantly higher mean score for brand trust than Brand 2 (Pilot, mean 4.86), with a *t* value of 7.079, sig. .000. In terms of the 'Trust to Provide' measure, the results were not conclusive. Brand 1's TTP Extension 1 and Extension 2 mean scores (at 5.70 and 5.56) were higher than Brand 2's (at 5.52 and 5.18), but not significantly. Brand 1 did, however, have significantly higher TTP means than Brand 2 (.05) for Extension 3 (Brand 1= 4.27, Brand 2= 3.75), Extension 2 and 3 combined (Brand 1= 4.92, Brand 2= 4.46) and Extension 1+2+3 combined (Brand 1= 5.18, Brand 2= 4.81) measures. At the combined 'TTP' Extension 1+2+3 level, Brand 1's mean score was 7.7% higher than that for Brand 2. The results for the 'Trust to Provide' extension measure thus were not clear-cut, but provided a degree of support for the hypothesis (H<sub>2</sub>).

For the other brand extension response measure, 'Likely to Try' the extensions, Brand 1 (Parker) had a significantly higher (.05) brand extension response mean for the unrelated brand extension category (Extension 3), at 3.61 versus Brand 2 at 3.06. For Extension 1 and Extension 2 there was no statistically significant difference in results between Brand 1 and Brand 2, nor for the extension 2+3 (combined) and the extension 1+2+3 (combined). The results within the Pen category will be considered in more detail in section 5.3.7.

#### **5.3.4.4 Coffee Category**

The results for the Coffee category (see Section 4.4.4 for TTP and 4.4.6.3 for LTT) were supportive of the research hypothesis. A significantly higher Brand 1 (Nescafe) brand trust mean score at 6.27 (*t* = 6.187, sig. .000) versus Brand 2 (Maxwell House) at 4.72 was accompanied by a significantly higher 'Likely to Try' response mean (.01) for each level of extension (Ext.1, Ext. 2, Ext. 3, Ext. 2+3, Ext. 1+2+3 combined) and for each 'Trust to Provide' mean (.01), except for Brand Extension 3 (the unrelated brand extension). The aggregate measures of brand extension measurement response for Extensions 1+2+3 combined, revealed a 15% higher mean score in 'Trust to Provide' (*t*=3.878) for Brand 1 (mean = 4.73) over Brand 2 (mean = 4.09), and a 26% higher score in 'Likely to Try' (*t*=5.026, sig. .000) for Brand 1 (mean = 4.17) over Brand 2 (mean = 3.30).

#### **5.3.4.5 Internet Retail Category**

The Internet Retail category research (see Section 4.4.5 for TTP and 4.4.6.5 for LTT) included one real brand, Amazon.com (Brand 1) and the fictitious brand, 'Brand L' (Brand 3). Amazon.com (mean = 5.92) and 'Brand L' (mean = 4.37) had significantly different



‘brand trust’ means ( $t=7.322$ , sig. .000) and significantly different brand extension response means, using both the ‘Trust to Provide’ (.0001) and ‘Likely to Try’ (.01 or higher) extension measurement response measures, with Brand 1’s means significantly higher than those for Brand 3. Using the TTP measure, Brand 1 had mean scores of 4.60, 4.68 and 2.89 for each of the extensions 1,2, and 3, while Brand 3 had mean scores of 3.73, 3.36 and 1.89 for the same measures, respectively. For the LTT measure, Brand 1 had mean scores of 3.39, 3.89, and 2.10 for each of extensions 1,2, and 3, while Brand 3 had mean scores of 2.94, 2.68, and 1.60 for the same measures, respectively.

At an aggregate extension level (1+2+3 combined), the mean score for Amazon.com (4.06 versus Brand 3 at 3.00) was 35% higher using the ‘Trust to Provide’ measure, and 29% higher (Brand 1 = 3.13, Brand 3 = 2.41) using the ‘Likely to Try’ measure than for Brand 3.

The accumulated results regarding Hypothesis 2 were supportive. The results will now be discussed in the context of prior academic research. Discussion will also consider the ‘Pens’ category, where the results provided little support for upholding the hypothesis.

### **5.3.5 Brands with Higher Brand trust Related to Higher Extension Measurement Responses**

The hypothesis that the brands with higher brand trust mean scores would have higher brand extension measurement response mean scores has not been tested previously within the academic literature. There have been, however, various pieces of academic research which have provided partial support for the results obtained within this study. Aaker (1990), for example, identified four dimensions which could add value to brand extensions, one of which was ‘brand credibility’. Keller and Aaker (1992) later developed a brand or company credibility variable, measuring it via ‘expertise’ and ‘trustworthiness’. In a study with two fictitious brands (Crane’s and Medallion) in the US potato chip (crisp) category, the authors sought to evaluate the impact (amongst other things) of the ‘credibility’ of the brand on extension evaluation. The findings of that study indicated that perceived company credibility (expertise and trustworthy status) and ‘fit’ appeared to mediate effects of intervening extensions on evaluations of a proposed extension. The authors found more support for the ‘company credibility’ variable than the ‘fit’ variable within the experimental setting. The authors concluded that:

“Given its important relationship with extension evaluations, other aspects of company credibility should be explored ... The expertise and trustworthy dimensions of credibility identified here, should be applicable in a broader context”.

Keller and Aaker (1992) have shown experimentally that a measure of ‘brand trust’ or ‘trustworthy status’ might have an impact on brand extension evaluation in other settings. Methodologically, the authors used tests of significance between means from different brands as a test of their hypothesis that higher credibility brands gained higher brand extension



response ratings. This is very similar to the methodology employed in this study to test hypothesis 2.

Further, various authors have noted the relevance of trust within relationship marketing, and one of the clearly stated objectives of relationship marketing has been the encouragement of cross-selling. Moriarty, et al. (1983) noted that long-term commitment (and trust) was important in increasing loyalty and cross-selling; Reichheld and Sasser (1990) noted the importance of cross-selling as an additional revenue stream; and Christy, et al. (1996) reported the benefits of profitable marketing relationships (in which trust was importantly implicated) to include increased brand usage, and opportunities to cross-sell other group products. It is argued, here, that cross-selling could include 'brand extensions' and 'line extensions'.

Additionally, Selnes (1998) noted the importance of trust in gaining 'relationship enhancement' in buyer-seller interactions. It could be argued that the purchase of a brand extension by a current user could be seen as 'relationship enhancement'. Selnes concluded that trust was a strong antecedent of 'motivation to enhance the scope of the relationship'. Selnes (1998) also related trust and satisfaction to different types of purchase decisions - new task, modified rebuy, straight re-buy (Robinson, et al. 1967). A new task decision to purchase a product or service would involve higher levels of perceived risk, particularly where complex, high cost products were involved or where a buyer was unable to infer intrinsic qualities of a product or service. Trust was felt to reduce perceived risks (McAllister, 1995), and brand extensions could be viewed as 'new task decisions'.

Other research which offered indirect support to the idea that higher trust levels might be accompanied by higher brand extension response came from Kumar (1996). In a study of US and European manufacturer-retailer relationships, retailers who trusted the manufacturers were 12% more committed to the relationship and 22% less likely to have developed alternative sources of supply. Further to this, Fletcher and Peters (1997) found that the level of trust and commitment felt by the consumer had a direct and significant effect on their willingness to share personal information and their openness to product and service offerings by firms in direct marketing environments. So, trust in brands had been related to increased willingness to consider product and service offerings.

McWilliam (1993) conducted research amongst marketing practitioners familiar with brand extension activity. The practitioners believed that consumers were quite flexible about brand extensions. Consumers were felt to take the view that as long as the parent brand was sufficiently highly regarded and trusted, and the explanation was sufficiently plausible, consumers were willing to try brand extensions. In support of this view, Smith (2000) stated in the UK practitioner journal 'Marketing' that:



“Virgin’s move into on-line auction sites will see it benefit from its brand recognition and brand trust developed in other category areas.”

Again, providing indirect support for the idea that brands with higher brand trust scores might also gain higher brand extension measurement response ratings, Hem. Gronhaug and Lines (2000) found that consumer knowledge of, and ‘belief in’, strong brands may compensate for a consumer’s lack of direct product knowledge in an extension category. ‘Belief in’ might otherwise be interpreted as ‘trust in’ these brands to fulfil their obligations. In support of this, Swaminathan, et al. (2001), considering the effects of parent brand on extension evaluation, suggested that an existing brand name provided an assurance of quality, thereby reducing risks involved in purchasing a new product. More broadly, the following literature has provided an insight into the importance of trust in brands, thereby enhancing the plausibility of brand trust being associated with brand extension response.

Chaudhuri and Holbrook’s (2001) study looked at 107 brands across 41 US product categories, and suggested that ‘brand trust’ and ‘brand affect’ combined to determine brand loyalty, which in turn influenced brand equity, market share and relative price. Delgado-Ballester and Manuera-Aleman (2001) also regarded ‘brand trust’ as being influential in generating consumer commitment, which in turn affected customers’ price tolerance. In the case of high involvement goods, the effect of brand trust was found to be particularly strong. Further, Argyris (1970) related trust to acceptance of change; Pruitt (1981) related trust to co-operation; Schurr and Ozanne (1985) related trust to loyalty levels; Mayer, et al. (1996) reported the importance of trust in developing, maintaining and enhancing relationships in a consumer-retailer service context; and, Turnhill (1997) used a measure of ‘brand trust’ as a predictor of brand loyalty levels. Sirdeshmukh, et al. (2002) had also found brand trustworthiness to be related to perceptions of loyalty behaviour.

A final area of the literature, which could explain how brand trust is related to brand extension response, was in the area of ‘brand associations’ within the brand extension literature. Rangaswamy, Burke and Oliva (1993) found that brands which were associated with more ‘intangible attributes’ were more likely to be extendible than those with very strong product based attributes. The type of ‘intangible attributes’ discussed within the research included variables such as ‘quality’, ‘style’, ‘durability’, ‘reputation’ and ‘value’. Presumably, ‘brand trust’, or ‘brand trustworthy status’, could be deemed to be an ‘intangible attribute’, the variable being closely related to ‘reputation’ and ‘quality consistency’. Park and Srinivasan (1994) offered further support, in finding that it was primarily a brand’s non-product attribute-based components which played a more dominant role in determining a brand’s overall equity and potentially the brand’s ability to extend. Arguably, again, brand trust would fall under the heading of ‘non-product attribute’ based components. Finally,



Bridges, Keller and Sood (2000) found that brands with dominant non (product) attribute-based associations (e.g. fashionability) tended to receive higher evaluations when extended to a category with no physical attributes in common.

### **5.3.6 Brand Extension Response Means Related to Distance from Core Category**

It is possible to relate the research results obtained here, to the academic literature, but from a different perspective. The mean scores obtained for each brand within the study tended to decline as the extensions moved further away from the parent brand category, from line (Extension 1) to related (Extension 2) and unrelated (Extension 3) extensions. These results were to be expected, given the wealth of research within the brand extension literature focused on 'fit' and 'category similarity' (e.g. Bousch and Loken, 1991). The results, which showed that higher brand trust brands tended to have higher brand extension measurement response scores (using both 'Trust to Provide' and 'Likely to Try') even in distant unrelated extension categories, might be interpreted as 'brand trust' mediating the effects of 'category similarity'. Clearly, further research would need to be undertaken to establish such a link between 'brand trust' and 'brand extension acceptance' levels.

### **5.3.7 The Pen Category - Not Fully Supporting Hypothesis**

Whilst the Combined Experiment Sample, the Tea Large Sample and each of the individual category samples were generally supportive of the research hypothesis, H<sub>2</sub>, the Pen Sample results were more tenuous (see Section 4.4.3 for TTP and 4.4.6.3 for LTT, Data Analysis).

Two plausible explanations may be put forward for the Pens result. Firstly, we may rule out some possible reasons for the inconsistent results. The brand trust mean scores of 6.20 for Brand 1 (Parker), and 4.86 for Brand 2 (Pilot), were significantly different ( $t = 7.079$ , sig. = .000) in the sample, and this result was in line with the pre-test results which showed Parker with a brand trust mean score of 5.88 and Pilot with 3.15. Respondent recruitment criteria required usage of both brands within each category, and although usage experience varied by brand within each category, the differences in usage experience within the 'Pens' category were entirely in line with those found in the other category areas. Issues over differences in brand trust mean and brand usage differentials cannot explain the inconsistent results.

#### **5.3.7.1 Potential Explanation 1 - Demographic variables**

The pens category sample was slightly different to the other category areas (Table 5.19). In total, a sample of 204 usable questionnaires was collected across the five categories within the Combined Experiment Sample, with a minimum sample size of 39 per product category.

Table 5.19 illustrates that the Pens category sample was more male-oriented (42%) than the Tea category (24%), the Coffee category (18%) and the Grocery retail category (19%).



although less so than the Internet Retailer sample (68%). The Pens category was also more highly educated, with 61% graduates, versus Tea (38%), Coffee (32%) and Grocery Retail (53%), although the Internet Retail Sample had 72% graduates.

Category	Sample (n)	% Male	% Female	% ≤ 40	% > 40	% No Grad	% Grad
Tea	40	24	76	55	45	62	38
Coffee	41	18	82	51	49	68	32
Grocery Retail	39	19	81	50	50	47	53
Pens	44	42	58	55	45	39	61
Internet	40	68	32	67	33	28	72
<b>Total Sample</b>	<b>204</b>	<b>34</b>	<b>66</b>	<b>55</b>	<b>45</b>	<b>49</b>	<b>51</b>

**Table 5.19: An examination of Demographic Variables by Product Category**

Given the earlier results, provided in Chapter 4, which related to demographic variables, it is conceivable that the different demographic mix in some way mediated the results. Indeed, the results regarding the gender variables did find that males, and particularly more highly educated males, tended to provide lower brand extension measurement response means. This demographic explanation is given further weight by the fact that the only category to be more male or more highly educated was the Internet Retail Category, where only one real brand (Amazon.com) faced a 'dummy' or fictitious brand, less of a stiff challenge.

### **5.3.7.2 Potential Explanation 2 - Brand Associations**

A second explanation for the inconsistent results from the Pens category relates to the brand extension literature concerning 'brand associations'. Rangaswamy, Burke and Oliva (1993), Park and Srinivasan (1994) and Bridges, Keller and Sood (2000) all conducted research into brand extension with similar conclusions (see Section 2.14.4, Literature Review). Brands which had strong 'intangible' or 'non-product based attributes' tended to be able to stretch further within brand extension categories. Earlier, it was argued that 'brand trust' might form one of these 'intangible attributes', and thus help the stretching of a higher trust brand over a lower trust brand, but here a different argument is presented. Pre-testing of brands did not include exhaustive audits of possible associations related to each brand. It may be that, whilst Parker as a brand had a higher brand trust profile than the Pilot brand, the Parker brand might also have been more closely associated with the pens product category, since it had such a long heritage in writing instruments. The Pilot brand was newer, may have been seen as more 'fashionable' and 'innovative', and may also have been seen as less specifically embedded in the Pens category. These assertions may have led to some of the extension concepts being viewed by respondents as being more appropriate to the Pilot brand than for Parker. These additional potential 'non-product attribute' brand associations might have influenced the overall brand extension measurement response means. This explanation could be supported by the work of Tauber (1981), who had noted that brand names such as Kleenex and Band Aid, which were closely associated with a product class, were more difficult to extend.



Parker and the pens 'product class' may have been synonymous in respondents minds.

### **5.3.8 Learning Regarding Brand 3 - Dummy Brand**

The results presented regarding brand extension 3, the fictitious brands within the Tea, Grocery Retail and Internet Retailer categories offered strong support for the hypothesis that lower trust brands would receive lower brand extension measurement scores. Further to this, Brand 3, the fictitious brand, was included within the sample to gain a generic 'category average response' via a relatively unknown brand with little background history. The responses to Brand 3, being significantly different (.01) to Brands 1 and 2 in terms of brand trust and both brand extension response measures (TTP and LTT), were felt to add weight to the significant differences in mean scores found between Brands 1 and 2 within the samples. The researcher claims these differences to be 'brand differences', based upon real usage experience and perceptions, relative to a 'unknown' brand within the same category.

Whilst the case was put forward for the use of fictitious brands within the Research Methodology Chapter (Broniarczyk and Alba, 1994), the results should not be over-emphasised for a number of reasons. Luhman (1995) stated that trust development was a process, which began with small risks and built on confirmation, and this was supported by Ambler (1996), as well as others. The real brands within the three categories were at a distinct advantage relative to 'Brand 3', given that respondents had had significantly more personal experience, and more deeply felt beliefs about real brands. Further, Lane (2000) demonstrated how brand extension communication strategies could overcome negative evaluations in what might be regarded as 'incongruent categories'. Lane found that the more times respondents saw brand extension advertisements, the more favourably they were evaluated. It could be argued that the higher levels of experience associated with real brands relative to the fictitious brand enabled respondents to put the various extension concepts into context more easily. Finally, Klink and Smith (2001) argued that the methodological approach of showing only scant details about an extension only once prior to evaluation was inappropriate. The authors found that increased elaboration regarding attribute information reduced the effects of 'fit' or 'category similarity' on overall evaluation. It could be argued that whilst all respondents received very brief information about the extension concepts for Brands 1, 2 and 3, elaboration by respondents would have been easier regarding Brands 1 and 2, given greater depth of prior knowledge and experience of these brands relative to Brand 3.

## **5.4 Hypothesis 3**

Brand trust, or the dimensions of brand trust, will be positively correlated with brand extension response measures.

A brief review of the research results will be provided prior to discussion of their relevance.



The data analyses testing this hypothesis was split into two sections. Firstly, Chi-square tests were used to establish whether the null hypothesis, that brand trust for Brand 1 or Brand 2 in both the Combined Experiment and the Tea Large samples, and measures of brand extension response were uncorrelated, could be rejected. All tests undertaken for both brands, both data samples, and both extension response measures, showed that brand trust was not uncorrelated with extension measurement response.

#### SAMPLES

	C E S Brand 1	C E S Brand 2	T L S Brand 1	T L S Brand 2
Brand Trust mean	6.00	4.91	5.99	5.35
TTP Ext 1+2+3 Mean	4.73	4.37	4.57	4.00
Chi-Square	31.738	21.822	18.259	5.119
Degrees of F	1	1	1	1
Sig Level	.000	.000	.000	.024

**Table 5.20: Chi-Square Test Results, Brand Trust versus TTP Ext. 1+2+3 Combined**

The results in Table 5.20 indicate categorically that the null hypothesis that brand trust and TTP combined measure were uncorrelated should be rejected. First, considering the Combined Experiment Sample, Brand 1 had a Chi-Square of 31.738 (.000), and Brand 2 a value of 21.822 (.000) for the correlation between means for brand trust and aggregated TTP responses. The Tea Large sample provided the same results, Brand 1 producing a Chi-Square of 18.529 (.000) and for Brand 2 a value of 5.119 (.05), all indicating that the null hypothesis should be rejected.

#### SAMPLES

	C E S Brand 1	C E S Brand 2	T L S Brand 1	T L S Brand 2
Brand trust mean	6.00	4.91	5.99	5.35
LTT Ext 1+2+3 Mean	3.82	3.50	3.51	3.26
Chi-Square	8.976	14.952	10.423	4.826
Degrees of F	1	1	1	1
Sig Level	.003	.000	.001	.028

**Table 5.21: Chi-Square Test Results, Brand Trust versus LTT Ext. 1+2+3 Combined**

For 'Likely to Try' (LTT) within, the Combined Experiment Sample (Table 5.21) there were Chi-Square values of 8.976 (.01) and 14.952 (.000) for Brands 1 and 2 respectively, and within the Tea Large sample the Chi-Square values were 10.423 (.000) and 4.826 (.05) for Brands 1 and 2 respectively.

There was thus, clearly, to be a level of association between brand trust and brand extension measurement response. Standard multiple regression analyses were conducted to gain an idea of the magnitude of the associations.

#### 5.4.1 Associations Between 'Brand Trust Dimensions' and 'Trust Brand to Provide' Extensions

The multiple regressions in Tables 5.22 and 5.23, show that, multidimensional 'models of brand trust' produced stronger associations with brand extension response measures than did the single variable measure of brand trust, but that while the results were statistically significant (.000), the levels of association were weak.

N=204	TTP Ext 1	TTP Ext 2	TTP Ext 3	TTP Ext 1+2+3
Six Dims Adj. R <sup>2</sup>	.210	.232	.027	.215
Sig.	.000	.000	.080	.000
Four Dims Adj. R <sub>2</sub>	.195	.251	.015	.222
Sig.	.000	.000	.137	.000
Brand Trust Adj. R <sub>2</sub>	.128	.210	.001	.142
Sig.	.000	.000	.266	.000

Table 5.22 Brand 1 TTP Measure of Extension and 'Dimensions of Brand Trust' Regression (CES)

Within the Combined Experiment Sample (CES), the 'six dimensions' were regressed against the dependent variable, TTP, at an extension aggregate level (Extension 1+2+3), with adjusted R<sup>2</sup> figures of .215 and .232 for Brands 1 and 2, respectively (Tables 5.22 and 5.23). The Tables also show that the adjusted R<sup>2</sup> figures for the four dimension model of brand trust, at .222 for Brand 1, and .241 for Brand 2, were near identical to those for the six dimension model. Brand trust 'dimensions' thus explained approximately 21-24% of the variance in the dependent variable, TTP Extension 1+2+3.

N=204	TTP Ext 1	TTP Ext 2	TTP Ext 3	TTP Ext 1+2+3
Six Dims Adj. R <sup>2</sup>	.260	.162	.049	.232
Sig.	.000	.000	.033	.000
Four Dims Adj. R <sub>2</sub>	.270	.173	.059	.241
Sig.	.000	.000	.009	.000
Brand Trust Adj. R <sub>2</sub>	.157	.052	.043	.120
Sig.	.000	.002	.005	.000

Table 5.23 Brand 2 TTP Measure of Extension versus 'Dimensions of Brand Trust' Regression (CES)

Within the Tea Large Sample (Tables 5.24 and 5.25), the adjusted R<sup>2</sup>s for Brands 1 and 2 using the six dimensional model and the same extension response measure were .198 and .266 respectively. The four dimension model and the twenty-one variable regression produced similar adjusted R<sup>2</sup> results at .185 and .192 for Brand 1 and .258 and .272 for Brand 2 (using the dependent variable TTP Ext 1+2+3). Thus, the levels of association within both data samples were consistent at adjusted R<sup>2</sup>s .185 to .266, with the dimensional models of brand trust, thus explaining 18-27% of the variance in the dependent variable, TTP Ext. 1+2+3 combined.



N=247	TTP Ext 1	TTP Ext 2	TTP Ext 3	TTP Ext 1-2-3
Six Dim's Adj. R <sub>2</sub>	.224	.101	.104	.198
Sig.	.000	.000	.000	.000
Four Dim's Adj. R <sub>2</sub>	.192	.106	.094	.185
Sig.	.000	.000	.000	.000
21 Variables Adj. R <sub>2</sub>	.226	.127	.080	.192
Sig.	.000	.000	.008	.000
Brand Trust Adj. R <sub>2</sub>	.195	.151	.090	.203
Sig.	.000	.000	.000	.000

Table 5.24 Brand 1 TTP Measure of Extension versus 'Dimensions of Brand Trust' Regression (TLS)

N=247	TTP Ext 1	TTP Ext 2	TTP Ext 3	TTP Ext 1+2+3
Six Dim's Adj. R <sub>2</sub>	.255	.160	.220	.266
Sig.	.000	.000	.000	.000
Four Dim's Adj. R <sub>2</sub>	.255	.158	.200	.258
Sig.	.000	.000	.000	.000
21 Variables Adj. R <sub>2</sub>	.266	.192	.201	.272
Sig.	.000	.000	.000	.000
Brand Trust Adj. R <sub>2</sub>	.169	.098	.092	.152
Sig.	.000	.000	.000	.000

Table 5.25 Brand 2 TTP Measure of Extension versus 'Dimensions of Brand Trust' Regression (TLS)

Brand trust, measured as a 'unidimensional' or single variable, only explained between 14% (Brand 1 Combined Experiment) and 20% (Brand 1, Tea Large Sample) of the variance in the data concerning TTP extensions 1+2+3 combined. The higher levels of association resulting from the regressions using the four and 'six dimensions' thus support the superiority of the multidimensional measurement of brand trust, over the unidimensional alternative.

Further, the strength of association between the six dimension and four dimension models of brand trust and brand extension measurement responses declined as extensions moved from line, to related, and unrelated extensions, in most cases.

#### 5.4.2 Associations Between 'Brand Trust Dimensions' and 'Likely to Try' Extension

N=204	LTT Ext 1	LTT Ext 2	LTT Ext 3	LTT Ext 1+2+3
Six Dims Adj. R <sup>2</sup>	.055	.121	.017	.089
Sig.	.010	.000	.155	.000
Four Dims Adj. R <sub>2</sub>	.054	.109	.021	.081
Sig.	.005	.000	.087	.000
Brand Trust Adj. R <sub>2</sub>	.013	.089	-.003	.039
Sig.	.056	.000	.546	.003

Table 5.26 Brand 1 LTT Measure of Extension versus 'Dimensions of Brand Trust' Regression (CES)

N=204	LTT Ext 1	LTT Ext 2	LTT Ext 3	LTT Ext 1+2+3
Six Dims Adj. R <sub>2</sub>	.152	.098	.030	.152
Sig.	.000	.001	.095	.000
Four Dims Adj. R <sub>2</sub>	.130	.105	.039	.146
Sig.	.000	.000	.036	.000
Brand Trust Adj. R <sub>2</sub>	.069	.063	.016	.082
Sig.	.000	.001	.060	.000

Table 5.27 Brand 2 'Likely to Try' (LTT) Measure of Extension versus 'Dimensions of Brand Trust' Regression (CES)

The levels of association between the 'six brand trust dimensions' and 'Likely to Try' measure of extensions were, overall, markedly lower than those obtained for the 'Trust to Provide' brand extension response measure (Tables 5.26-5.29). Using the aggregate (Extension 1+2+3 combined) measure, the adjusted R<sup>2</sup>s between the 'six brand trust dimensions' and LTT were .089 and .152 for Brands 1 and 2 respectively, within the Combined Experiment Sample. Brands 1 and 2 within the Tea Large Sample had adjusted R<sup>2</sup>s of .095 and .269 respectively. The Tables also showed that the four dimension model of brand trust produced similar adjusted R<sup>2</sup> results when regressed with the LTT measure, Brands 1 and 2 having .081 and .146 for the C.E. Sample, and .080 and .265 for the T.L. Sample. The twenty-one variable regression results (Tables 5.28 and 5.29) within the larger T.L. Sample were slightly higher for Brand 1 (at .118), and lower for Brand 2 (at .238). Overall, the levels of association obtained for Brands 1 and 2 across the two samples were relatively consistent, albeit, with conflicting evidence for Brand 2 (Typhoo) in the Tea Large Sample, which had higher association levels than Brand 1. The levels of association for all regression analyses tended to decline as extensions moved further away from the core brand category (brand extension similarity or 'fit').

N=247	LTT Ext 1	LTT Ext 2	LTT Ext 3	LTT Ext 1+2+3
Six Dim's Adj. R <sub>2</sub>	.066	.048	.051	.095
Sig.	.001	.007	.005	.000
Four Dims Adj. R <sub>2</sub>	.054	.028	.049	.080
Sig.	.002	.030	.003	.000
21 Variables Adj. R <sub>2</sub>	.078	.069	.066	.118
Sig.	.000	.016	.019	.000
Brand Trust Adj. R <sub>2</sub>	.039	.045	.038	.072
Sig.	.000	.000	.000	.000

Table 5.28 Brand 1 LTT Measure of Extension vs 'Dimensions of Brand Trust' Regression (LTS)



N=247	LTT Ext 1	LTT Ext 2	LTT Ext 3	LTT Ext 1+2+3
Six Dim's Adj. R <sub>2</sub>	.187	.128	.212	.269
Sig.	.000	.000	.000	.000
Four Dims Adj. R <sub>2</sub>	.191	.135	.187	.265
Sig.	.000	.000	.000	.000
21 Variables Adj. R <sub>2</sub>	.164	.126	.213	.238
Sig.	.000	.000	.000	.000
Brand Trust Adj. R <sub>2</sub>	.126	.056	.109	.154
Sig.	.000	.000	.000	.000

**Table 5.29 Brand 2 LTT Measure versus Dimensions of Brand Trust - Regression (LTS)**

Consistent with the results for TTP, results using the LTT response measures also showed higher levels of association for both the (four and six) dimensional models of brand trust relative to the single variable measure of brand trust with, for example, the six dimension model having an adjusted R<sup>2</sup> of .269 and the four dimension model having .265 versus .154 for the single brand trust variable (when using the aggregated LTT Ext. 1+2+3 combined measure for Brand 2 within the T L Sample, Table 5.29).

### 5.4.3 The Impact of Demographics on Levels of Association

Demographic variables influenced the levels of association between the six 'dimensions of brand trust' and the dependent variables, brand extension response. Table 5.30 clearly illustrates that gender had a role in mediating the levels of association between the 'brand trust dimensions' and TTP Ext. 1+2+3 combined, with females having consistently higher levels of association, as high as .309 for Brand 2 within the Combined Experiment Sample, compared to males.

	Brand 1			Brand 2		
	Gender Male	Female	Full Sample	Gender Male	Female	Full Sample
Adjusted R <sub>2</sub> Dimensions (CES)	.095	.251	.215	.134	.309	.232
Adjusted R <sub>2</sub> Dimensions (TLS)	.117	.239	.198	.279	.293	.266

**Table 5.30: Gender and Dimensions of Brand Trust versus TTP Measure of Extensions 1+2+3.**

In Table 5.31, the regression of the 'six brand trust dimensions' with LTT Ext. 1+2+3 (combined), was less clear-cut. In two of four cases, association levels for females were substantially higher than for males (Brand 1 CES, Brand 2 TLS); and in two cases the association levels were broadly even across gender (Brand 1 TLS) and ( Brand 2 CES). Overall, gender has influenced association levels between brand trust and brand extension response measures.

	Brand 1			Brand 2		
	Gender Male	Female	Full Sample	Gender Male	Female	Full Sample
Adjusted R <sub>2</sub> Dimensions (CES)	.004	.122	.089	.179	.164	.152
Adjusted R <sub>2</sub> Dimensions (TLS)	.103	.090	.095	.197	.298	.269

**Table 5.31: Gender and Dimensions of Brand Trust versus LTT Measure of Extensions 1+2+3.**

Regarding age (Tables 5.32 and 5.33), association levels were higher in all instances for the  $\leq 40$  age group, with some adjusted  $R^2$  values .322 and .356 for Brand 2 within the Combined and Tea Large Samples using the TTP brand extension response measure.

	Brand 1			Brand 2		
	Age		Full Sample	Age		Full Sample
	$\leq 40$	$> 40$		$\leq 40$	$> 40$	
Adjusted R2 Dimensions (CES)	.197	.214	.215	.322	.168	.232
Adjusted R2 Dimensions (TLS)	.243	.150	.198	.356	.196	.266

**Table 5.32 Age and Dimensions of Brand Trust versus TTP Measure of Extensions 1+2+3.**

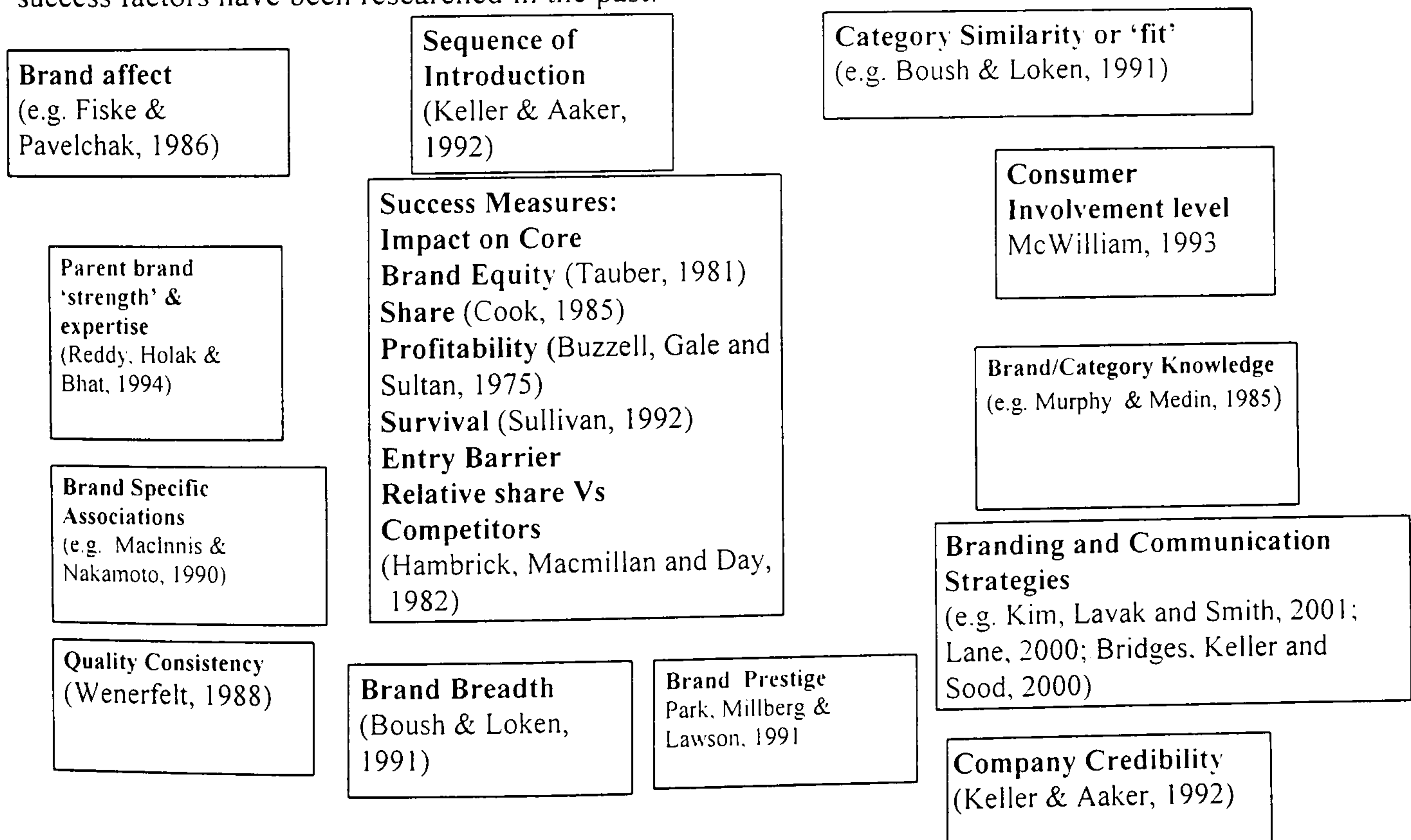
	Brand 1			Brand 2		
	Age		Full Sample	Age		Full Sample
	$\leq 40$	$> 40$		$\leq 40$	$> 40$	
Adjusted R2 Dimensions (CES)	.121	.044	.089	.165	.080	.152
Adjusted R2 Dimensions (TLS)	.103	.079	.095	.399	.134	.269

**Table 5.33 Age and Dimensions of Brand Trust versus LTT Measure of Extensions 1+2+3.**

Thus, the age of respondents has mediated the levels of association between measures of brand trust and measures of brand extension response.

#### 5.4.4 Apparent Weakness in the Levels of Association

It was not surprising that brand trust explained only part of the variance in brand extension measurement response, for either the 'Trust to Provide' or 'Likely to Try' measures of extensions. At least twelve different variables, in Figure 5.1, (repeated from the Literature Chapter), have been related to the success of brand extensions. Many brand extension success factors have been researched in the past:



**Figure 5.2 Brand Extension – Success Factors and Measures of Success**



Brand/Category knowledge (Murphy and Medin, 1985); Brand Affect (Fiske and Pavelchak, 1986); Quality Consistency (Wenerfelt, 1988); Brand Specific Associations (MacInnis and Nakamoto, 1990); Brand Breadth (Boush and Loken, 1991); Brand Prestige (Park, Millberg and Lawson, 1991); Category Similarity or Fit (Boush and Loken, 1991); Sequence of Introduction and Brand Credibility (Keller and Aaker, 1992); Consumer Involvement Level (McWilliam, 1993); Parent Brand Strength and Expertise (Reddy, Holak and Bhat, 1994); Brand Usage (Kirmani, Sood and Bridges, 1999); and Branding and Communication Strategies (e.g. Kim, Lavak and Smith, 2001).

The Chi-Square tests (Section 5.4) demonstrated that a level of association existed between brand trust and brand extension measurement response measures. Given the complexity of the number of variables involved in brand extension acceptance, this result was thus significant in itself. Indeed, Wilson and Jantrania (1994) found trust to be only one of seven factors affecting success in business relationships.

#### **5.4.5 Putting the Levels of Association into Context**

With the above complexity in mind, it is also relevant to compare the multiple regression results here with those obtained in other studies. Typically, the results in this study for the CES and TLS samples (using both six and four dimensional models of brand trust) have shown adjusted  $R^2$ s in the region of .19 to .27 for 'Trust Brand to Provide' (TTP) Extension and between .08 and .269 for 'Likely to Try' (LTT) Extension, across Brands 1 and 2, and the various samples. Selnes (1998) used five 'antecedents' to predict brand trust in a business to business context, and reported an adjusted  $R^2$  of only .35 for the multi-item regression model, the variables serving to explain 35% of the variance in relationship enhancement. Additionally, Moorman, Deshpandé and Zaltman (1992) in their research into US marketing research agencies and clients, sought to find a link between trust and agency usage, but failed to find a significant link. Sirdeshmukh, et al. (2002) had found that 'consumer trustworthiness', as measured by 'operational competence', 'operational benevolence', and 'problem solving orientation', appeared to explain (using  $R^2$ , not adjusted  $R^2$ ) 40% of perceived loyalty behaviour within the clothing retail context, and 48% within the non-business airlines context. The  $R^2$  figures reported were not adjusted (as they are within this study), and it is felt that a 'global' response regarding perceptions of past or future purchase behaviour would be more likely to be closely correlated to brand trust than very specific responses to new product/service concepts, some being either partially or wholly unrelated to the original product categories. The Sirdeshmukh, et al. (2002) research also reported that 'value' offered by the service provider appeared more influential than 'trust' in relation to loyalty behaviour in both service contexts studied. So, whilst the levels of association in this study were 'weak' (Research Methods Chapter, Section 3.12.2.7), the levels of association



were significant at .01 or higher, reached critical values at which they were deemed to be statistically different to zero (Wilkinson and Dallal, 1981), and might be considered to be strong in the context of other variables associated with brand extension evaluation, and other published results involving trust. Millward Brown (2002), who recently visited the Leeds University Business School, reported an  $R^2$  of only .05 for the association between raw media weight and change in brand share, and the  $R^2$  only increased to .2 when advertising share of voice was used in association with change in brand share. These levels of association, both statistically significant, were based upon 100 brands over a 3 year time period, and serve to emphasise the relatively low levels of association which can occur in complex 'multi-influence' dependent variable situations.

#### **5.4.6 Could the Levels of Association have been Higher?**

A case can be made that the levels of association between brand trust and brand extension response could have been higher with the selection of different market categories. The selected categories were primarily Fast Moving Consumer Goods (tea, coffee, pens) and relatively low involvement services (grocery retail, Internet retail), categories where consumer/respondents did not have close contact nor the opportunity to form deep and strongly held opinions about their interactions with providers. The argument that higher involvement goods, and high value, high complexity brand extensions will involve high levels of perceived user risk is supported by many researchers (e.g. Christy, et al., 1996). Given that brand trust has been inversely related to perceived risk (McAllister, 1995), levels of association between brand trust and extension response would, logically, be higher in such situations involving high involvement product categories.

McWilliam (1993), researching decision-making by marketing practitioners, perceived that many practitioners viewed all types of brand extensions to be the same, that they were essentially low involvement process decisions (Ehrenberg, 1974). McWilliam cited research by Bousch and Loken (1991) who found that decision times for extensions in grocery and electronic goods were markedly different. McWilliam suggested an explanation, that there were different cognitive processes at work for extensions in high and low involvement categories, reflecting the different perceived risks and complexity.

In such high involvement situations, with higher perceived risks and complexity, consumers are likely to feel more vulnerable and therefore brand trust might well be operationalised more readily (Doney and Cannon, 1997). For example, Moorman, Deshpandé and Zaltman (1992) have stated that 'in a risk-taking context, partners will necessarily exhibit signs of vulnerability as a pre-condition of trusting behaviour'.

The idea that for brand trust to be a fully salient variable decision outcomes must be uncertain and important to the trustor, is supported by the trust literature (e.g. Deutsch, 1962,



Schlenkler, Helm and Tedeschi, 1973). Selnes (1998), who related 'satisfaction' and 'trust' to different types of purchase decisions, noted that 'new task' decisions involved higher levels of perceived risk, particularly where complex, high cost products were involved or where a buyer was unable to infer intrinsic qualities of a product or service. Selnes argued that trust reduced perceived risks, and this view has been supported by the relationship marketing literature (e.g. Barnes, 1994; Berry, 1995; Bitner, 1995; Grönroos, 1990; Morgan and Hunt, 1994, Gwinner, et al., 1998).

### 5.5 Hypothesis 4

Differences in the level of brand trust, in the six hypothesised 'Dimensions of Brand Trust' and in brand extension acceptance (TTP and LTT) will occur according to gender, age and educational level such that:

- a) Older respondents will score the above at higher levels than will younger respondents.
- b) Females will rate the above at higher levels than will males.
- c) More highly educated respondents will rate the above at lower levels than will those respondents of lower education.

A review of the results will be conducted prior to a full discussion of the findings. The testing of mean differences between sub-groups, based on age, gender and educational level, was conducted using one-way and two-way ANOVA (see Section 4.4 of the Data Analysis and Results Chapter).

#### 5.5.1 Combined Experiment Sample

##### 5.5.1.1 Gender

Variable	Sex		Education		Age	
	Female N= 129 Mean	Male N= 67 Mean	Non-Grad N= 94 Mean	Graduate N= 98 Mean	≤ 40 N= 112 Mean	> 40 N=90 Mean
Probity	5.88**	5.58	5.83	5.71	5.77	5.78
Equity	5.45	5.31	5.46	5.31	5.38	5.43
Reliability	5.89**	5.59	5.83	5.72	5.82	5.72
Satisfaction	5.78*	5.28	5.64	5.54	5.69	5.49
Communication	5.76**	5.36	5.63	5.58	5.60	5.63
Process	5.47	5.31	5.54	5.29	5.35	5.51
Brand trust	6.05	5.88	6.04	5.87	6.03	5.94
TTP Ext 1+2+3	4.07*	3.35	3.99	3.61	3.78	3.82
LTT Ext 1+2+3	4.89*	4.46	4.81**	4.58	4.74	4.71

\* Denotes significant difference between means (\*\*= .05 level, \*= .01 level)

**Table 5.34: Brand 1: Mean Values by Demographic Groupings: Gender, Education and Age – CES**

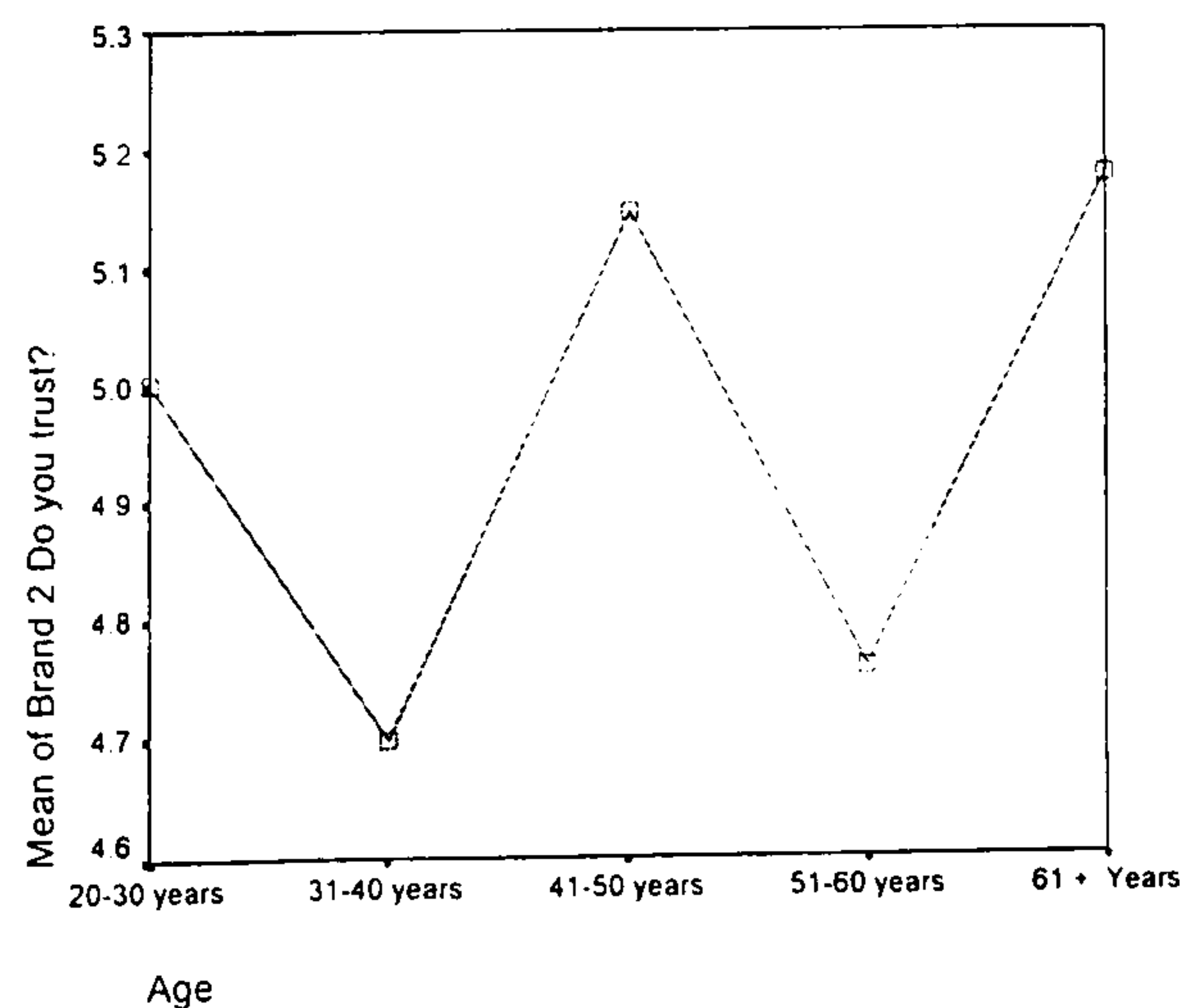
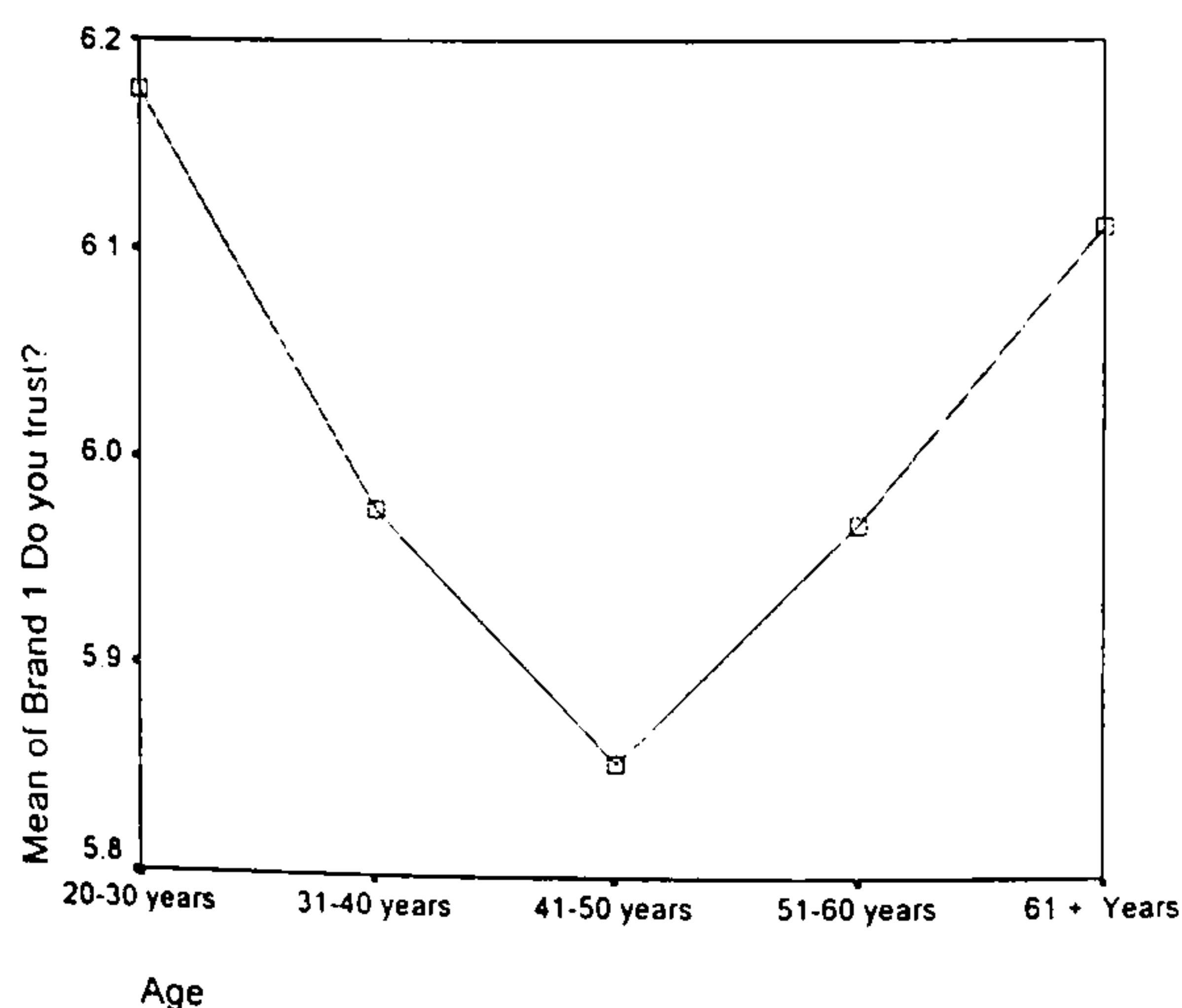
Table 5.34 shows statistically significant results related to gender for Brand 1 within the overall Combined Experiment Sample (CES) for six of the nine variables measured, (Probity,

Reliability, Satisfaction, Communication, TTP Ext. 1+2+3, and LTT Ext. 1+2+3) with the remaining three variables (Equity, Process and Brand trust) being directionally supportive of the research hypothesis. Females had higher mean scores than males for all variables. brand trust, the 'brand trust dimensions' and the brand extension response measures (Trust to Provide and LTT). The results for Brand 2 were inconclusive, with no statistically significant differences between females and males. For Brand 2, the mean scores for females were higher than for males, in seven of the nine variables. The table is not repeated for reason of brevity (see Section 4.10.1).

### 5.5.1.2 Age

Support for a significant association between age and brand trust, 'brand trust dimensions' and extension response was less clear-cut, with some of the results supporting hypothesis H4. Age was examined at two levels within the analysis: less than or equal to 40 years ( $\leq 40$ ) versus over 40 years ( $> 40$ ), as well as for five age splits. For Brand 1 and 2 within the Combined Experiment Sample (Table 5.34) there were no statistically significant differences between the age splits of  $\leq 40$  versus  $> 40$ . The mean scores were similar between the groups in Table 5.34. For Brand 2, there were higher mean scores for older respondents in six of the nine variables measured, all related to brand trust or the 'brand trust dimensions', but again not at statistically significant levels (see Section 4.10.1).

The response means for extension measurements for both TTP and LTT were lower for the older age group ( $> 40$ ), even though the mean scores for brand trust and the brand trust dimensions were higher for this group. The one-way ANOVA tests for Brand 1 and Brand 2 using the five different age groups produced no statistically significant differences in means for any variable. Consistent with the results from the Tea Large Sample, the older age group (61 years +) had either the highest or some of the highest mean scores for brand trust and brand trust dimension, and yet delivered the lowest LTT Ext. 1+2+3 mean score for Brand 1 (3.40 versus highest 4.04) and Brand 2 (3.01 versus highest at 3.74). A pattern emerged across the five different age groups, with brand trust starting at moderately high mean scores amongst





**Table 5.35: Brand Trust Means for Brand 1 and Brand 2 plotted against Age (CES)**

the 20-30 years age group, dipping with the 31-40 year age group, rising again with the 41-50 and 51-60 year age group, and generally peaking with the 61 year and over age group. The pattern is shown clearly for Brand 1 in Table 5.35, but not for Brand 2. The Brand 1 result is consistent with those for Brands 1 and 2 with the T L Sample (see Section 5.5.2.2). Whilst brand trust measures were higher for the older respondents, conversely, the brand extension measurement response means tended to decline for this group.

### 5.5.1.3 Education

Education was also measured at two levels: by highest educational level attained as graduate or non-graduate (see Section 4.10.1), and by four levels of highest educational level attainment (see Section 4.10.1). The results (Table 5.34) for graduates/non-graduates produced only one statistically significant difference in means, for LTT Extensions 1+2+3 combined, where non-graduates (mean = 4.81) scored significantly higher (.05) than graduates (mean = 4.58). All eight other variables measured for Brand 1 showed higher mean values, but not statistically significant, for non-graduates relative to graduates within the Combined Experiment Sample. Brand 2 results, however, were not supportive of the hypothesis that non-graduates would provide higher mean scores than graduates, since no statistically significant mean differences were found. Analysis of the education variable by the four educational splits (see Section 4.10.1) produced only one significant result for Brand 1 (LTT Extensions 1+2+3 combined), where the highest educated respondents had a mean score of 3.37, and the ONC/A Level respondents delivered a mean score of 4.44. Similarly, Brand 2 had only one significant result (for LTT Extensions 1+2+3 combined), where graduates had a mean of 3.71, significantly lower (.05) than those for ONC/A Level respondents, at 4.05.

### 5.5.1.4 Gender and Age

Two-way ANOVA tests were conducted on the same dataset, looking for 'interaction effects' between demographic variables. For gender and age (Table 5.36) there were no combined or 'interaction' effects for Brand 1, but significant results for gender in six of the nine variables, with Probity (.05), Reliability (.05), Satisfaction (.01), Communication (.05), TTP Ext. 1+2+3 (.01), and LTT Ext. 1+2+3 (.01) showing significant associations. The 'effect size', using the Partial Eta Squared measure, at between .027 and .069, was small to medium in size. No significant differences were found to relate to age of respondents, or indeed to any interaction effects between age and gender. Use of two-way ANOVA on Brand 2 found no statistically significant differences in means for any of the nine variables, either for main effects or interaction effects between gender and age (Section 4.10.1).

### Gender and Age

Variable	Female 20-40 N= 80 Mean	Male 20-40 N= 31 Mean	Female 41+ N= 48 Mean	Male 41+ N= 36 Mean	Sig. Demog Variables	Partial Eta Squared
Probity**	5.91	5.41	5.83	5.72	Gender .022	.027
Equity	5.46	5.17	5.44	5.43		
Reliability**	5.93	5.56	5.83	5.63	Gender .023	.027
Satisfaction*	5.87	5.29	5.63	5.27	Gender .002	.049
Communication**	5.71	5.34	5.83	5.37	Gender .022	.027
Process	5.45	5.09	5.49	5.50		
Brand trust	6.12	5.80	5.93	5.94		
TTP Ext 1+2+3*	4.84	4.46	4.96	4.46	Gender .008	.036
LTT Ext 1+2+3*	3.97	3.21	4.21	3.47	Gender .000	.069

Denotes significant difference between means [\*\* = p.05, \* = p.01]

**Table 5.36: Brand 1, Mean Values by Demographic Groupings: Gender and Age Combined - CES**

#### 5.5.1.5 Gender and Education

For gender there were six statistically significant 'main effects', out of nine variables, for Brand 1 in the C E sample (Table 5.37), Probity (.05), Reliability (.05), Satisfaction (.01), Communication (.05), TTP Ext. 1+2+3 (.05), and LTT Ext. 1+2+3 (.01), with Eta effect sizes ranging from .2 to .6 (classified as small to medium size).

### Gender and Education

Variable	Female Non- Grad N= 66 Mean	Male Non- Grad N= 24 Mean	Female Grad N= 56 Mean	Male Grad N= 40 Mean	Sig. Demog Variables	Partial Eta Squared
Probity**	5.94	5.62	5.83	5.52	Gender .023	.028
Equity	5.48	5.50	5.39	5.16		
Reliability**	5.91	5.72	5.87	5.48	Gender .029	.026
Satisfaction*	5.86	5.22	5.70	5.27	Gender .001	.060
Communication**	5.67	5.55	5.84	5.23	Gender .050	.020
Process**	5.53	5.63	5.40	5.09	Grad .023	.029
Brand trust	6.10	5.95	5.91	5.80		
TTP Ext 1+2+3**	4.88	4.76	4.86	4.23	Gender .028	.027
LTT Ext 1+2+3*	4.04	3.86	4.11	2.95	Gender .001	.056
					Grad .044	.022
					Interact .019	.030

\* Denotes significant difference between means [\*\* = p.05, \* = p.01]

**Table 5.37 Brand 1: Mean Values by Demographic Groupings: Gender and Education Combined - CES**

There were two significant 'main effects' concerning education (graduate or non-graduate) for Brand 1 (Table 5.37), on Process (.05) and LTT Ext. 1+2+3 (.05), with one 'interaction effect' between gender and education reaching statistical significance for the LTT Ext. 1+2+3 variable(.05). For Brand 2, again, the results (see Section 4.10.1) indicated only directional support for gender and education, with (at non-significant levels) lowest mean



scores by male graduates on six of the nine variables, and highest means scores by female non-graduates on five of the nine variables.

## 5.5.2 Tea Large Sample

### 5.5.2.1 Gender

Using one-way ANOVA, by gender only one statistically significant difference (.05) in mean values was found for Brand 1 (LTT Extensions 1 and 2 combined), with a mean score for females of 3.78 versus 3.27 for males. For the other eight variables on Brand 1 (Tetley), there were higher mean values for females than for males, but at non-significant levels. For Brand 2 (Typhoo), there were no statistically significant mean differences related to gender, but eight out of nine variables had higher mean values for females than for males, at non-significant levels. The table has not been repeated here for brevity (see Section 4.10.2).

### 5.5.2.2 Age

For the 'over 40 years' versus '40 years and under' age split, there were no significant mean differences for Brand 1 (Section 4.10.2), although six of nine variables were marginally higher for the over 40s relative to 40 years and under, these being Probity, Equity, Reliability, Satisfaction, Process and LTT Ext. 1+2+3. Brand 2 results were more conclusive, with seven of nine variables showing significant differences in means (Table 5.38). The remaining two variables (TTP Ext 1+2+3, and LTT Ext 1+2+3) were directionally supportive, with higher mean score by the over 40s. The seven variables with significantly different mean values were Probity (.021), Equity (.0001), Reliability (.002), Satisfaction (.005), Communication (.004), Process (.001) and Brand trust (.047), with the older respondents scoring more highly, than those of  $\leq 40$ .

Variable	Sex		Education		Age	
	Female N= 158 Mean	Male N=80 Mean	Non-Grad N= 122 Mean	Grad N= 112 Mean	$\leq 40$ N=128 Mean	> 40 N=115 Mean
Probity**	5.42	5.16	5.45	5.21	5.20	5.50**
Equity**	5.08	4.81	5.12**	4.85	4.77	5.25*
Reliability**	5.39	5.30	5.50**	5.22	5.18	5.59*
Satisfaction**	5.12	4.95	5.25**	4.91	4.88	5.30*
Communication**	5.00	4.86	5.12*	4.79	4.79	5.16*
Process**	4.87	4.90	4.95	4.82	4.70	5.13*
Brand trust**	5.39	5.22	5.52**	5.16	5.19	5.53**
TTP Ext 1+2+3	4.41	4.39	4.56	4.33	4.33	4.49
LTT Ext 1+2+3**	3.40	3.06	3.55**	3.09	3.15	3.45

\* Denotes significant difference between means [\*\* = p.05, \* = p.01]

**Table 5.38: Brand 2: Mean Values by Demog. Groupings: Gender, Education and Age - TLS**  
By the five age splits, there were no statistically significant differences in means concerning Brand 1 (see Section 4.10.2). Respondents aged 61 years or over had either the highest or

some of the highest mean scores on brand trust and brand trust dimension mean scores in combination with the lowest scores on two brand extension response measures (TTP Ext. 1+2+3 a mean of 4.52 versus the highest at 4.97, LTT Ext. 1+2+3 a mean of 3.37 versus the highest at 4.05). Analysis by age split into the five age cells for Brand 2 (Table 5.39) showed seven out of nine variables to have significantly different mean scores, with the 61 years and over age group having higher mean scores than the 31-40 year age group.

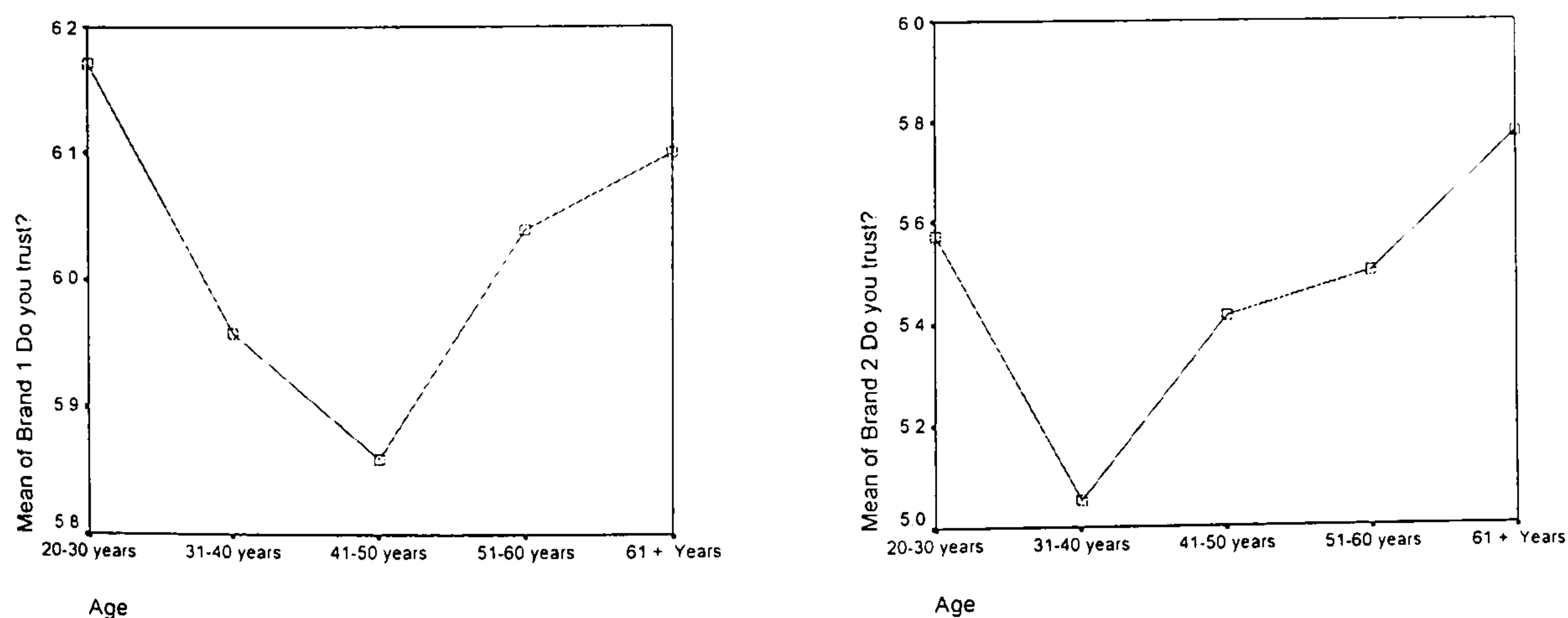
#### AGE

Variable	20 – 30 N= 35 Mean	31 – 40 N= 93 Mean	41-50 N=58 Mean	51-60 N=26 Mean	61+ N=31 Mean
Probity**	5.43	5.11**	5.43	5.39	5.73**
Equity**	5.02	4.68*	5.14	5.14	5.56*
Reliability**	5.42	5.09*	5.51	5.49	5.83*
Satisfaction**	5.19	4.76**	5.26	5.19	5.45**
Communication**	5.04	4.70**	5.12	5.05	5.32**
Process**	4.97	4.59*	5.07	4.98	5.35*
Brand trust**	5.57	5.05**	5.41	5.50	5.77**
TTP Ext 1+2+3	4.33	4.33	4.52	4.64	4.33
Trial Ext 1+2+3	3.36	3.07	3.40	3.94	3.13

Denotes significant difference between means [\*\* = p.05, \* = p.01]

**Table 5.39 Brand 2: Mean Values by Demographic Groupings: Age Split - TLS**

These were for Probity (.04), Equity (.0001), Reliability (.006), Satisfaction (.017), Communication (.013), Process (.002), and Brand trust (.05). Relative to the high mean scores of the 61+ age group for most variables, their mean scores for LTT (3.13) and for TTP (4.33) were some of the lowest. This was consistent with results from the Combined Experiment Sample (Section 4.10.1), albeit at non-significant levels. So, whilst the older age group tended to score more highly on brand trust and the 'brand trust dimensions', they often scored lowest on the two brand extension



**Table 5.40: Brand Trust Means for Brand 1 and Brand 2 plotted against Age (TLS)**

measurement response variables. A pattern also emerged across the five different age groups,



with brand trust starting at moderately high mean scores amongst the 20-30 years age group, dipping with the 31-40 year age group, rising again with the 41-50 and 51-60 year age group, and generally peaking with the 61 year and over age group. Conversely, the brand extension measurement response means tended to decline for the highest age group. These 'patterns' are illustrated diagrammatically, with the mean value of the brand trust and extension acceptance variables plotted across the different age groups (Table 5.40), and these results were consistent with Brand 1 from the C E Sample (Table 5.35).

### **5.5.2.3 Education**

By graduates/non-graduates, two variables, Equity (.05) and Satisfaction, (.01) had statistically significantly higher means amongst non-graduates for Brand 1 (Tetley) (see Table 4.78, Section 4.10.2). For Equity, the non-graduate mean was 5.38 (versus 5.11 for graduates), and for Satisfaction the non-graduate mean was 5.72 (versus 5.38 for graduates). For the remaining seven variables, there were higher means for the non-graduate group. For Brand 2 (Typhoo) the results were clearer (see Table 5.38 above), with statistically significant higher means for non-graduates than graduates on six of nine variables, and the remaining three directionally supportive. The significant differences were for Equity (.031), Reliability (.042), Satisfaction (.029), Communication (.01), Brand trust (.036), and LTT (.021). The significant differences had Eta squared effect sizes in the .2 to .3 'small' effect range. For Brand 1, using the four cells of highest educational attainment, there were two statistically significant results between the lowest and highest educational attainment levels, on Equity (.05) and Process(.05), with a mean score on Equity of 5.44 for the CSE/O Level group versus 4.98 for postgraduate/professional, and for Process mean of 5.24 and 4.85 respectively. Consistent with these results, all of the remaining seven variables demonstrated the highest means for the lowest educational attainment group, and vice versa (see Table 4.80, Section 4.10.2). For Brand 2, on Brand Communication, there were statistically different mean scores of 5.20 for CSE/GCSE respondents and 4.75 for graduates ( $p=.05$ ). The remaining results for Brand 2 were similar to those for Brand 1, with the lowest educational group having the highest mean values, and vice versa (see Table 4.81, Section 4.10.2).

### **5.5.2.4 Gender and Age**

For gender and age, there was one statistically significant 'main effect' for gender (LTT Ext 1+2+3) concerning Brand 1, at the .05 level, with a mean of 4.05 for older females and 3.29 for older males. The 'effect size', as measured by Eta Squared, was .04, of small magnitude. Some other interesting patterns emerged, with highest means for females of over 40 years on all variables, and lowest means for males aged 20-40 for seven of the nine variables. There were no 'interaction effects' (see Table 4.83, Section 4.10.2).

For Brand 2 (Table 5.41) there were two significant 'main effects' concerning gender, on Probity (.05) and Equity (.05), with Eta Squared statistics of .033 and .045 respectively (classified as small). For age, there were six statistically significant 'main effects' out of the nine variables, on Probity (.05), Equity (.01), Reliability (.01), Satisfaction (.01), Communication (.01), and Process (.01). The Eta squared, ranging from .022 to .057 were of a small to medium size. There were no interaction effects.

**Gender and Age**

Variable	Female 20-40 N= 97 Mean	Male 20-40 N=30 Mean	Female 41+ N= 60 Mean	Male 41+ N=50 Mean	Sig. Demog Variables	Partial Eta Squared
Probity** **	5.25	5.03	5.69	5.25	Gender .050 Age .023	.033 .022
Equity** *	4.83	4.61	5.49	4.93	Gender .013 Age .000	.045 .057
Reliability*	5.19	5.14	5.73	5.40	Age .007	.031
Satisfaction*	4.94	4.66	5.40	5.12	Age .006	.032
Communication*	4.84	4.65	5.26	4.99	Age .006	.032
Process*	4.71	4.65	5.14	5.06	Age .003	.037
Brand trust	6.01	6.03	6.03	5.89		
TTP Ext 1+2+3	4.37	4.22	4.49	4.49		
LTT Ext 1+2+3	3.23	2.91	3.68	3.16		

\* Denotes significant difference between means [\*\* = p.05, \* = p.01]

**Table 5.41 Brand 2: Mean Values by Demographic Groupings: Gender and Age Combined**

### 5.5.2.5 Gender and Education

By gender and education, there were two significant 'main effects' for Brand 1, on Satisfaction (.05), and brand trust (.05) for graduates versus non-graduates, both at Eta Squared small effect size (.021 and .017). For gender, there was one significant main effect (LTT Ext. 1+2+3) at .05, and again at small effect size (Eta Squared .034). A consistent pattern emerged, again, with the lowest means for male graduates, and the highest means for female non-graduates on eight of the nine variables. (see Table 4.85, Section 4.10.2).

For Brand 2 there were three statistically significant 'main' effects concerning graduates, on Satisfaction (.05, Eta Squared .06), Communication (.05, Eta Squared .02), and LTT Ext. 1+2+3 (.01, Eta Squared .029), all of small to medium effects size. In addition, male graduates had the lowest mean scores across all nine variables, albeit non-significant (see Table 4.86, 4.10.2).

## 5.6 Hypothesis 4 - Discussion of Results

Although there was inconsistency in results by demographic variables, gender, age and education, the results nevertheless did support the hypothesis that females tended to exhibit higher levels of brand trust, of brand trust dimensions and of brand extension response



measures than did males. Less educated respondents tended to show higher levels of brand trust, of brand trust dimensions and of brand extension response measures than those of higher attainment; and, older respondents tended to have higher levels of brand trust, and of brand trust dimensions, but lower scores for the extension response measures.

### **5.6.1 Putting the Results into Context**

The academic literature has not directly addressed the role of demographics within brand trust nor, indeed, brand extension measurement. There were, however, several relevant academic studies, at the periphery, which related, to the demographic results obtained in this study.

First, the consistency between the results obtained by this study, and the results of the quantitative pilot research undertaken in 1998 (and published in Michell, Reast and Lynch, 1998) is noteworthy. The 1998 Pilot Study, with a sample size of 106, found relatively small differences between demographic groups with regard to gender, age and education. The largest differences, although still relatively small, were by gender. Females rated the Equity, Reliability and Satisfaction dimensions, on average, at a significantly higher level than males (sig. .05). In fact, the means for females on twenty-one of the twenty-two variables, and brand trust, were higher than those for males. Females were, thus, in general, more trusting of the companies than were males. These results were highly consistent with the results obtained in 2001 fieldwork for the CES and TLS samples. Interpretation of the 1998 pilot results has, in many ways, been strengthened, with more significant differences in mean scores by gender, and a different and wider set of product categories tested. Based on the consistency of these two studies, the evidence for gender differences concerning brand trust, brand trust dimensions, and brand extension measurement response is strong.

The 1998 pilot study also found a slight bias towards non-graduates and older respondents showing higher mean ratings in general for the twenty-two variables and brand trust, although differences were non-significant. These 1998 results, although non-significant and directional in nature were again consistent with the results for the main samples. The main study has also found several significant differences between graduates and non-graduates, and between older and younger respondents. The results, although not as strong as those for gender, did offer support, with lesser educated and older respondents exhibiting higher brand trust than more highly educated and younger respondents. The fact that older respondents also gave lower mean scores to the brand extensions than other age groups will be discussed in section 5.6.3.

### **5.6.2 Academic Literature Relating to ‘Consumer Characteristics’**

Kang and Ridgway (1996), who studied consumer loyalty as a reciprocation for retailer investments in relationships, found weak support for the notion that appreciation of retailer



relationship investments was moderated by the individual consumer's category involvement level. Kang and Ridgway also found that elderly shoppers, in particular, were more likely to be 'relationship receptive'. Their conclusion may, in part, be supported by the results from this study, where older respondents had higher brand trust and higher brand trust dimension mean scores.

Szmigin and Bourne (1998) further brought the individual consumer under the spotlight, when they argued that:

“the value of relationships will depend on the nature of the service, the nature of the consumer, and the nature of the situation, ... not all customers want, or gain from, long-term relationships ... customers may differ in their personalities, their needs and situations, they may not all want or need a relationship”.

Various authors have looked at the role of 'consumer characteristics' within brand extension evaluation and acceptance: McWilliam (1993) considered the role of the consumer involvement level; Broniarczyk and Alba (1994) considered the impact of the consumer knowledge level (whether expert or novice status) on brand specific associations, and therefore extension evaluation; and, Barone, Miniard and Romeo (2000) made the case that viewers' individual mood states could have a mediating role on brand extension evaluation. Klink and Smith (2001) noted that, as consumers, people varied in risk-aversion and new product adoption behaviour (c/f Rogers, 1983), with the majority of consumers classified as 'late adopters'. Klink and Smith indicated that previous brand extension research had not factored in this element of consumer adoption behaviour. The authors tested for 'consumer innovativeness' in order to consider possible new product adoption behaviour, and found that the effect of 'fit' or 'category similarity' diminished as consumers' innovativeness increased. This section has presented some of the literature relating to 'consumer characteristics' drawn from both the trust/relationship marketing and the brand extension literatures. It can be seen that, whilst various aspects regarding consumer characteristics have been studied previously, the demographic variables of gender, age and education have not been explicitly applied to the consumer brand trust or brand extension areas. The fact that this research study indicates that demographic variables can be related to different brand trust and brand extension responses is significant regarding research methodological issues relating to demographics. A feature of much of the prior brand extension research was that the majority of the samples composed undergraduate students or university employees and were undertaken in the United States. Such student samples (and often university employee samples) by their very nature, were biased towards more educated and younger respondents than the general population, and this may well have affected the results. A further, more general, observation regarding the effects of demographics in this study, is that a UK sample was used. Harris and Dibben



(1999) have concluded that trust development could well be influenced by national values.

### **5.6.3 A Focus on the Older Respondents**

The older respondents (61 years +) had higher mean scores for brand trust and the dimensions of brand trust than other age groups. In contrast to their high brand trust, and high brand trust dimension ratings, the older respondents exhibited some of the lowest mean scores concerning brand extension response (both for 'Trust Brand to Provide and for 'Likely to Try'). One possible explanation for this result is that, whilst generally older respondents were seemingly more trusting than younger respondents, they were, on average, also more risk averse and had different new product adoption behaviour. Klink and Smith (2001) had noted how consumer 'innovativeness' could influence responses to brand extensions. With this in mind, it may have been that many (although not all) older respondents would have been classified as 'late majority' or 'laggards' within Rogers' 'Diffusion of Innovation' framework (1983). While economically viable within an ageing population, they may have been, stereotypically, less tolerant of change and may thus have seen many brand extension activities as change for the sake of change.

The following chapter will provide a review of the research investigation, relating research findings to Hypotheses. The research findings will be related to the literature, with contributions being noted in the process. The managerial implications of the research, the limitations of the study, and directions for future research, will also be addressed by the Chapter.

## CHAPTER 6 SUMMARY AND CONCLUSIONS

### 6.1 Introduction

This Chapter reviews the research investigation, relating the research findings to hypotheses. The research findings will be related to the existing literature, with contributions to the literature noted where relevant. The managerial implications related to the research will be outlined, together with any limitations and directions for future research.

### 6.2 Focus of the Research

This research study has spanned two separate and until now distinct literature areas, namely trust and brand extension. A full literature review, conducted for both literature areas, found that ‘trust’ in an end-user consumer context had received little attention, and brand trust as a factor in brand extension success had been considered only indirectly. A concluding review of each of the literature areas will now take place, integrating additions to the literature as part of the process.

### 6.3 Consumer Trust in Brands and Companies

Existing academic research has tended to under-emphasise the significance and importance of consumer brand trust. Trust has been studied in many contexts over the last 40 years, from psychology and interpersonal relations (e.g. Deutsch, 1960) to source credibility (e.g. Giffin, 1967), to channel relations and relational exchange (e.g. Dwyer, Schurr and Oh, 1987) and in relationship marketing (e.g. Morgan and Hunt, 1994). Only in the last 15 years has the concept of ‘relationship marketing’ been studied and applied in the context of consumers, with Dwyer, et al. (1987) proposing that:

“consumer markets could also benefit from attention to conditions that foster relational bonds leading to reliable repeat business”.

Although there was much debate about the legitimate application of relationship marketing in the context of consumer markets (e.g. Barnes, 1994; Sheaves and Barnes, 1996; O’Malley and Tynan, 1998), there have also been many supporters of this application within the academic literature (e.g. Christy, et al., 1996; Webster, 1994; Ramsey and Sohi, 1997; Crutchfield, 2001). Much of the debate has revolved around whether trusting relationships could be developed within low involvement, low risk category areas. Much of the research within relationship marketing has acknowledged the important role of trust (e.g. Morgan and Hunt, 1994; Beatty, Mayer, et al., 1996; and Berry, 2002). Whilst various researchers have attempted to measure trust, a complex concept, using multidimensional models and scales in interpersonal contexts (e.g. Lewis and Wiegert, 1985) and in business to business contexts (e.g. Ganesan, 1994), the development and testing of a model of brand trust related to end-



consumers has not taken place, and only one single definition of consumer-brand trust has been developed (Chaudhuri and Holbrook, 2001).

It was, thus, seen that the role of trust within relationship marketing was well established and well researched in the business to business domain, but far less so in the consumer context. By focusing this study on the concept of brand trust in a consumer context, it was believed that the findings could make a contribution to the existing marketing literature. This linkage and contribution to the literature has been explored in this study.

#### **6.4 Linkage of Research Findings to Validation of Brand Trust as a Consumer Concept**

The exploratory qualitative research phase of this thesis (outlined within the Research Methods Chapter) clearly validated the idea that consumers had trust in brands and organisations. “Yes, it makes sense to me - I trust Marks and Spencer” [Group 4, Male, 25-39, Managers]. The four focus groups helped to validate the consumer vocabulary, noted that brands had built trust over many years, and that a number of variables could be associated with brand trust.

“A single occasion would not be enough to build brand trust, but it would make you more likely to give the company another try to see if it is consistently good”. [Group 1, Female 40-60 years, administrative staff].

The qualitative research phase also indicated that consumer/interviewees believed that different brands had different amounts of brand trust associated with them, and implied consumers would ‘act’ (in the sense of relatively loyal purchasing) in ways related to the level of brand trust in the brand. This specific element of the research findings has connections to research by authors such as Aaker (1997), Fournier (1998), Garbarino and Johnson (1999) and Chaudhuri and Holbrook (2001) who have viewed consumers as capable of trusting brands within the consumer-brand ‘relationships’ studied.

“If a lot of brand trust has been built over time - with lots of good experiences, one or two indiscretions won’t destroy all of this trust, but you would balance these against all of the good experiences”.

[Group 1, Female, 40-60 years, administrative staff]

#### **6.5 Developing a Definition of Consumer Brand Trust**

Definitions of trust have been present within the academic literature for the last thirty-five years. However, only a single definition of consumer perceived brand trust has been presented within the literature (Chaudhuri and Holbrook, 2001). The following Table (6.1), presenting the many definitions of trust over a thirty year period from 1967 to 2001, can be seen to be drawn either from the interpersonal/social psychology literature, or the channel relations/relationship marketing literature. Only one definition by Chaudhuri and Holbrook (2001) has addressed consumer-brand trust.

### Definitions of Trust 1967 – 2001

**Rotter (1967).** Defined trust as “a generalised expectancy held by an individual that the word of another can be relied on”, and also that behaviourally ‘honesty makes trust possible’.

**Deutsch (1973).** Trust was based on “the expectation that one will find what is expected rather than what is feared”.

**Schurr and Ozanne (1985)** have defined trust as “a belief that an exchange partner is reliable and will fulfil the perceived obligations of the relationship”.

**Bialaszewski and Giallourakis, (1985).** Trust was defined as “an attitude displayed in situations where ... a person is relying on another person, a person is risking something of value, and/or a person is attempting to achieve a desired goal”.

**Anderson and Narus, (1984).** “Trust has also been defined as ‘a partner’s belief that the other partner will perform actions that will result in positive outcomes, as well as not take unexpected actions that would result in negative outcomes”.

**Anderson et al., (1987).** [Mutual trust is] “the degree to which the channel member perceives that its relationship with the supplier is based upon mutual brand trust and thus is willing to accept short-term dislocation because it is confident that such dislocation will balance out in the long-run”.

**Anderson and Weitz, (1989)** “We define trust as one party’s belief that its needs will be fulfilled in the future by actions undertaken by the other party”.

**Moorman, et al. (1992)** Trust was defined as “a willingness to rely on an exchange partner in whom one has confidence”.

**Morgan and Hunt, (1994).** “We conceptualize trust as existing when one party has confidence in an exchange partner’s reliability and integrity”.

**Ganesan, (1994).** “Trusting behaviour involves a future expectation about an exchange partner resulting from the partner’s current level of reliability and the degree of satisfactory experience of the partner”.

**McAllister (1995)** defined trust as “the extent to which a person is confident in, and willing to act on the basis of the words, actions and decisions of others”.

**Doney and Cannon (1997)** defined trust as “the perceived credibility and benevolence of a target of trust”.

**Chaudhuri and Holbrook (2001)** “define brand trust as the willingness of the average consumer to rely on the ability of the brand to perform its stated function”.

**Table 6.1: Definitions of Trust 1967 to 2001**

Drawing on earlier definitions, particularly McAllister (1995), a new definition of consumer brand trust is proposed. In line with the definitions by Moorman, et al., (1992), Morgan and Hunt, (1994), and McAllister (1995), the definition here has drawn upon the idea of a trusting party (the consumer) showing “confidence” in the brand or organisation from which they were buying goods or services. Also, in line with the definitions by Moorman, et al., (1992) and McAllister (1995), the consumer was perceived to not only feel confidence in the brand or organisation, but was willing to act on that confidence. In line with the definitions by



Morgan and Hunt (1994), Ganesan (1994), McAllister (1995) and Doney and Cannon (1997), the reasons for this confidence in the brand or organisation have been presented. Finally, drawing on the work of Smith and Barclay (1997), who argued that consumers could learn about brands and build trust in brands prior to personal experience; and Nolan (1985), who asserted that brand trusted peers could be sufficient to develop brand trust in a third-party prior to interaction, the proposed definition of consumer brand trust relies on either consumer perceptions or experience of the brand or organisation in question. Consumer-brand trust has thus been defined as:

“the extent to which a consumer is confident in, and willing to act on the perceived or experienced reliability, satisfaction, probity and equity of an organisation or brand”.

### 6.6 Developing a ‘Model’ of Consumer Brand Trust

Several models of trust have been drawn from the academic literature with sources ranging from interpersonal relations and social psychology (e.g. Lewis and Wiegert, 1985) to business to business relationship marketing (e.g. Morgan and Hunt, 1994).

#### Models of Trust

Author, Model and Components	Context
<b>Johnson-George and Swap (1982)</b> identified two dimensions of trust they labelled ‘reliableness’ and ‘emotional trust’	Social Psychology
<b>Rempel, et al. (1985)</b> distinguished between ‘dependability’ and ‘faith’ as unique forms of trust	Social Psychology
<b>Lewis and Wiegert (1985)</b> stated that interpersonal trust had ‘cognitive’ and ‘affective’ foundations	Interpersonal Communications
<b>Morgan and Hunt (1994)</b> emphasised behavioural aspects and cognitive elements of trust	Business to business/RM
<b>Ganesan (1994)</b> suggested Benevolent (motives/intentions) and credibility (expertise) dimensions	Business to business/RM
<b>McAllister (1995)</b> suggested a two-dimensional conceptualisation using ‘affect’ based trust and ‘cognition’ based trust. Affect based trust was grounded in reciprocal interpersonal care and concern and cognition based trust was grounded in beliefs about peer reliability and dependability	Business to business/RM
<b>Smith and Barclay (1997)</b> suggested a tripartite conceptualisation of trust with dimensions of ‘character motives’, ‘role competence’ and ‘judgement’	Business to business/RM
<b>Doney and Cannon (1997)</b> argued that trust was multidimensional built around ‘perceived credibility’ and ‘benevolence’.	Business to business/RM
<b>Fletcher and Peters (1997)</b> established two dimensions of trust, an ‘ability dimension’ (competence, equity and fairness, promise fulfilment) and a ‘motive/intent’ dimension (discreteness, integrity, receptivity and loyalty)	Business to business/RM
<b>Sirdeshmukh, Singh, and Sabol, (2002)</b> Established two dimensions of Consumer trust: trust in ‘front-line employees’, and trust in ‘management practices and policies’. Trustworthiness was felt to be an antecedent to consumer trust, itself having three dimensions, ‘operational competence’, ‘operational benevolence’, and ‘problem solving orientation’.	Consumer – Retail Clothing and Airline

**Table 6.2: Models of Trust 1982-2002**

It can be seen from Table 6.2, which has pulled together all previous trust models, that almost without exception both ‘affective’ and ‘cognitive’ dimensions feature within

conceptualisations of brand trust. It can also be seen from the Table that all the models developed to date may be sourced to interpersonal relations, social psychology, business to business channel relations, and relationship marketing.

One of the fundamental elements of this research has been to try to validate a model, or 'conceptual framework', of consumer brand trust. Various forms of dimensionalisation existed within the academic literature prior to 1996 (the commencement of this research), but no models existed within the consumer domain.

## **6.7 Hypothesis 1**

Brand trust can be shown to be associated with a number, of key 'associative variables'- which form a 'model' of the construct, in that:

Brand trust will be positively correlated the six dimensions overall and with each of the six 'Dimensions' (Probity, Equity, Reliability, Satisfaction, Brand Communication and Process) for both 'Brand 1' and 'Brand 2' within the full samples (Combined and Tea Large) and at product category level.

### **6.7.1 Research Findings – H1**

This hypothesis has been partially supported, with four of the six postulated dimensions being shown to be positively correlated with brand trust within standard multiple regression equations. The results using standard multiple regression have been presented within the Data Analysis and Results Chapter and debated within the Discussion of Findings Chapter and, in summary, the multiple regression analyses undertaken have found support for four of the six 'dimensions' which had been postulated to be positively correlated with brand trust. The Probity, Equity, Reliability and Satisfaction dimensions all appeared as positively correlated with brand trust on at least two occasions across the eleven regression model solutions (Table 6.3).

The Equity variable appeared, in terms of statistical significance, eight times, Reliability six times, Probity three times and Satisfaction twice. The Brand Communication variable did not feature, in terms of statistical significance, in any of the models. The Process variable was significantly, but negatively, correlated with brand trust on five occasions. An examination of the significant, but negative, correlation of the Process variable with brand trust was provided within the Discussion of Findings Chapter (5.2.4).



Sample	N= 204 CES		N= 247 TLS		N= 39 Sainsbury	N=39 Co-op	N= 44 Parker	N=44 Pilot	N=41 Nescafé	N=41 Maxwell House	N=41 Amazon
	B1	B2	B1	B2							
Probity		✓**			✓**				✓*		
Equity	✓* ✓*	✓*	✓*	✓*		✓**	✓*			✓**	✓*
Reliability	✓* ✓**	✓*	✓*	✓*		✓**		✓**			
Satisfaction				✓*							✓**
Process	(✓)**	(✓)*	(✓)*	(✓)*				(✓)**	(✓)*		
Communication											
Six Dim's Adjusted R <sup>2</sup>	.603	.679	.524	.700	.624	.716	.434	.695	.763	.672	.712
Four Dim's Adjusted R <sup>2</sup>	.590	.676	.504	.689	.625	.695	.427	.660	.600	.690	.709

[\*\* = p.05, \* = p.01]. [B = Brand, CES= Combined Experiment Sample, TLS= Tea Large Sample].

**Table 6.3 Summary Multiple Regression Results – Samples and ‘Dimensions of Brand Trust’**

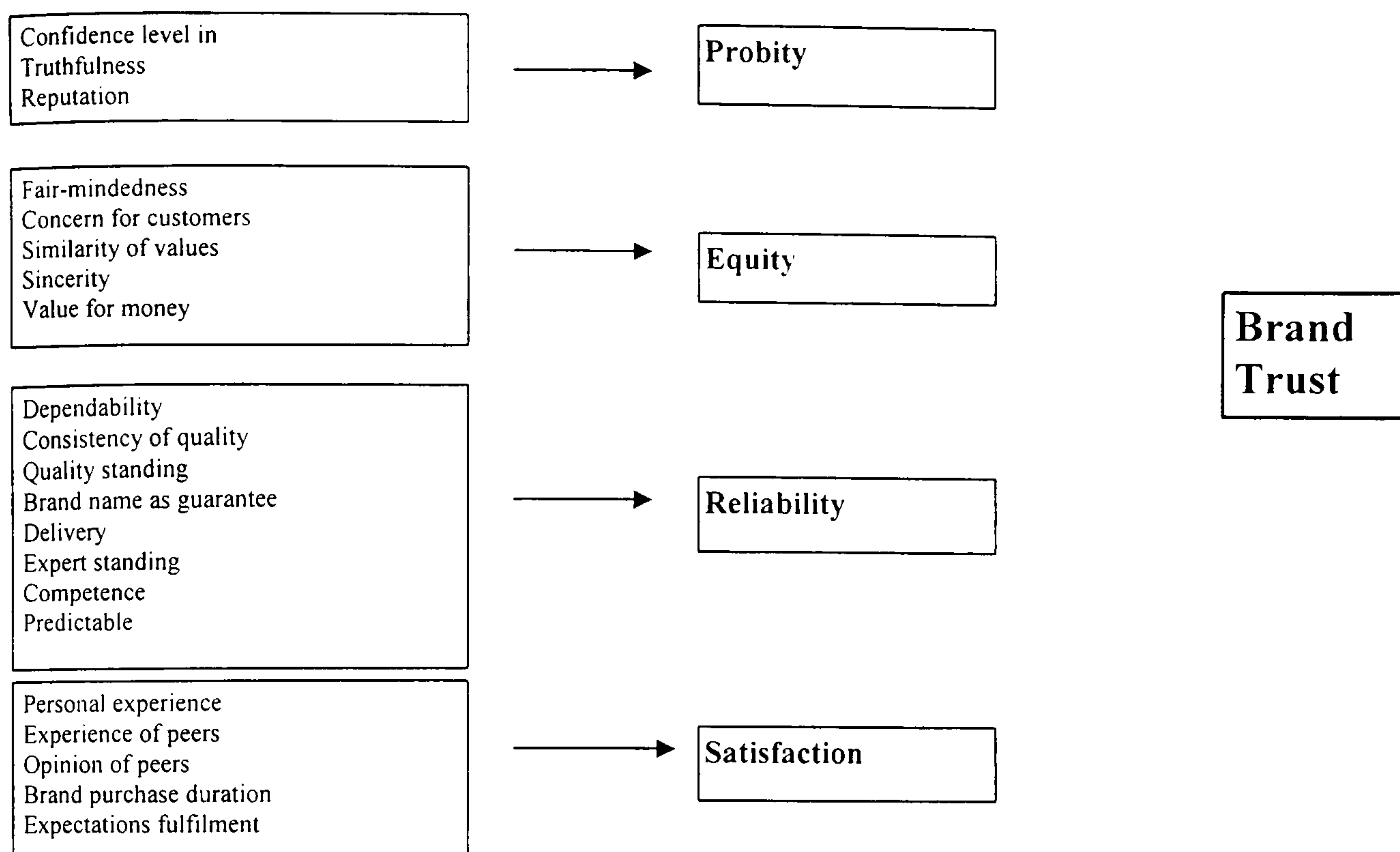
An examination of the progression of the Process dimension and ‘Process variables’ (relative to increasing values of brand trust) across both the Combined Experiment and the Tea Large Sample, concluded that the dimension and its related variables did increase in value broadly in line with brand trust, but due to the relatively high values at lower mean brand trust scores, and erratic progression, the dimension was found to be correlated negatively.

The research results have provided support for the notion of a multidimensional model of consumer-brand trust, reflecting both affective and cognitive areas, and built around the four dimensions of Probity, Equity, Reliability and Satisfaction, which themselves were related to twenty-one variables drawn from the literature. The six dimension regression models offered high levels of explanatory power, with nine of the eleven equations delivering adjusted R<sup>2</sup> figures in excess of .6. Table 6.3 also shows that the adjusted R<sup>2</sup> results within each sample when using a four dimensional model of trust, were very consistent with those for the six dimensional model. Thus, a four dimensional model of consumer brand trust was supported by research results, and presented as a finding of this research (Figure 6.1 below).

The research finding was broadly in line with earlier conceptualisations of trust within the other research fields referred to in section 6.6, in that it reflected both the ‘affective’ and ‘cognitive’ dimensions of trust. In addition to this, the findings were consistent with those of the earlier quantitative pilot research stage (Michell, Reast and Lynch, 1998) which considered retail banking, retail department stores and domestic household electrical goods categories. This earlier pilot stage found strong support for the four dimensions of Probity, Equity, Reliability and Satisfaction, and delivered similar levels of explanatory power (adjusted R<sup>2</sup>) with regard to the variance in ‘brand trust’. The findings from exploratory qualitative research also supported the postulated model. Respondents within the research groups could see the relevance of the ‘dimensions’ in the context of brand trust in organisations and brands.

“Yes - I could see those things building trust in a company or brand”.

[Group 1, Female, 40-60 years, Administrative Staff].



**Figure 6.1: Model of the Dimensions of Consumer-Brand Trust**

These findings, as far as external validity is concerned, can only be related to fast moving consumer goods (FMCG) and relatively low involvement, low risk, low complexity service categories, since these reflect the types of categories selected and tested within this and the earlier pilot quantitative research phase (Retail Banks, Dept. Stores, and Electrical goods).

It has been argued within the Discussion of Findings Chapter that, whilst the Brand Communication and Process variables were not positive correlates of brand trust within the context of the categories selected for research, they may well be relevant in high involvement, higher risk and complex consumer contexts. Various literature sources have supported the assertion that consumer relationships differ greatly between different types of goods and service categories (e.g. Christy, et al., 1996).

### 6.7.2 Brand Extension and Brand Trust

Defined by Aaker and Keller (1990) as “the stretch of an established (brand) franchise to a different product class”, much literature has focused upon the importance of, and success factors in, brand extension activities. Some researchers have indirectly addressed the role of brand trust within brand extension response, for example Keller and Aaker (1992), who considered the impact of ‘company credibility’ (measured by expertise and brand trustworthiness) on brand extension evaluation. However, no research has set out to measure a direct relationship between brand trust and brand extension measurement response.



McWilliam (1993), in research amongst senior marketing practitioners, inferred that practitioners viewed brand trust to be an important factor in the acceptance of brand extension activities, and the researcher here is aware that the respected international brand tracking company, Millward Brown, has been tracking brand trust levels (as a single measure) in brands for many years, with brand owners seeing brand trust as part of the equity of the brand (c/f Dyson, Farr and Hollis, 1996).

The literature review concerning brand extension has demonstrated that the success factors surrounding brand extension have been the subject of much research over the last twenty years. It is, believed, however, by integrating the relationship marketing and trust literature with brand extension response, that a novel contribution to the existing brand extension literature has been made within the 'Parent Brand or Company Characteristics' Literature Chapter theme (Section 2.14.4), which included elements such as 'brand affect', 'brand prestige', 'brand specific associations', 'parent brand strength and expertise', and 'parent brand credibility'.

### **6.8 Hypothesis 2**

Brands with higher brand trust levels will be more likely to succeed in extension categories (particularly distant extension categories), with success measured by 'likelihood to try' or 'trust to provide extension', in that:

- a) Brand 1 (the higher trust brand) will outperform brand 2 (the moderate trust brand) in extension 1, 2 and 3 (in total and split sample).
- b) Brand 1 (the higher trust brand) will outperform brand 3 (the lower trust fictitious brand) in extension 1, 2 and 3 (in total and split sample).
- c) Brand 2 (the moderate trust brand) will outperform brand 3 (the lower trust fictitious brand) in extension 1, 2 and 3 (in total and split sample).

#### **6.8.1 Research Findings – H2**

The results for this hypothesis, using paired sample 't' tests within the samples (CE and TLS) and at the category split sample level, found strong, almost unambiguous, support for the hypothesis. It can be seen from Table 6.4 that, within the Combined Experiment Sample, the brand extension response at an aggregate level (Ext. 1+2+3) was 14% higher for Brand 1 using the LTT brand extension response measure ( $t = 5.597$ ), and 12% higher for Brand 1 using the TTP measure ( $t = 6.474$ ) compared to Brand 2. Similarly, within the Tea Large Sample, significant differences in mean values of 9% using LTT and 14% using TTP were generated for Brand 1 over Brand 2. All of these significant differences in brand extension measurement response were accompanied by significant differences in brand trust levels between the brands. Each of the individual category level analyses showed statistically

significant differences in brand extension measurement response means, except for the Pens category at the LTT extension response measure. The inconsistency in the results for the Pens category, as argued in the Discussion of Findings Chapter, may be related to the different demographic profile of the Pens sample and/or possible brand specific associations not captured at pre-test stage.

	C E Sample N= 204	T L Sample N= 247	Shops N=39	Tea N=40	Pens N= 44	Coffee N=40	Internet N=40
B1 v B2 LTT Sig.	.000	.000	.001	.067	.474	.000	N/A
% Diff. In means	14%	10%	23%	8%	2%	26%	N/A
B1 vs B2 TTP sig.	.000	.000	.010	.000	.018	.000	N/A
% Diff. In means	12%	14%	12%	14%	8%	16%	N/A
B2 v B3 LTT Sig.	.000	N/A	.000	.000	N/A	N/A	N/A
% Diff. In means	35%	N/A	53%	22%	N/A	N/A	N/A
B2 v B3 TTP Sig.	.000	N/A	.000	.000	N/A	N/A	N/A
% Diff in means	39%	N/A	58%	23%	N/A	N/A	N/A
B1 v B3 LTT Sig.	.000	N/A	.000	.000	N/A	N/A	.000
% Diff. In means	56%	N/A	90%	31%	N/A	N/A	30%
B1 v B3 TTP Sig.	.000	N/A	.000	.000	N/A	N/A	.000
% Diff. In means	57%	N/A	77%	40%	N/A	N/A	35%

**Table 6.4: Aggregate Level TTP Ext.1+2+3 combined and LTT Ext. 1+2+3 combined**

Table 6.4 also illustrated that, where a Brand 3, or dummy brand, was included within a sample, the dummy brand was scored at a statistically significantly lower level for brand trust and brand extension measurement responses than were Brands 1 and 2. Within the Combined Experiment Sample, for example, Brand 2 had a 35% higher brand extension response mean using the LTT measure and 39% higher mean using the TTP measure than Brand 3. In the context of the earlier results, it was not surprising that Brand 1 gained a 56% higher mean using the LTT measure, and a 57% higher mean using the TTP measure, than Brand 3 within the Combined Experiment Sample.

### 6.8.2 Literature Support – H2

The finding that differences in brand trust level between brands appeared to accompany differences in brand extension measurement response means has given support to the earlier work of Keller and Aaker (1992), who had noted a relationship between ‘company credibility’ (using brand trustworthiness as one measure) and brand extension evaluation. The finding is also in line with work by McWilliam (1993), who found that marketing practitioners viewed trust as important in consumer evaluation and acceptance of brand extensions.

## 6.9 Hypothesis 3

Brand trust, or the dimensions of brand trust, will be positively correlated with brand extension measures.

### 6.9.1 Research Findings – H3

The research has found consistent, statistically significant (.000), but weak association



between brand trust, the dimensions of brand trust, and brand extension response measures (TTP and LTT). Chi-Square tests established that the null hypothesis that brand trust and brand extension response measures were independent should be rejected in all cases across both of the large samples (CES and TLS). In summary (Table 6.5), multiple regression analyses regressing the six dimensions of brand trust with brand extension response measures, showed adjusted  $R^2$ s of .215 and .232 for Brands 1 and 2, respectively, and .222 and .241 for Brands 1 and 2 regressing the four dimensions of brand trust with the TTP Ext. 1+2+3 aggregate measure in the Combined Experiment Sample. It can be seen from Table 6.5 that this was consistent with results from the Tea Large Sample, where adjusted  $R^2$ s of .198 and .266 were recorded for Brands 1 and 2 using the six dimension model, and .185 and .258 for the four dimension model, using the same extension response measure. Association levels tended to be lower for the LTT Ext. 1+2+3 aggregated measure regressed against the 'dimensions of brand trust', with Brands 1 and 2 within the Combined Experiment Sample having adjusted  $R^2$ s of .089 and .152 for the six dimensions, and .081 and .146 for the four dimensions respectively, whilst Brands 1 and 2 within the Tea Large Sample showed adjusted  $R^2$  figures of .095 and .269 for the six dimensions and .080 and .265 for the four dimensions, respectively, regarding the LTT extension measure.

Extension Measure	Brand 1 (C E S)	Brand 2 (C E S)	Brand 1 (T L S)	Brand 2 (T L S)
TTP Ext 1-3 Six Dim. Adjusted $R^2$	.215	.232	.198	.266
TTP Ext 1-3 Four Dim. Adjusted $R^2$	.222	.241	.185	.258
LTT Ext 1-3 Six Dim. Adjusted $R^2$	.089	.152	.095	.269
LTT Ext 1-3 Four Dim. Adjusted $R^2$	.081	.146	.080	.265

**Table 6.5: Brand Trust Dimensions versus Brand Extension Response (Multiple Regression)**

Overall, the results were consistent between the two samples. These results, whilst interpreted as weak due to the low adjusted  $R^2$  values, can nevertheless be seen to be strong in the context of the multitude of well-researched variables associated with brand extension evaluation and success. Importantly, the  $R^2$  values are statistically significant, and reach critical levels of association, suggesting that some level of relationship exists (Wilkinson and Dallal, 1981). It is also notable that the associations between brand trust and brand extension are mediated by demographic variables such as gender, with  $R^2$  values being significantly higher for females.

### 6.9.2 Literature Support – H3

It is difficult to relate these findings specifically to published academic work, since no direct comparative studies exist. Selnes (1998) used five antecedents in predicting trust, four of which were significant (communication, commitment, conflict handling and satisfaction).

These ‘antecedents’ served to explain .355 of the variance in ‘relationship enhancement’, a related concept, arguably, to the one used here of consumers extending their purchasing to extension categories. As stated earlier, the findings here support the work of Keller and Aaker (1992), and McWilliam (1993).

It is argued, within the Discussion of Findings Chapter, that the above brand trust and brand extension results, albeit showing a weak association, when taken together with the significant differences in brand trust and brand extension response means, do represent an important finding. It appears that brands with higher brand trust levels do indeed gain higher brand extension measurement responses (all other things being equal), and statistical significance levels (.000) are shown to exist in the association between these variables. It can therefore be claimed, fairly, that these findings regarding levels of consumer-brand trust make an addition to the existing brand extension success factors (repeated and adapted from Literature Chapter, 2.14.3.1), shown as Figure 6.1, providing another factor associated with brand extension evaluation, and acceptance.

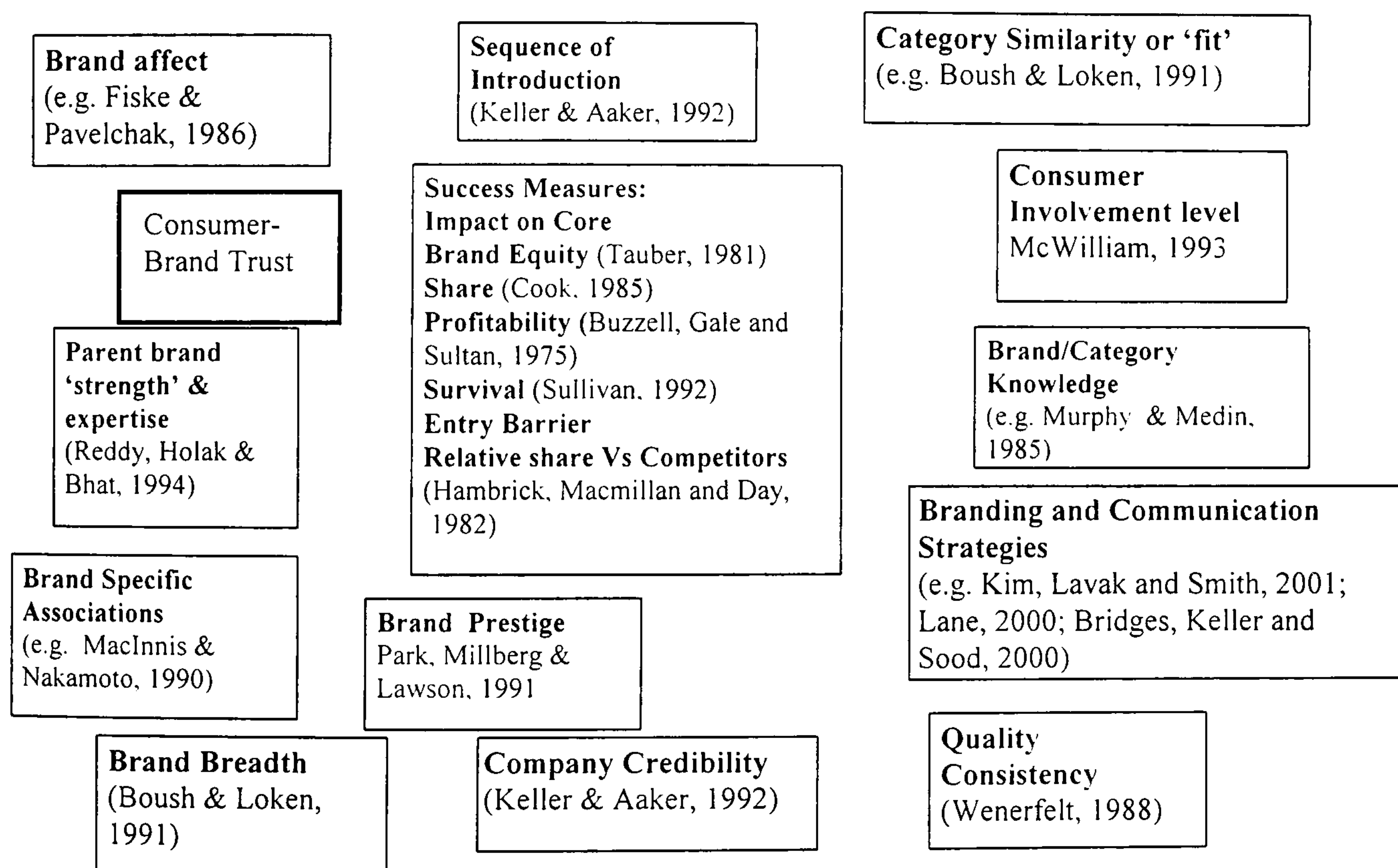


Figure 6.2: Brand Extension –Success Factors and Measures of Success + Brand Trust

#### 6.10 Hypothesis 4

Differences in the level of brand trust, in the six hypothesised ‘Dimensions of Brand Trust’, and in brand extension acceptance (TTP and LTT) will occur according to gender, age and educational level such that:

- Older respondents will score the above at higher levels than will younger respondents.



- b) Females will rate the above at higher levels than will males.
- c) More highly educated respondents will rate the above at lower levels than will those respondents of lower education.

#### **6.10.1 Research Findings – H4**

The key finding from this research was that gender, in particular, was a significant influencing factor on levels of brand trust, brand trust dimensions and brand extension measurement response, with females rating variables and dimensions at significantly higher levels within much of the analysis compared to males. There was also support for the hypothesis that age and educational level also played a part in influencing brand trust and brand extension measurement response, with older and less educated respondents recording higher mean scores than younger and well educated interviewees. Older respondents, however, whilst tending to show higher brand trust scores, also tended to have lower brand extension mean scores than did younger ones.

#### **6.10.2 Gender Findings**

The testing of mean differences between demographic sub-groups was conducted using both one-way ANOVA, considering individual variables, and two-way ANOVA, considering possible interaction ‘effects’ between demographic variables. In almost all instances, female respondents recorded higher scores than males, both in terms of brand trust, brand trust dimensions and brand extension response measures. Mean differences by sex for brand trust and brand trust dimensions were often found to be at statistically significant levels, and the remaining non-significant results were directionally supportive of the finding that females were more trusting of the subject brands than males. Females recorded higher mean scores for brand extension measurement responses, with mean differences in ‘Likely to Try’ ranging from 5-15% higher than by males, and mean differences in ‘Trust to Provide Extensions’ ranging from 0-21% higher than by males. Females were more trusting of the brands within the Grocery Shops, Tea, Coffee, Pens and Internet categories than were males, and this higher brand trust was also accompanied by a higher propensity to trust the brand to provide legitimate brand extensions (TTP) and a propensity to try such brand extensions (LTT). Females recorded a higher adjusted  $R^2$ , and thus a significantly higher association between ‘brand trust dimensions’ and ‘brand extension response measures’, than did males in three-quarters of the multiple regression equations run between the two sub-samples. The findings, thus, suggest that a stronger link exists between brand trust dimensions and brand extension measurement responses for females than for males.

#### **6.10.3 Educational Level Findings**

Analysis of the results for both samples, the Combined Experiment Sample and the Tea Large Sample, have led to the conclusion that differences in educational level are associated



with differences in mean scores for brand trust, brand trust dimensions, and brand extension measurement responses. The results, however, were not conclusive, and there were fewer statistically significant differences in mean scores shown by differing educational levels than was the case by gender. However, many differences in means were directionally supportive of the hypothesis that less educated respondents (e.g. non-graduates) would demonstrate higher mean scores for brand trust, brand trust dimension and brand extension measurement response (than e.g. graduates). Thus, support, although partial, was found for the hypothesis that less educated respondents were likely to be more trusting and more 'likely to try' the brand extension concepts.

#### **6.10.4 Age Level Findings**

The results considering the differential impact of age on brand trust, brand trust dimensions and brand extension measurement response did offer support for the hypothesis. One-way ANOVA test results were directionally supportive of the hypothesis that older respondents would have higher mean scores for brand trust and brand trust dimensions, and some of the results showed statistically significant differences (e.g. Brand 2, Typhoo in the Tea Large Sample). So, evidence was provided that older respondents were likely to be more trusting in a brand context than were younger ones. The older respondents also tended to offer some of the lowest brand extension measurement response scores. This effect may relate to different age groups being related to the different phases of the Diffusion of Innovation curve (Rogers, 1983), with older consumers being less adaptable to, and less 'tolerant' of, change. Such a judgement would relate with the work of Klink and Smith (2001) regarding 'consumer innovativeness' and brand extension evaluation.

#### **6.10.5 Literature Support – H4**

The findings regarding the differential demographic influences on brand trust and brand extension measurement responses were new additions to both the consumer brand trust and the brand extension literatures. Whilst various authors have, peripherally, discussed the role of consumer characteristics within the relationship marketing literature (e.g. Garbarino and Johnson, 1999; Kang and Ridgway, 1996; and Szmigin and Bourne, 1998), finding that differing consumers may have different outlooks towards marketing relationships, no previous authors have specifically focused research attention on demographic variables related to levels of consumer-brand trust. Kang and Ridgway (1996) have come closest in identifying that elderly shoppers have appeared to be more 'relationship receptive'. Similarly, within the brand extension literature, demographic factors have not been constituent parts of any focus area of the 'success factors in brand extension'. McWilliam (1993) has considered the role of 'consumer involvement level', Broniarczyk and Alba (1994) have considered the role of 'consumer knowledge level', Barone, Miniard and Romeo (2000) have considered the

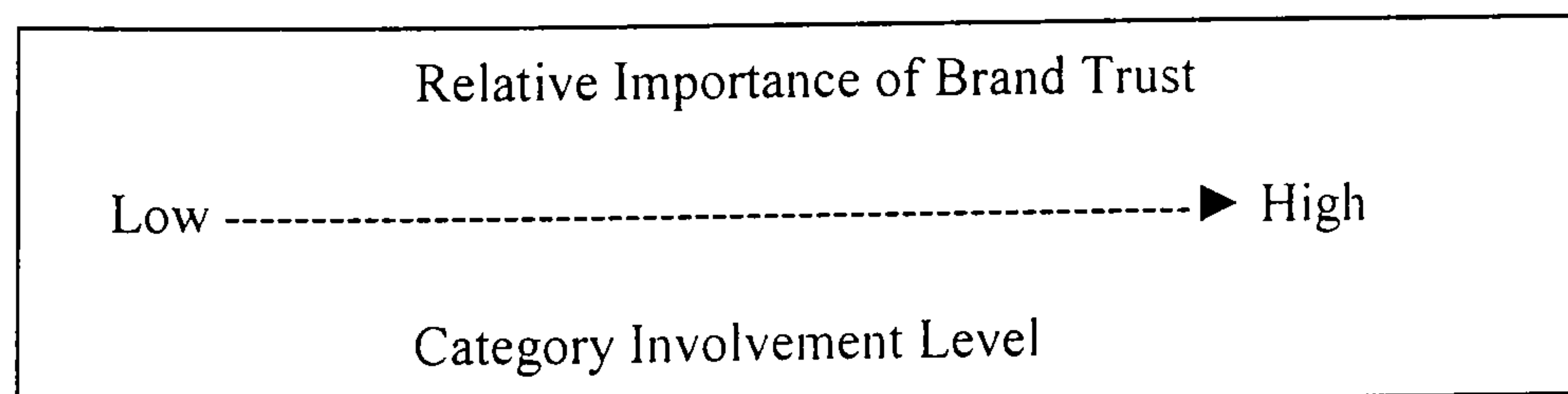


role of ‘viewers’ mood state’ to attitudes to extensions, and Klink and Smith (2001) have made the case for considering ‘consumer innovativeness’ in extension evaluation decisions. It is argued, thus, that the brand trust and brand extension literatures have been embellished and complemented by these aspects of the findings of this thesis.

## 6.11 Managerial Implications

### 6.11.1 Brand Trust and Brand Extension

Brand owners should already have recognised that brand trust is an important component of brand equity (Dyson, Farr and Hollis, 1996), and that brand trust has already been linked to brand loyalty within academic studies (e.g. Schurr and Ozanne, 1985). The research presented within this thesis adds weight to the benefits of investment in brands and may represent heartening news for brand owners in a climate of declining brand trust levels, and declines in trust in social institutions generally (Bainbridge, 1997). The research indicates, across two samples and five category areas (tea, coffee, pens, grocery retail and internet retail), that brand trust dimensions are related to brand extension response, and further, that brands with higher trust levels (means) also tend to have significantly higher brand extension response means. The advantage for the higher trust brand is carried from ‘close-in’ line extensions, through to ‘related’ brand extensions, and also to the more distant ‘unrelated’ brand extension areas. The findings presented within this research may provide statistical evidence for what brand owners have thought intuitively for many years (e.g. McWilliam, 1993), namely, that trusted brands can be more readily ‘stretched’ by their owners. The findings are perhaps all the more significant, since the categories selected for this research investigation were typically low involvement, low risk categories, where it might be expected that brand trust would not be ‘fully activated’. The academic literature has widely supported the view that trust reduces perceived risk on the part of the buyer (e.g. Selnes, 1998), and that in the face of higher risk decisions, the role of trust would be expected to become more important. In support of this Boush and Loken, (1991), found that decision times for brand extensions relating to the electrical goods categories were far longer than for the FMCG grocery categories. This research suggested that there were different cognitive processes at work, with limited ATR (Ehrenberg, 1974) type processes for low involvement categories and more extended, cognitive, AIDA type decision approach for higher involvement goods.



**Figure 6.3 Brand Trust and Category Involvement Level**



Given the higher level of cognitive processing and higher risk attached to high involvement categories, potentially allied to the expert status (Broniarczyk and Alba, 1994) of the consumer, brand trust could play an increasingly important role within the purchase evaluation as the level of category involvement increases.

The fact that brand trust was shown to be significantly associated with brand extension response even in low involvement categories such as tea and coffee underlines the strength of the brand trust concept. It appears that the research supports the benefits of 'halo' associations for strong brands, those associations based upon broad 'non-product' perceptions of the brand. Rangaswamy, Bourke and Oliva, (1993) researching in the US yoghurt, mouthwash, shampoo, and RTE breakfast cereals markets, found that brands which were associated with more 'intangible attributes' were more likely to be extendable than those with very strong 'product based associations'. The attributes discussed within the Rangaswamy, et al. research were quality, style, durability, reputation, and value, but it is claimed here that this research supports the addition of Brand Trust as an additional 'non-product attribute association' influencing the ability of the brand to extend.

The research findings also suggest a dividend for brand owners with moderate trust brands within these same low involvement categories. Such brands have an advantage in extending their brand over lesser trusted, generic or relatively unknown, same category rivals, but would not fare as well as the high trust brands in line, related or unrelated categories. The caveat to the suggestion that moderate trust brands would perform poorer than higher trust brands, is that results have been based upon an experimental setting with real brands and realistic but 'brand neutral' extension concepts. It may well be that creative research and development activity could result in brand extension concepts where higher levels of perceived fit exist for the moderate trust brand, and thus higher brand extension responses are achieved for the moderate trust, relative to the higher trust brand.

### **6.11.2 Brand Trust and Brand Extension in a Wider Context**

The research has clearly shown, across two samples of relatively low-involvement goods and service categories, that brand trust and brand extension response measures were significantly correlated. The results are also felt to support the assertion that brand extension evaluation and purchase decisions are complex multi-factor decisions, with many possible influences at play. The brand extension research summary table (Figure 6.2) clearly provided a summary of the various influences or associated variables, which have been found to relate to the success or evaluation of brand extensions. It is claimed here that brand owners should now regard brand trust as a further validated variable within the mix of variables associated with brand extension evaluation. It may well be that each of the factors presented within Figure 6.2 only explain a relatively small proportion ( $R^2$ ) of the variation in extension response. but

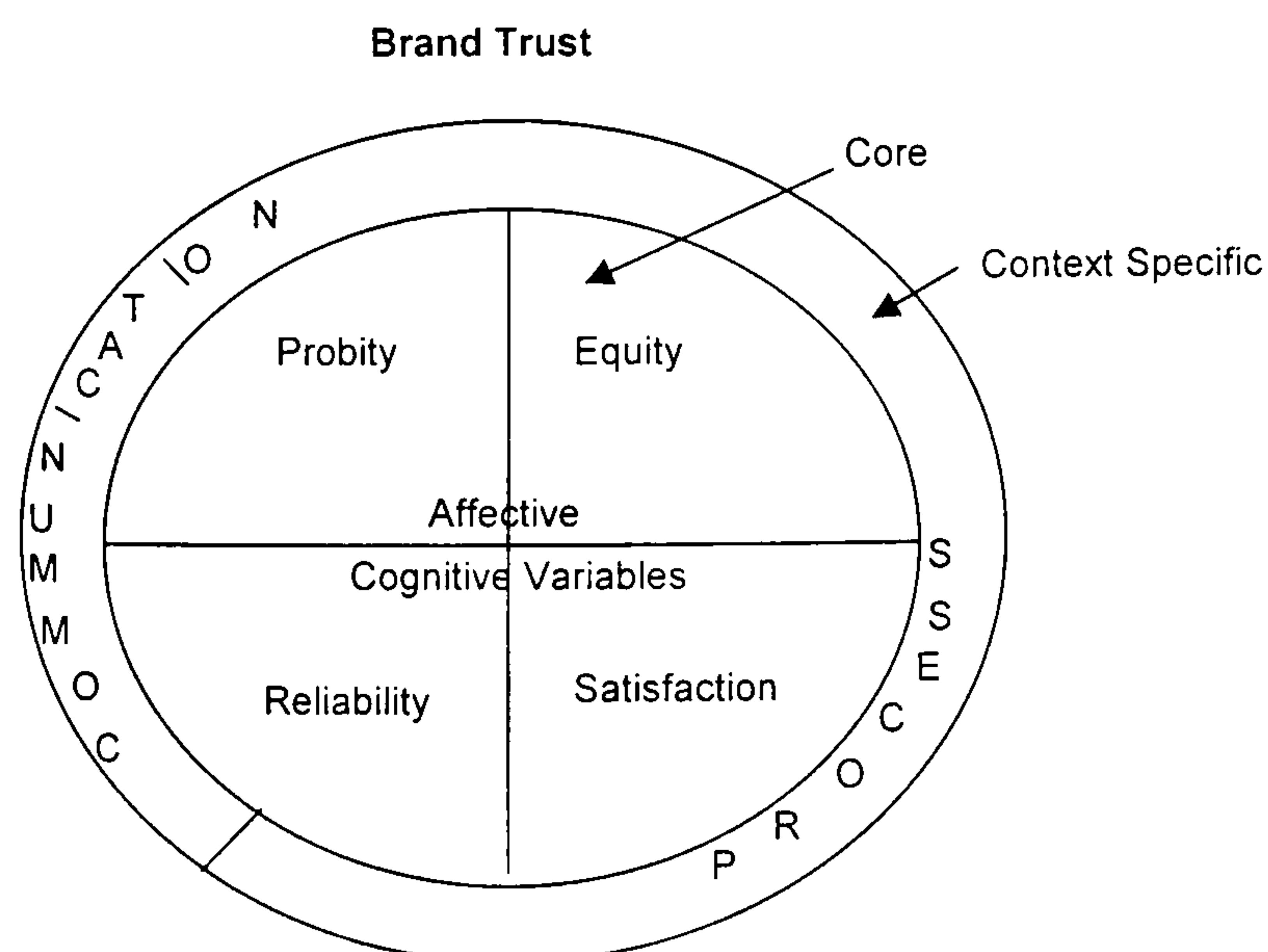


taken together such factors may explain a large proportion of the variance in extension response.

A parallel example of these complex multi-factor influences might be that of a brand's market share. Millward Brown (2002), in a recent presentation to Leeds University Business School, and based upon a sample of 100 brands over a three year time period, examined the association level between media spend levels and market share. When considering basic media weight (raw GRPs) they found an  $R^2$  of just .05, and when using media share of voice within category, the  $R^2$  still only reached .2. Clearly, brand owners think that media spend levels and share of voice are important influences on market share, and yet this factor is just one of many which appear to influence market share change (appendix 14).

### 6.11.3 Brand Trust and Brand Owners

It appears from the literature, that the majority of research studies support a multi-dimensional conceptualisation of trust, and this thesis has reinforced the multi-dimensional perspective, in a consumer-brand context. Some brand owners have been tracking trust in their brands over many years as part of continuous tracking studies or part of ad-hoc 'usage and attitude' surveys. This measurement of brand trust has tended to be a single measure, taking little account of possible dimensions of brand trust. This research study has supported the notion of brand trust revolving around the core dimensions of Probity, Equity, Reliability and Satisfaction as depicted in figure 6.4 below



**Figure 6.4 Hypothesised Core and Context Specific Elements of Brand Trust**

It is felt that these four dimensions might be core elements of brand trust which are common to all goods and service contexts, with the outer ring, containing the Process and

Communication dimensions, being specific to higher involvement product or service contexts.

Brand owners should perhaps think more carefully about the nature of trust within their brands and reflect this in their tracking methodology, thus being more able to evaluate the management and development of brand trust based upon initiatives within each of the dimension areas. The next section of the managerial implications will be concerned with the tracking, management and development of the postulated core dimensions of brand trust - Probity, Equity, Reliability and Satisfaction. This will be followed by a closer consideration of the possible role of the 'context specific' Process and Brand Communication dimensions.

#### **6.11.4 Tracking, Management and Development of Brand Trust**

##### **6.11.4.1 Probity**

This dimension reflects the honesty and standing of the brand in terms of product or service claims delivered in advertising, packaging, or other forms of brand communication including personal interaction. Reputation is a key element within this dimension, and it may well be that trust and reputation enjoy a symbiotic relationship, both capable of enhancing or detracting from each other. Academic literature would support the notion that trust is an underpinning element to the reputation of a brand or organisation (Hart and Johnson, 1999). Clearly, reputation management is an important element of the apparent honesty of a brand.

##### **6.11.4.2 Equity**

This dimension reflects the extent to which a brand is fair in its dealings with its customers, showing concern for its customers, providing value for money, and the extent to which the values portrayed or perceived regarding the brand and brand owner reflect those of the customers. Various specific measures based around these variables can be managed and developed by brand owners. Both the Equity and Probity dimensions could be seen to relate to the credibility of the brand in terms of its good (or poor) character.

##### **6.11.4.3 Reliability**

This dimension reflects many variables concerned with the delivery of the product or service. The extent to which quality is consistent, the extent to which the brand is dependable or can be 'relied upon', the extent to which the brand is seen to be competent or even expert within its field. In many ways, this dimension is concerned with the credibility of the brand within its domain.

##### **6.11.4.4 Satisfaction**

The satisfaction dimension revolves around the extent to which customers have had (or consider that they are likely to have) satisfactory experiences from the brand. These perceptions regarding satisfaction may come from the customer's personal experience, the experiences and opinions of 'trusted others' (Doney and Cannon, 1997), and the extent to



which customers consider that their expectations concerning the brand and its products and services have been fulfilled. This dimension is cognisant of the powerful influence of word of mouth communications and the possible impact on brand trust. Whilst individual consumers may have had satisfactory experiences with a brand, the experiences of 'trusted others' also play a part within trust perceptions of a brand. Customer expectations regarding brands and their products and services must be managed and monitored, or customers will inevitably feel disappointed with product or service delivery. Many of the elements included within the satisfaction dimension can be managed, clearly being linked to many of the Reliability variables.

#### **6.11.4.5 Process and Brand Communication**

The research conducted within the five, low involvement, goods and service categories did not support the inclusion of Process and Brand Communication dimensions within brand trust. As indicated within the discussion chapter (5.2.5.6), it may well be that for brand owners within the higher involvement goods and service categories, the Process and Brand Communication dimensions are emphasised. Research by Selnes (1998) within the business to business domain, and by Sirdeshmukh, et al., (2002) within the retail clothing and non-business airlines consumer contexts, both emphasised the relevance of people process based variables within trust. Selnes (1998) for example had used five antecedents in predicting trust (or establishing the trustworthy status of a business), these being communication, commitment, conflict handling and satisfaction. These variables clearly reflected both 'people-based processes' and quality of communication within the evaluation of trustworthy status of a business partner. Sirdeshmukh, et al. asserted that trust was based around two dimensions, "trust in front-line employees" and "trust in management policies and practices". These same researchers also found brand 'trustworthiness' to be based around the three dimensions of 'operational competence', 'operational benevolence', and 'problem-solving orientation'.

It is argued here, that given the research support within the literature regarding the relevance of Communication and Process within business to business and more interaction-based, people process orientated, higher involvement consumer contexts such as airline usage, that the role of Process and Communication dimensions cannot, at this stage, be ruled out. It may be that this research, focussed on low involvement goods, has captured the central or core elements of brand trust, and that the Process and Communication dimension are context specific, being more relevant in high involvement or people process involved product/service situations. The area of the application of brand trust to high involvement goods and service categories will be given further consideration within section 6.13, Future Areas of Research.



### **6.11.5 Brand Trust and Demographic Influences**

The research findings have offered support concerning the role of demographic variables, in particular gender, but also differential age and educational levels in mediating the strength of brand trust profiles of brands. Brand owners need to be aware of possibly diverse perceptions of their brands amongst different groups of consumers, looking to measure these and develop suitable plans to build brand trust amongst differing target groups. A further reason to track brand trust amongst different age groups over the long-term, is that this study essentially provides a snap-shot of brand trust within different age groups. It may be that the study has captured, to a certain extent, a generational difference in attitudes to brands, with the older generation of the future (the current middle aged), being more critical and less trusting of brands.

### **6.11.6 Brand Extension and Demographic Influences**

Brand owners should be aware that not only did differences in brand trust means appear to be mediated by gender, age and educational level, but demographic variables also influenced responses to brand extensions. Brand owners will need to ensure that appropriate care is taken in researching brand extension concepts through consideration of demographic profiles. A further observation is that given the ageing population, brand owners will need to increasingly understand the needs, perceptions, concerns and attitudes of older consumers related to fast moving consumer goods brands, if they are to be successful in developing brand extensions targeted at this group.

## **6.12 Limitations to this Study**

### **6.12.1 Category Selection**

An unavoidable limitation of this study was that the selected categories were deliberately low involvement, low risk, low complexity goods and services categories. It has been argued within this study that inclusion of some high involvement, high complexity, high risk categories may have led to more support for the six dimensional conceptual framework of brand trust, and possibly higher correlation between brand trust levels and brand extension response levels. The choice of categories was influenced by a number of considerations, including the likelihood that respondents would, generally, be in a position to complete questionnaires from an informed perspective. The widening of category selection is considered to be an area for future research (section 6.13.1).

### **6.12.2 Geographic Coverage**

This research study was undertaken amongst 411 consumers from the North of England, and it is possible that differences in brand trust and brand extension measurement responses exist geographically. Regionality has not been the subject under study here. Various authors also point to the potential for national culture to have an influence on 'trust', and thus the fact that



research was conducted within the UK is a limitation on the generalisability of the results. Comparative international studies are felt to be an area for future research (section 6.13.2).

### **6.12.3 Brand Trust and Brand Extension in Isolation**

A further limitation of this study is the fact that brand trust was considered, experimentally, in isolation in relation to brand extension response measures. Other factors influencing the perceptions of brand extensions were deliberately not included in this study, other than category similarity or 'fit' (c/f Bousch and Loken, 1991), whose influence was assessed using the three levels of brand extension concept (line, related and unrelated extensions). Brand Trust in the context of other brand extension acceptance factors is considered to be an area for future research (6.13.3).

### **6.12.4 Causality**

The nature of this research study, making an exploratory linkage between brand trust and brand extension measures did not allow for assertions about causality. A longitudinal study, monitoring brand trust and responses to extensions may help in determining causality rather than association between the variables.

## **6.13 Future Areas of Research**

### **6.13.1 Wider Category Selection**

The low involvement categories were selected for this study since they allowed for data to be collected, easily, from respondents who, on the basis of pre-testing, were very likely to be familiar with and have usage experience within the tea, coffee, pens, internet retail, and grocery retail categories. Since usage of both brands was a requirement, within the category for which the respondent was completing a questionnaire, penetration levels, influencing both costs and timings of the project, were a major consideration within category and brand selection decisions.

Given the earlier discussions regarding the application of the brand trust model to the context of high involvement goods and services, and the extent to which the postulated 'context specific' Process and Brand Communication dimensions would be reflected in such a model, further research within high involvement goods and services is a clear priority. Categories which might be considered for inclusion within such research could include: cars (product); audio-visual equipment (product); computers and peripherals (product); independent financial advisors (service); estate agents (service); doctors (service). Such categories would provide a context of higher perceived risks (financial or otherwise) for the customer, would be likely to provide for higher involvement and cognitive processing regarding decisions, and would commonly provide a situation of higher levels of interaction between customer and goods/service provider than afforded by most FMCG brand contexts. In addition to making the Process and Communication dimensions more relevant, research within such areas may



lead to higher levels of association between brand trust dimensions and brand extension response than achieved within low involvement goods and services.

### **6.13.2 International Comparative Studies**

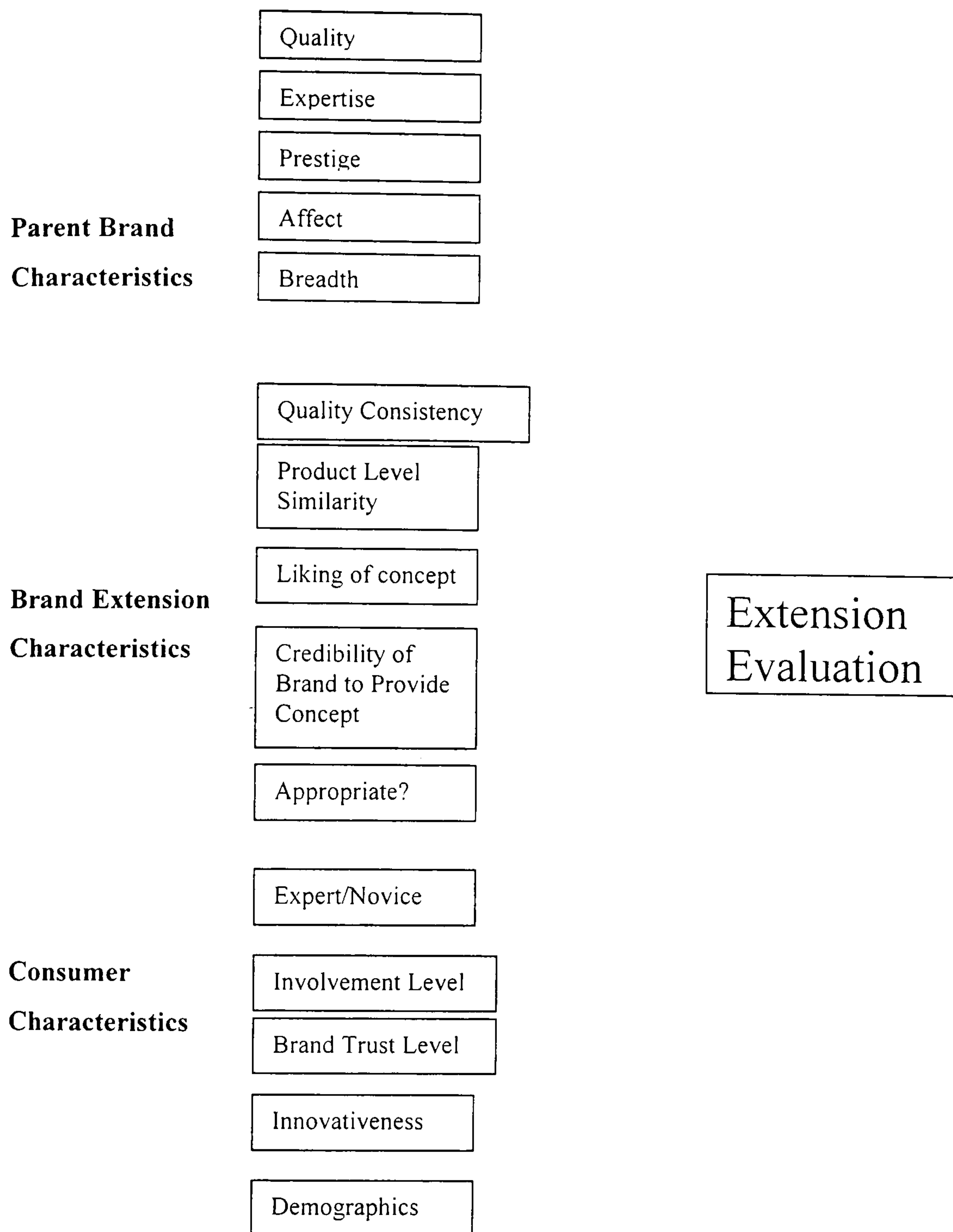
Much of the research concerning trust, relationship marketing and brand extension has been conducted within the USA and Europe. This research study, concerning consumer-brand trust, has been conducted within the UK, another developed western economy. Further research considering both the dimensionalisation of brand trust (in high and low involvement contexts) and its relationship with brand extension response could be conducted within the USA and Europe in addition to other cultures and countries around the world, for example East Asia, South Asia.

### **6.13.3 Brand Trust in the Context of ‘Other Brand Extension Influences’**

The literature chapter of this thesis, amongst other things, specifically focussed on the many dimensions relating to brand extension response and ultimate success, these being summarised within figure 6.2. A finding of this research is that brand trust is significantly associated with brand extension response, with  $R^2$  figures being found to be well above critical values. The current research study has not addressed, directly, any other mediating variables (except for brand extension ‘category similarity’ reflected within the line, related and unrelated categorisation of brand extension concepts) associated with brand extension response. Future research related specifically to this area might seek to consider the role of brand trust within brand extension relative to the parent brand, brand extension, and consumer characteristics outlined within Figure 6.5 below.

Parent brand characteristics being ‘perceived quality of the parent brand’ (Keller and Aaker, 1992); ‘perceived expertise of the parent brand’ (Reddy, Holak and Bhat, 1994); liking of the parent brand (‘affect’, Fiske and Pavelchak, 1986); prestige status of the parent brand (Park, Millberg and Lawson, 1991); and the perceived breadth of the parent brand (Boush and Loken, 1991). Brand extension characteristics being: quality consistency of extension (Wenerfelt, 1988); category level and image level similarity of extension (Bridges, 1990); liking of the extension; perceived credibility and expertise of the parent brand in delivering the extension (Keller and Aaker, 1992); and an evaluation of the competitiveness of the extension within the new category. Consumer based characteristics being: individual consumer involvement level (McWilliam, 1993); level of consumer expertise or brand/category knowledge and usage levels (Murphy and Medin, 1985); the level of consumer innovativeness (Klink and Smith, 2001); and any demographic factors such as gender, age and educational level.





**Figure 6.5 Brand Trust in the Context of other associated Brand Extension variables**

The various elements discussed here, and developed from earlier research within the area of brand extension, can all be captured using 7-point semantic differential scales, consistent with those used in the main questionnaire instrument for this study, and analysed using multivariate techniques. Such an approach would allow for the relative influence of each factor to be captured, and the entire list might be used in the medium to long-term for the modelling of brand extension response and related antecedent dimensions.

#### 6.13.4 Factor Analysis, Sample Size and Model Parsimony

The trust dimensions within this study have been developed on the basis of the qualitative focus groups conducted at the exploratory phase of research, and the Cronbach alpha (Cronbach, 1951) scale reliability scores obtained for each of the dimensions and its related set of variables. Although factor analysis had not been applied originally in the data analysis, it does provide the opportunity for additional insights if each response (e.g. Aaker and Keller, 1990), rather than each respondent (e.g. Keller and Aaker, 1992), is used as the basis for the sample size. Table 6.6 below outlines the difference this makes to sample size, and the corollary of this is that exploratory factor analysis can be conducted, with confidence, at this stage, without further sample collection. The Combined Experiment Sample thus yields a sample size of 368 responses or cases, and the Tea Large Sample yields a sample size of 494 responses or cases, these being regarded as robust sample sizes for undertaking exploratory factor analysis, without undue concern about ‘over-fitting’ the data, and generating sample specific solutions.

	RESPONDENTS		RESPONSES			
	Brand 1/2	Brand 1/2	Brand 1	Brand 2	Brand 1	Brand 2
	CES	TLS	CES	TLS	CES	TLS
Tea	40	247	40	40	247	247
Coffee	41	N/A	41	41		
Pens	44	N/A	44	44		
Grocery Retail	39	N/A	39	39		
Internet Retail	40	N/A	40	N/A		
<b>SUB-TOTAL</b>	<b>204</b>	<b>247</b>	<b>204 (1)</b>	<b>164 (2)</b>	<b>247 (1)</b>	<b>247 (2)</b>
<b>TOTAL</b>	<b>204</b>	<b>247</b>		<b>1+2= 368</b>		<b>1+2= 494</b>

**Table 6.6: Sample Size Based upon Respondents versus Responses**

As an initial examination of the future research area of factor analysis, the next section, 6.13.5 will briefly describe the factor analysis technique, and then provide the results of exploratory analysis within the Combined Experiment and the Tea Large samples. These results are purely preliminary and are offered as potential for future research investigation.

#### 6.13.5 Exploratory Factor Analysis

##### 6.13.5.1 The Factor Analysis Technique

Factor analysis, or more properly, the family of factor analytical techniques, are often used as a ‘data reduction’ approach. Factor analysis takes a large number of variables and looks for a way that the data may be ‘reduced’ or summarised using a smaller set of factors or components, by looking for ‘clumps’ or groups among the inter-correlations of a set of variables. The approach is used extensively by researchers involved in the development and evaluation of tests and scales (Pallant, 2001), and can be used to reduce a large number of



related variables to a more manageable number, prior to using them in other analyses such as multiple regression or multivariate analysis of variance.

The term factor analysis encompasses a variety of different, although related, techniques. One of the main distinctions is between what is termed principal components analysis (PCA) and factor analysis (FA). Both attempt to produce a smaller number of linear combinations of the original variables in a way that captures (or accounts for) most of the variability in the pattern of correlations. However, whilst in PCA the original variables are transformed into a smaller set of linear combinations, with all of the variance in the variables being used, in FA, factors are estimated using a mathematical model, where only the shared variance is analysed (Pallant, 2001). For the purposes of this exploratory look at the data sets, the PCA method has been selected, with Tabachnick and Fidell (2001) stating that 'if you want an empirical summary of the data set, PCA is the better choice'. Such a data reduction approach may help to refine the model of brand trust, eliminating unnecessary variables, and producing alternative combinations of variables (as dimensions) which can be tested within multiple regression. For the purposes of simplicity, the terms 'factors' and 'components' will be used interchangeably when referring to the groupings generated within PCA.

#### **6.13.5.2 Preliminary Results of Exploratory Factor Analysis for CES and TLS**

Exploratory analysis has been conducted using the Combined Experiment Sample (n=368 cases) and the boosted Tea Large Sample (n=494 cases). The various recommended tests for the suitability of the data for factor analysis have been conducted, including checks for correlations amongst variables of above .3, Bartlett's Test of Sphericity (which should be statistically significant at  $p < .05$ ) and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy. The KMO index ranges from 0 to 1, with .6 suggested as the minimum value for a good factor analysis (Tabachnick and Fidell, 2001). All of these data-checking values are presented as part of the factor analysis output.

Having undertaken data-checking procedures, there are two main steps within factor analysis. Factor extraction determines the number of factors, and factor rotation, presents the pattern of variable 'loadings' in a manner which is easier to understand. The number of factors emerging from the analysis (factor extraction) will be determined using Kaiser's criterion (Pallant, 2001), where only factors with an eigen-value of 1.0 or more are retained for further investigation, and Catell's scree test (Catell, 1966). An orthogonal (uncorrelated, assumes that the factors are not related) rotation method (factor rotation) will be used to help with interpretation of the factor solution, which according to Tabachnick and Fidell (2001) results in solutions which are easier to interpret, describe and report. Within the orthogonal rotation method, the commonly used Varimax rotation technique has been selected, this approach



tending to minimise the number of variables which have high loadings on each factor, thus aiding interpretation (Pallant, 2001).

### **Preliminary Results – Combined Experiment Sample [Rotated Solution]**

The results for the Principal Components Analysis undertaken using the Combined Experiment Sample are shown in Table 6.7 below. The PCA process was undertaken using the 21 variables representative of the four postulated brand trust dimensions – Probity, Equity, Reliability and Satisfaction. As a result of initial analyses, five of the variables have been excluded from the analysis (Peer Opinion, Value for money, Predictable, Delivery, and Brand Name as Guarantee) on the basis of low factor loadings or very similar loadings to both factors. The remaining sixteen variables have been included within the Principal Components Analysis, and have produced two components which explained a total of 66% of the variance.

<b>[n=368]</b>	<b>Components</b>	
<b>Variables</b>	<b>1</b>	<b>2</b>
Truthful [Probity]	.800	
Fair-minded [Equity]	.796	
Sincere [Equity]	.795	
Shows Concern [Equity]	.769	
Similar Values [Equity]	.720	
Gives Confidence [Probity]	.713	
Competence [Reliability]	.685	
Expert Status [Reliability]	.651	
Reputation [Probity]	.593	
Personal Experience [Satisfaction]		.838
Usage History [Satisfaction]		.800
Fulfils Expectations [Satisfaction]		.770
Quality Consistency [Reliability]		.707
Peoples' Experience [Satisfaction]		.679
Quality Level [Reliability]		.674
Dependability [Reliability]		.657
<b>% of Variance Explained (rounded)</b>	37%	29%

Extraction Method: Principal Components Analysis

Rotation Method: Varimax with Kaiser Normalization, entry set at .58 to clean solution

[KMO = .956 Bartlett's Test of Sphericity = .000 Correlation Matrix at >.3]

**Table 6.7: Principal Component Analysis Solution - CES**

The first component, including nine variables, primarily anchored around the Probity (e.g. honesty) and Equity (e.g. fairness) Dimensions, reflecting the 'character credibility' of the brand, but including other measures of a brand's trust in terms of its category-based credibility (competence, expert status) has been labelled 'CREDIBILITY'. The second component, including seven variables, anchored purely around the remaining variables from the postulated Satisfaction and Reliability dimensions, has been labelled 'PERFORMANCE SATISFACTION', since it is based upon an evidential assessment of the brands trust on the basis of its performance (products and services). The two components broadly support the



idea of 'affective' and 'cognitive' dimensions of brand trust, with the first component being primarily affective, and the second component being cognitive.

### **Preliminary Results – Tea Large Sample [Rotated Solution]**

The results for the boosted Tea Large Sample (Table 6.8), again using the 21 variables representing the four postulated dimensions of brand trust, found two similar, though not identical components of brand trust, which together explained a total of 64% of the variance. The PCA approach again led to the removal of the five variables listed above (Peer Opinion, Value for money, Predictable, Delivery, and Brand Name as Guarantee).

<b>[n=494]</b>	<b>Components</b>	
<b>Variables</b>	<b>1</b>	<b>2</b>
Fair-minded [Equity]	.831	
Truthful [Probity]	.791	
Competence [Reliability]	.791	
Sincere [Equity]	.748	
Dependability [Reliability]	.747	
Expert Status [Reliability]	.737	
Similar Values [Equity]	.733	
Gives Confidence [Probity]	.729	
Shows Concern [Equity]	.726	
Quality Level [Reliability]	.694	
Reputation [Probity]	.658	
Peoples' Experience [Satisfaction]		
Usage History [Satisfaction]		.732
Fulfil Expectations [Satisfaction]		.698
Personal Experience [Satisfaction]		.676
Quality Consistency [Reliability]		.621
<b>% of Variance Explained (rounded)</b>	45%	19%

Extraction Method: Principal Components Analysis

Rotation Method: Varimax with Kaiser Normalization, entry set at .6 to clean solution

[KMO = .963 Bartlett's Test of Sphericity = .000 Correlation Matrix at >.3]

**Table 6.8: Principal Component Analysis Solution - TLS**

The first component, featuring eleven variables, anchored around seven variables drawn from the postulated Probity and Equity Dimensions of brand trust, the remaining being drawn from the Reliability dimension, has again been labelled CREDIBILITY. This first component with eleven variables, shares nine common variables with component 1 within the Combined Experiment Analysis described above. The second component, labelled PERFORMANCE SATISFACTION was again anchored completely around variables drawn from the postulated Reliability and Satisfaction dimensions of brand trust (emphasising product and service performance), but included only four variables (usage history, fulfils expectations, personal experience and quality consistency), all of which were featured in Component two within the

Combined Experiment Sample. On the basis of these commonalities, it has been decided to accept the notion of a two dimensional model of brand trust, CREDIBILITY based trust and PERFORMANCE SATISFACTION based trust.

In order to conduct further analyses utilising the preliminary results of the above Principal Components Analyses, a single conceptualisation of the two brand trust dimensions has been established. The researcher has decided to accept the components derived from the Combined Experiment Sample, which it is felt more clearly reflect the differing 'affective' and 'cognitive' dimensions of brand trust relative to the (similar) components derived from the Tea Large Sample. It is also felt that the more diverse nature of the Combined Experiment Sample, may lead the factor solution to have wider external validity and application.

The final element of this 'further research' section will consider the levels of association between CREDIBILITY/ PERFORMANCE SATISFACTION and brand trust as a single measure, and between CREDIBILITY/ PERFORMANCE SATISFACTION and Likely to Try Extension 1+2+3, and Trust Brand to Provide Extensions 1+2+3 within both the CES and TLS samples. Appropriate attention will be paid to comparison of the results drawn from the two component model of brand trust, and the four dimensional model of brand trust discussed earlier.

### 6.13.6 Levels of Association For a Two Component Model of Brand Trust

#### 6.13.6.1 Two Components with Brand Trust as a Single Measure

Dependent variable: Level of Brand Trust N=368

Independent variables: Two Components of Brand Trust

Variable	Unstandardised		Standardised		
	B	SEB	Beta	T	Sig T
Credibility	.699	.066	.519	10.605	.000*
Performance Satisfaction	.379	.054	.345	7.049	.000*
Multiple R	.820		Analysis of Variance [*= p.01, **= p.05]		
R Square	.672		DF	Sum of Squares	Mean Square
Adj. R Square	.670	Regression	2	388.08	194.04
Standard Error	.727	Residual	364	189.60	.521
		F=	372.51	Sign F= .000	

**Table 6.9: Multiple Regression – Combined Experiment Sample**

Table 6.9 above indicated that the two component model of brand trust, with an adjusted  $R^2$  of .670, had good explanatory power with regard to the single measure of brand trust. The table also indicated that both of the brand trust components were statistically significant within the regression, with Credibility (Beta .699) at .000, and Performance Satisfaction (Beta .379) at .000. These results compared favourably with those reported for the postulated four dimensional model of brand trust within the Combined Experiment Sample (section 6.7.1), where Brand 1 had an adjusted  $R^2$  of .590 and Brand 2 had an adjusted  $R^2$  of .676.



Dependent variable: Level of Brand Trust N=494  
 Independent variables: Two Components of Brand Trust

Variable	Unstandardised		Standardised		
	B	SEB	Beta	T	Sig T
Credibility	.550	.068	.403	8.041	.000*
Performance Satisfaction	.510	.061	.419	8.355	.000*
Multiple R	.785				
R Square	.617				
Adj. R Square	.615				
Standard Error	.776				
		Regression	DF	Sum of Squares	Mean Square
		Residual	2	469.81	234.908
		F=	485	292.06	.602
			390.08	Sign F= .000	

**Table 6.10: Multiple Regression – Tea Large Sample**

Table 6.10, for the Tea Large Sample, indicated that the two component model of brand trust, with an adjusted  $R^2$  of .615, also had good explanatory power with regard to the variance in the dependent variable, the single measure of trust. Consistent with the results for the CE sample, the TL sample also found both of the components statistically significant, with Credibility (Beta .550) at .000, and Performance Satisfaction (Beta .510) at .000. The results produced by regressing the two component model of brand trust with the single measure of trust compared favourably with those produced by the postulated four dimensional model of brand trust (section 6.7.1), where Brand 1 had an adjusted  $R^2$  of .504, and Brand 2 had an adjusted  $R^2$  of .689.

It would appear from these preliminary results that the exploratory factor analyses may have produced a more parsimonious model of brand trust which has retained the explanatory power of the more complex model. It would also appear that the factor analysis solution offers support for a two dimensional model of brand trust revolving around a primarily affective dimension relating to the Credibility of the brand, and a cognitive dimension relating to the Performance Satisfaction generated by the brand. This preliminary finding, based upon robust sample sizes, and relating to Hypothesis 1, offers a potentially new conceptualisation of brand trust, and is worthy of further research investigation.

#### **6.13.6.2 Two Brand Trust Components and Brand Extension Response - Combined Experiment Sample**

Preliminary analysis has also been conducted considering the level of association between the two component model of brand trust and brand extension response (LTT and TTP), this relating to Hypothesis 3. Tables 6.11 and 6.12 relate the results found within the Combined Experiment Sample.

Dependent variable: Likely to Try Extensions 1+2+3 N=368  
 Independent variables: Two Components of Brand Trust

Variable	Unstandardised		Standardised		
	B	SEB	Beta	T	Sig T
Credibility	-.105	.120	-.069	-.871	.384
Performance Satisfaction	.536	.098	.433	5.470	.000*
Multiple R	.381		<u>Analysis of Variance</u> [* = p.01, ** = p.05]		
R Square	.145		<u>DF</u>	<u>Sum of Squares</u>	<u>Mean Square</u>
Adj. R Square	.140	Regression	2	106.40	53.20
Standard Error	1.314	Residual	363	627.57	1.729
		F=	30.773	Sign F= .000	

**Table 6.11: Multiple Regression – Combined Experiment Sample**

Table 6.11, which regressed independent variables Credibility and Performance Satisfaction with the dependent variable Likely to Try Extension 1+2+3, found an adjusted  $R^2$  of .140, with Performance Satisfaction being statistically significant within the equation (Beta .536, .000). Credibility was found to be negatively correlated, though at non-significant levels. This result compared favourably with the results for the four dimensional model of brand trust, where Brand 1 had an adjusted  $R^2$  of .081, and Brand 2 adjusted  $R^2$  of .146 (section 6.9.1).

Table 6.12, showed that the two component model of brand trust had an adjusted  $R^2$  of .251, with both components being statistically significant within the regression equation at the .001 level or higher. This result for the Trust Brand to Provide variable compared well with results for the four dimensional model of brand trust, where Brand 1 had an adjusted  $R^2$  of .222 and Brand 2 had an adjusted  $R^2$  of .241.

Dependent variable: Trust Brand to Provide Extensions 1+2+3 N=368  
 Independent variables: Two Components of Brand Trust

Variable	Unstandardised		Standardised		
	B	SEB	Beta	T	Sig T
Credibility	.325	.094	.254	3.441	.001*
Performance Satisfaction	.291	.077	.279	3.782	.000*
Multiple R	.505		<u>Analysis of Variance</u> [* = p.01, ** = p.05]		
R Square	.255		<u>DF</u>	<u>Sum of Squares</u>	<u>Mean Square</u>
Adj. R Square	.251	Regression	2	132.34	66.171
Standard Error	1.032	Residual	363	386.91	1.061
		F=	62.081	Sign F= .000	

**Table 6.12: Multiple Regression – Combined Experiment Sample**

### 6.13.6.3 Two Brand Trust Components and Brand Extension Response – Tea Large Sample

Tables 6.13 and 6.14 relate to analyses conducted within the boosted Tea Large Sample, regressing the two component model of brand trust with the brand extension response variables LTT and TTP.



Dependent variable: Likely to Try Extensions 1+2+3 N=494  
 Independent variables: Two Components of Brand Trust

Variable	Unstandardised		Standardised		Sig T
	B	SEB	Beta	T	
Credibility	.051	.125	.031	.412	.680
Performance Satisfaction	.547	.111	.366	4.916	.000*
Multiple R	.392				
R Square	.154				
Adj. R Square	.150	Regression	2	175.41	87.70
Standard Error	1.412	Residual	484	965.40	1.995
		F=	43.97	Sign F= .000	

**Table 6.13: Multiple Regression – Tea Large Sample**

Table 6.13 provided an adjusted  $R^2$  of .150 for the two component model of brand trust with Likely to Try Extension 1+2+3, with Performance Satisfaction alone being statistically significant within the equation (Beta .547, .000). This result compared favourably with those derived for the four dimensional model of brand trust, where Brand 1 had an adjusted  $R^2$  of .080, and Brand 2 had an adjusted  $R^2$  of .265.

Finally, Table 6.14 below showed that the two component model of brand trust had an adjusted  $R^2$  of .236, with the Performance Satisfaction component being statistically significant within the equation (Beta .476, .000). The result compared well with the results for the four dimensional model of brand trust, where Brand 1 had an adjusted  $R^2$  of .185, and Brand 2 had an adjusted  $R^2$  of .258.

Dependent variable: Trust Brand to Provide Extensions 1+2+3 N=494  
 Independent variables: Two Components of Brand Trust

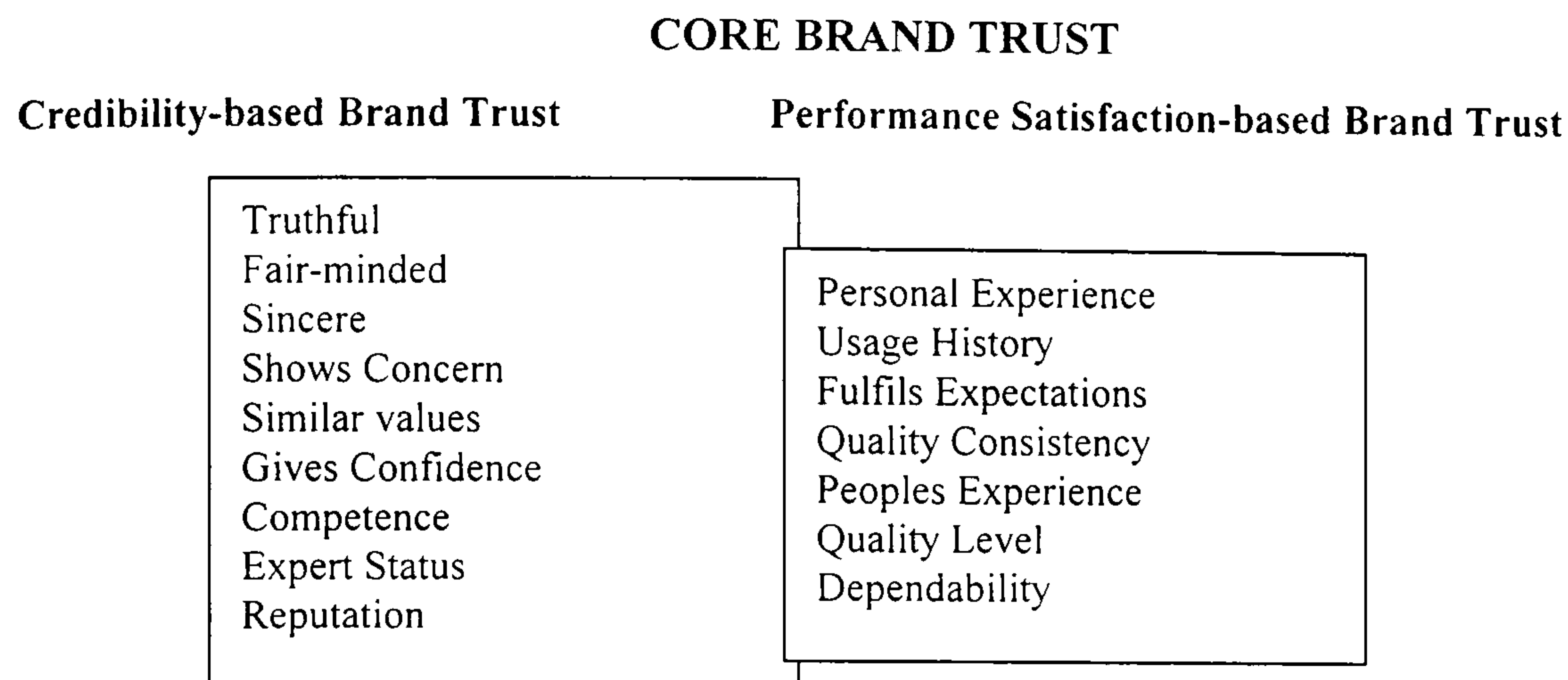
Variable	Unstandardised		Standardised		Sig T
	B	SEB	Beta	T	
Credibility	.172	.099	.123	1.746	.081
Performance Satisfaction	.476	.088	.382	5.413	.000*
Multiple R	.489				
R Square	.239				
Adj. R Square	.236	Regression	2	190.12	95.064
Standard Error	1.116	Residual	484	603.87	1.248
		F=	76.19	Sign F= .000	

**Table 6.14: Multiple Regression – Tea Large Sample**

These preliminary findings, relating to Hypothesis 3, support the levels of association found earlier between brand trust dimensions and brand extension response variables 'Likely to Try' and 'Trust Brand to Provide'. Levels of association within these preliminary results for the two component model stood at the .140-.150 adjusted  $R^2$  level for the LTT variable, and the .240-.250 adjusted  $R^2$  level for the TTP variable, with remarkable consistency across the two data samples. It would appear from these preliminary findings, that the more parsimonious two component model of brand trust maintains association levels in line with those achieved by the more complex brand trust model, and suggests the research area worthy of further investigation.

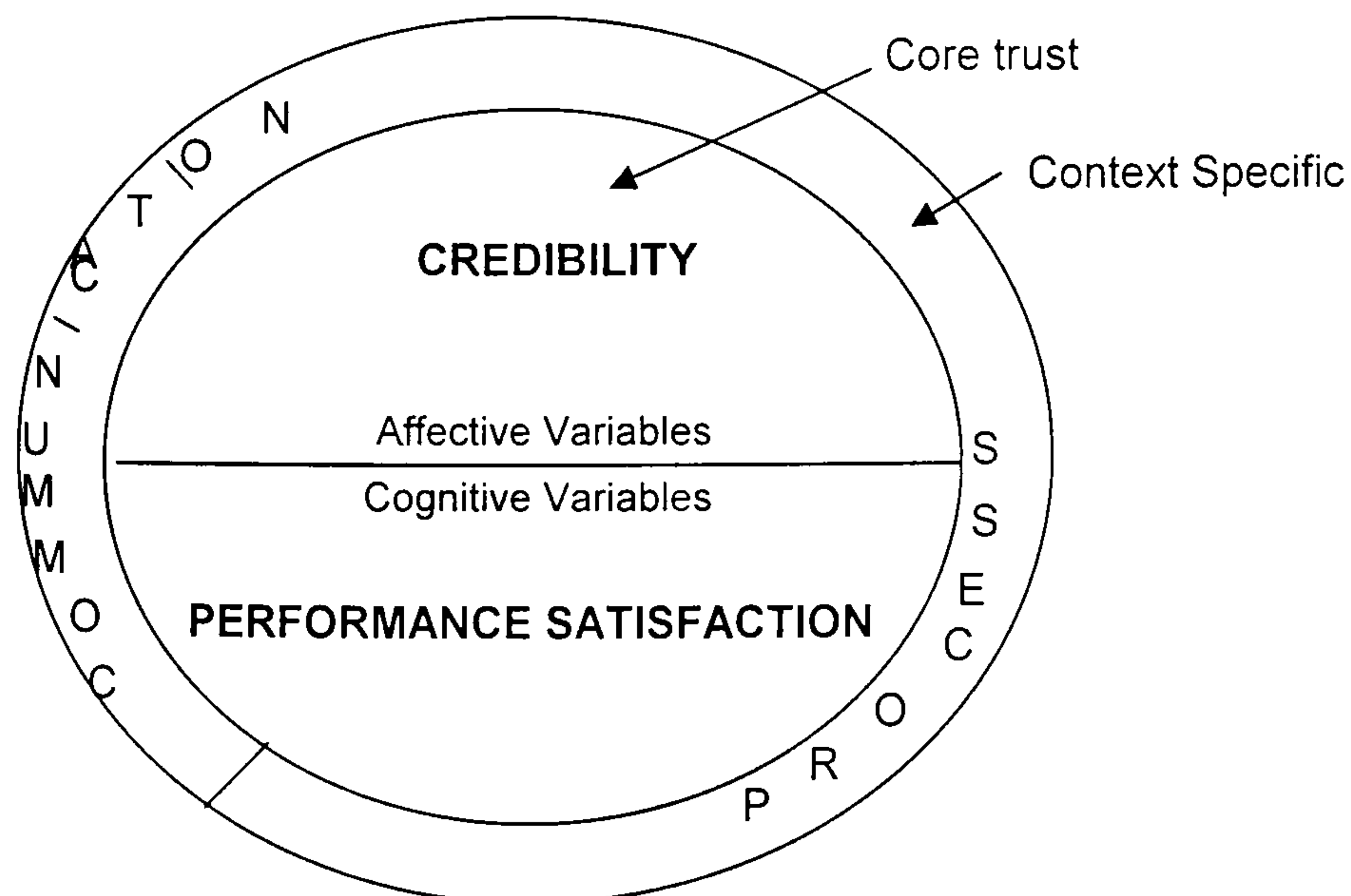
### 6.13.7 Possible Future Model of Brand Trust

Given the preliminary results obtained utilising Principal Component Analysis, and the subsequent multiple regression results, it might suggest that core brand trust is based around two dimensions rather than four, and such a model, and its managerial implications could be evaluated within further research. Further research might seek to validate the presence of these two core dimensions of brand trust within other categories (e.g. high involvement), and also seek to establish their validity in an international setting (Figure 6.6).



**Figure 6.6 Preliminary Two Component Model of Brand Trust**

Additional research within the higher involvement categories could seek to establish the relevance of the previously hypothesised context specific brand trust dimensions, Process and Brand Communication.



**Figure 6.7 Possible Core and Context Specific Brand Trust Dimensions**

It would appear from the preliminary research within two substantial FMCG samples, where both samples supported a two component conceptualisation of brand trust, that the future likelihood of finding support for a six dimensional model of brand trust, even in high



involvement goods and services categories, is somewhat diminished. Future research might seek to establish the validity of the hypothesised model of core and context specific dimensions of brand trust (Figure 6.7).

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# Leeds University Business School PhD Marketing Questionnaire - Feb 1997

This questionnaire has been constructed as part of a piece of PhD research within the Leeds University Management Centre. It would be very helpful if you could spare the time to complete this survey in accordance with the instructions below. Your completed survey, together with the other background information requested, will form a valuable part of this research.

Please circle your age, sex and highest education level below.

Age: 18-25    26-35    36-45    46-55    56-65

Sex: Female    Male

Highest level of education attained: CSE    GCSE/O    A-LEVEL    ONC/D    HNC/D  
BA/BSC    MA/MSC / MPhil    PhD    Professional Qualification.....

Job of main earner in household: .....

As a consumer, you will buy goods and services from many companies. Based upon your perceptions and knowledge, please select one company from each of the 3 business categories shown below ( Banks, Retailers and Domestic Appliance manufacturers) and complete the questionnaire as requested. If you do not feel able to complete the questionnaire for one or more of the categories then simply leave this part of the questionnaire blank.

<b>Banks</b>	<b>Retailers</b>	<b>Domestic appliance Manufacturers</b>
Barclays	Marks & Spencer	Hoover
TSB	Littlewoods	Philips

Please choose and circle one of the company's from each of the above categories and now complete the questionnaire.

**Instructions:**

Thinking now about the one of the companies that you have circled, can you please look at the scales below. At each end of the scale there is a word that could describe the company, with a range of numbers to describe the extent to which you agree with the opposing statements. Please circle the number that best shows your opinion. e.g.

Friendly    1    2    3    4    5    6    7    Unfriendly

If you circle 1 this indicates a more positive view of the company, 7 will be negative and 4 neutral.

## Banks

Thinking about the Bank that you circled on the front page can you now complete this section:

Sincere	1	2	3	4	5	6	7	Insincere
Similar values to me	1	2	3	4	5	6	7	Dissimilar values to mine
Good professional standing	1	2	3	4	5	6	7	No professional standing
Always "delivers"	1	2	3	4	5	6	7	Rarely "delivers"
Most people have a high opinion	1	2	3	4	5	6	7	most people have a poor opinion
Advertising gives helpful information	1	2	3	4	5	6	7	advertising doesn't give helpful information
Bought from company for years	1	2	3	4	5	6	7	Bought from company for short time
High integrity	1	2	3	4	5	6	7	Low integrity
Predictable	1	2	3	4	5	6	7	Unpredictable
Good reputation	1	2	3	4	5	6	7	Poor reputation
Company name guarantees satisfaction	1	2	3	4	5	6	7	Company name doesn't guarantee satisfaction
Truthful	1	2	3	4	5	6	7	Untruthful
High confidence in	1	2	3	4	5	6	7	Low confidence in
Cares about others as well as itself	1	2	3	4	5	6	7	Cares only about itself



Appendix 1

Most people have a high opinion	1	2	3	4	5	6	7	most people have a poor opinion
Advertising gives helpful information	1	2	3	4	5	6	7	advertising doesn't give helpful information
Bought from company for years	1	2	3	4	5	6	7	Bought from company for short time
High integrity	1	2	3	4	5	6	7	Low integrity
Predictable	1	2	3	4	5	6	7	Unpredictable
Good reputation	1	2	3	4	5	6	7	Poor reputation
Company name guarantees satisfaction	1	2	3	4	5	6	7	Company name doesn't guarantee satisfaction
Truthful	1	2	3	4	5	6	7	Untruthful
High confidence in	1	2	3	4	5	6	7	Low confidence in
Cares about others as well as itself	1	2	3	4	5	6	7	Cares only about itself
Good personal experience	1	2	3	4	5	6	7	Poor personal experience
Consistent quality	1	2	3	4	5	6	7	Inconsistent quality
Reliable guarantees/warranties	1	2	3	4	5	6	7	Unreliable guarantees/warranties
Most I know have had good experience of company	1	2	3	4	5	6	7	Most I know have had poor experience of company
High quality	1	2	3	4	5	6	7	Low quality
Dependable	1	2	3	4	5	6	7	Undependable
Benevolent	1	2	3	4	5	6	7	Not benevolent
Fair minded	1	2	3	4	5	6	7	Not fair minded
High faith in	1	2	3	4	5	6	7	Low faith in
High trust in company	1	2	3	4	5	6	7	Low trust in company

Electrical Appliance Manufacturers

Thinking about the Electrical Appliance Manufacturer that you circled on the front page can you now complete this section:

Sincere	1	2	3	4	5	6	7	Insincere
Similar values to me	1	2	3	4	5	6	7	Dissimilar values to mine
Good professional standing	1	2	3	4	5	6	7	No professional standing
Always "delivers"	1	2	3	4	5	6	7	Rarely "delivers"

Appendix 1

Good reputation	1	2	3	4	5	6	7	Poor reputation
Company name guarantees satisfaction	1	2	3	4	5	6	7	Company name doesn't guarantee satisfaction
Truthful	1	2	3	4	5	6	7	Untruthful
High confidence in	1	2	3	4	5	6	7	Low confidence in
Cares about others as well as itself	1	2	3	4	5	6	7	Cares only about itself
Good personal experience	1	2	3	4	5	6	7	Poor personal experience
Consistent quality	1	2	3	4	5	6	7	Inconsistent quality
Reliable guarantees/warranties	1	2	3	4	5	6	7	Unreliable guarantees/warranties
Most I know have had good experience of company	1	2	3	4	5	6	7	Most I know have had poor experience of company
High quality	1	2	3	4	5	6	7	Low quality
Dependable	1	2	3	4	5	6	7	Undependable
Benevolent	1	2	3	4	5	6	7	Not benevolent
Fair minded	1	2	3	4	5	6	7	Not fair minded
High faith in	1	2	3	4	5	6	7	Low faith in
High trust in company	1	2	3	4	5	6	7	Low trust in company

Thank you very much for sparing the time to complete this questionnaire.

Benevolent	1	2	3	4	5	6	7	Not benevolent
Fair minded	1	2	3	4	5	6	7	Not fair minded
High faith in	1	2	3	4	5	6	7	Low faith in
High trust in company	1	2	3	4	5	6	7	Low trust in company

Retailers

Thinking about the Retailer that you circled on the front page can you now complete this section:

Sincere	1	2	3	4	5	6	7	Insincere
Similar values to me	1	2	3	4	5	6	7	Dissimilar values to me
Good professional standing	1	2	3	4	5	6	7	No professional standing
Always "delivers"	1	2	3	4	5	6	7	Rarely "delivers"
Most people have a high opinion	1	2	3	4	5	6	7	most people have a poor opinion
Advertising gives helpful information	1	2	3	4	5	6	7	advertising doesn't give helpful information
Bought from company for years	1	2	3	4	5	6	7	Bought from company for short time
High integrity	1	2	3	4	5	6	7	Low integrity
Predictable	1	2	3	4	5	6	7	Unpredictable



## Appendix 2

Table 3. Equation Variables Related To Levels Of Trust.

Variable	Level of Trust							Average Full Sample (n=271) mean
	1 (n=12) mean	2 (n=16) mean	3 (n=30) mean	4 (n=52) mean	5 (n=74) mean	6 (n=60) mean	7 (n=27) mean	
Confidence	1.75	2.56	3.53	4.15	5.16	5.87	6.81	4.80
Dependability	3.00	3.31	3.80	4.46	5.26	5.90	6.89	5.03
Personal Experience	2.42	2.88	3.40	4.56	5.08	6.03	6.63	4.91
Fair-mindedness	1.25	3.19	3.23	3.81	4.46	5.22	6.20	4.31
Quality Standing	3.33	3.50	4.03	4.67	5.43	5.97	6.89	5.19
Predictability	4.42	4.50	4.40	4.87	5.05	5.33	6.19	5.06
Truthfulness	2.06	3.06	3.53	4.10	4.84	5.58	6.41	4.65

\* 7-point Likert scale (1 = low, 7 = high)

## Appendix 3

Table 6. Mean Values By Firm.

	Barclays (n=43) mean*	TSB (n=39) mean	Marks & Spencer (n=90) mean	Little-woods (n=13) mean	Hoover (n=45) mean	Phillips (n=41) mean	Full Sample (n=271) mean
Reputation	4.67	4.64	6.36	4.85	5.11	5.54	5.44
Professional Standing	4.79	4.49	6.13	4.85	4.96	5.20	5.28
Integrity	4.40	4.18	5.66	4.54	4.47	4.85	4.87
Confidence	4.14	3.51	5.82	4.62	4.44	4.95	4.80
Truthfulness	4.23	3.87	5.39	4.62	4.27	4.61	4.65
<b>Average For Probity Values</b>	<b>4.45</b>	<b>4.14</b>	<b>5.87</b>	<b>4.70</b>	<b>4.65</b>	<b>5.03</b>	<b>5.01</b>
Helpful Advertising	3.98	4.33	4.90	4.15	4.64	4.95	4.60
Sincerity	4.07	3.64	5.20	4.54	4.31	4.27	4.48
Fair-Mindedness	3.81	3.51	5.16	4.31	4.02	4.05	4.31
Similar Values	3.25	3.36	4.89	4.15	3.73	3.63	3.99
Caring	3.42	3.05	4.80	4.23	3.67	3.66	3.94
Benevolence	3.14	3.13	4.56	4.00	3.56	3.66	3.80
<b>Average For Equity Variables</b>	<b>3.61</b>	<b>3.50</b>	<b>4.92</b>	<b>4.23</b>	<b>3.99</b>	<b>4.04</b>	<b>4.19</b>
Quality Standing	4.53	4.08	6.10	4.62	5.04	5.27	5.19
Quality Consistency	4.65	4.00	5.93	4.85	4.87	5.05	5.09
Guarantee From Corporate Name	4.33	4.08	6.14	4.15	4.84	5.07	5.08
Predictability	4.93	4.90	5.63	4.85	4.71	4.54	5.06
Warranties	4.12	3.95	6.00	5.08	4.93	5.07	5.04
Dependability	4.53	3.92	5.94	4.69	4.71	5.07	5.03
<b>Average For Reliability Variables</b>	<b>4.52</b>	<b>4.16</b>	<b>5.96</b>	<b>4.71</b>	<b>4.85</b>	<b>5.01</b>	<b>5.08</b>
Opinion	4.09	4.23	6.10	4.77	4.87	5.07	5.09
Experience Of Peers	4.07	3.97	6.00	4.85	4.78	4.95	4.99
Personal Experience	4.05	3.79	5.78	4.77	4.78	5.17	4.91
Purchase Duration	3.98	3.85	5.80	4.46	4.93	4.98	4.90
Delivers Satisfaction	4.42	4.26	5.68	5.00	4.38	4.68	4.87
<b>Average For Satisfaction Variables</b>	<b>4.12</b>	<b>4.02</b>	<b>5.87</b>	<b>4.77</b>	<b>4.75</b>	<b>4.97</b>	<b>4.95</b>
<b>Trust</b>	<b>4.02</b>	<b>3.49</b>	<b>5.59</b>	<b>4.31</b>	<b>4.40</b>	<b>4.76</b>	<b>4.65</b>

\* 7 point Likert scale (1 = low, 7 = high)



## Appendix 4

I would now like you to think about the categories below:

- a) **Which of these categories of product or service are you familiar with?**  
[Please tick the box for each category you are familiar with in column a]
- b) **.. and which of these categories are you unfamiliar with?**  
[Please tick the box for each category you are unfamiliar with in column b]
- c) **Which of the categories are you knowledgeable about?**  
[Please tick the box for each category you are knowledgeable about in column c]
- d) **.. and which of the categories are you not knowledgeable about?**  
[Please tick the box for each category you are not knowledgeable about in column d]
- e) **Which of the categories has a prestigious image?**  
[Please tick the box for each category which has a prestigious image in column e]
- f) **.. and which of the categories would you say does not have a prestigious image?**  
[Please tick the box for each category which has not got a prestigious image in column f]

	Columns					
	a	b	c	d	e	f
Airlines		✓				
Batteries	✓					
Banks and Building Societies	✓					
Cameras		✓				
Photographic Films		✓				
Cars	✓					
Cinemas		✓				
Computers and Equipment	✓					
Domestic Appliances		✓				
Audio-Visual Electrical Goods	✓					
Grocery – Major Retailers		✓				
Travel Agents		✓				
Holiday Operators		✓				
Mobile Phones		✓				
Pens	✓					
Analgesics					✓	
Indigestion Remedies	✓					
Sport Shoes and Clothing			✓			
Toothpaste	✓					
Toothbrushes	✓					
Mouthwashes					✓	
Vehicle Recovery and Breakdown Services	✓					
Watches	✓					

## LEEDS UNIVERSITY BUSINESS SCHOOL

### PhD Research Questionnaire

October/November 1999

This questionnaire will provide valuable help with PhD research at Leeds University. Please follow the instructions at the start of the questionnaire. The questionnaire is intended to be completed with immediate responses and impressions about categories of goods and services. The questionnaire takes the form of tick-box style and should take no more than about 10-15 minutes of your time.

Thank you for your help.

*John Lead*  
GMOS.



I would now like you to think about the next set of categories below, following exactly the same routine:

- a) Which of these categories of product or service are you familiar with?  
[Please tick the box for each category you are familiar with in column a]
- b) .. and which of these categories are you unfamiliar with?  
[Please tick the box for each category you are unfamiliar with in column b]
- c) Which of the categories are you knowledgeable about?  
[Please tick the box for each category you are knowledgeable about in column c]
- d) .. and which of the categories are you not knowledgeable about?  
[Please tick the box for each category you are not knowledgeable about in column d]
- e) Which of the categories has a prestigious image?  
[Please tick the box for each category which has a prestigious image in column e]
- f) .. and which of the categories would you say does not have a prestigious image?  
[Please tick the box for each category which has not got a prestigious image in column f]

	Columns					
	a	b	c	d	e	f
Carbonated Drinks						
Coffee						
Tea						
Beer						
Cider						
Whisky						
Gin						
Vodka						
Breakfast Cereals						
Chocolate Confectionery						
Tinned Foods						
Ice Cream						
Soups						
Jams/Preserves						
Relishes/Pickles						
Cereals						
Bread						
Frozen Potato Products						
Frozen Vegetables						
Frozen Meals						
Cakes						
Crisps and Nuts						
Biscuits						

In order to ensure that the responses collected within these questionnaires conform to quota requirements, it is necessary to collect some very basic demographic information. Please circle the appropriate categories:

Sex: Male Female

Age: 20 - 30 31 - 40 41 - 50 51 - 60 61+

Highest Level of Education Attained: (please circle)

CSE GSCE A-level ONC/D HNC/D

BA/BSc MA/MSc/Mphil PhD Professional Qualification

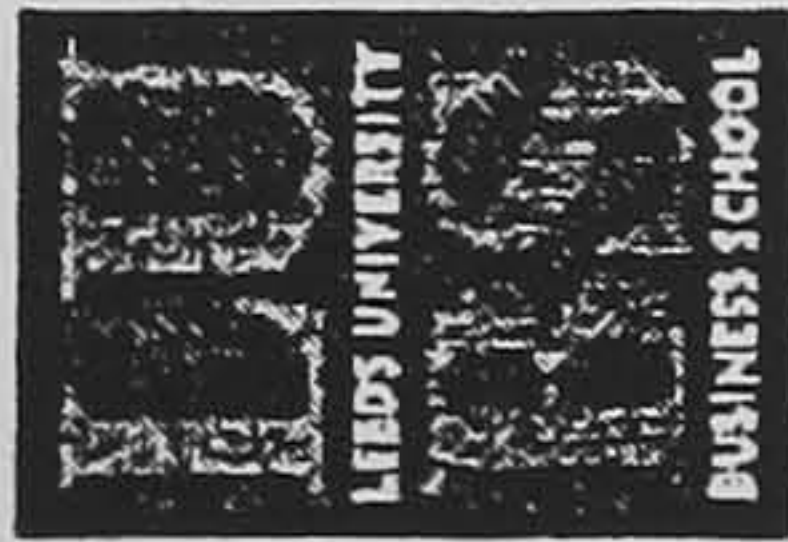
Occupation of Main Earner in Household: Event Secretary



# Leeds University Business School

## PhD Research Questionnaire

March 2000



This questionnaire will provide valuable help with PhD research at Leeds University. Please follow the instructions at the start of the questionnaire. The questionnaire is intended to be completed with immediate responses and impressions about categories of goods and services. The questionnaire takes the form of tick-box and rating scales and should take no more than about 15 minutes of your time.

Thanks for your help

### Appendix 5

- Please follow the instructions below and answer the following questions.
- Looking at the brands below, please tick which of these brands you have seen or heard of before. [Please place ticks in column 1 below].
  - Looking again at the list of brands below, please tick those which you have ever used before. [Please place ticks in column 2].
  - Thinking now about those brands which you ticked in column 1, please tell me how much you like or dislike each brand. [A score of 1 is 'like a lot', whilst a score of 7 is 'dislike a lot'. Please place your score of 1, 2, 3, 4, 5, 6 or 7 in column 3].
  - Looking again at those brands which you ticked in column 1, please tell me how much you trust each brand. [A score of 1 is trust a lot, a score of 7 is distrust a lot. Please place the appropriate score of 1, 2, 3, 4, 5, 6 or 7 in column 4].
  - Now thinking about the same set of brands, please tell me how much you feel these brands are prestigious. [A score of 1 is very prestigious, a score of 7 is not very prestigious. Please place the score of 1, 2, 3, 4, 5, 6 or 7 in column 5].

Coffee	[1 = very much, 7 = not very much]				
	Column 1 Seen Or heard [Tick]	Column 2 Ever used [Tick]	Column 3 Like/ Dislike [Score]	Column 4 Trust/ Distrust [Score]	Column 5 Prestig- ious? [Score]
Maxwell House	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Kenco	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nescafe	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lyons	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gold Blend	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Which words come to mind when thinking about these brands?:**

- Maxwell House.....
- Kenco.....
- Nescafe.....
- Lyons.....
- Gold Blend.....



Please answer the questions below ,following the SAME instructions.

1. Looking at the brands below, please tick which of these brands you have seen or heard of before. [Please place ticks in column 1 below].
2. Looking again at the list of brands below, please tick those which you have ever used before. [Please place ticks in column 2].
3. Thinking now about those brands which you ticked in column 1, please tell me how much you like or dislike each brand. [A score of 1 is 'like a lot', whilst a score of 7 is 'dislike a lot'. Please place your score of 1,2,3,4,5,6 or 7 in column 3].
4. Looking again at those brands which you ticked in column 1, please tell me how much you trust each brand. [A score of 1 is trust a lot, a score of 7 is distrust a lot. Please place the appropriate score of 1,2,3,4,5,6 or 7 in column 4.]
5. Now thinking about the same set of brands, please tell me how much you feel these brands are prestigious. [A score of 1 is very prestigious, a score of 7 is not very prestigious. Please place the score of 1,2,3,4,5,6 or 7 in column 5].

[1 = very much, 7 = not very much]

	Column 1 Seen Or heard (Tick)	Column 2 Ever used (Tick)	Column 3 Like/ Dislike (Score)	Column 4 Trust/ Distrust (Score)	Column 5 Prestig- ious? (Score)
<b>Grocery Retailer</b>					
Asda	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sainsbury	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tesco	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coop	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Safeway	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Which words come to mind when thinking about these brands?:

- Asda.....
- Sainsbury.....
- Tesco.....
- Coop.....
- Safeway.....

Appendix 5

Please answer the questions below ,following the SAME instructions

1. Looking at the brands below, please tick which of these brands you have seen or heard of before. [Please place ticks in column 1 below].
2. Looking again at the list of brands below, please tick those which you have ever used before. [Please place ticks in column 2].
3. Thinking now about those brands which you ticked in column 1, please tell me how much you like or dislike each brand. [A score of 1 is 'like a lot', whilst a score of 7 is 'dislike a lot'. Please place your score of 1,2,3,4,5,6 or 7 in column 3].
4. Looking again at those brands which you ticked in column 1, please tell me how much you trust each brand. [A score of 1 is trust a lot, a score of 7 is distrust a lot. Please place the appropriate score of 1,2,3,4,5,6 or 7 in column 4.]
5. Now thinking about the same set of brands, please tell me how much you feel these brands are prestigious. [A score of 1 is very prestigious, a score of 7 is not very prestigious. Please place the score of 1,2,3,4,5,6 or 7 in column 5].

[1 = very much, 7 = not very much]

	Column 1 Seen Or heard (Tick)	Column 2 Ever used (Tick)	Column 3 Like/ Dislike (Score)	Column 4 Trust/ Distrust (Score)	Column 5 Prestig- ious? (Score)
<b>Pens</b>					
Pilot	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sheaffer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Parker	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Papermate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Waterman	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Which words come to mind when thinking about these brands?:

- Pilot.....
- Sheaffer.....
- Parker.....
- Papermate.....
- Waterman.....

Please answer the questions below ,following the SAME instructions

1. Looking at the brands below, please tick which of these brands you have seen or heard of before. [Please place ticks in column 1 below].
2. Looking again at the list of brands below, please tick those which you have ever used before. [Please place ticks in column 2 ].
3. Thinking now about those brands which you ticked in column 1, please tell me how much you like or dislike each brand. [A score of 1 is 'like a lot', whilst a score of 7 is 'dislike a lot'. Please place your score of 1,2,3,4,5,6 or 7 in column 3].
4. Looking again at those brands which you ticked in column 1, please tell me how much you trust each brand. [A score of 1 is trust a lot, a score of 7 is distrust a lot. Please place the appropriate score of 1,2,3,4,5,6 or 7 in column 4.]
5. Now thinking about the same set of brands, please tell me how much you feel these brands are prestigious. [A score of 1 is very prestigious, a score of 7 is not very prestigious. Please place the score of 1,2,3,4,5,6 or 7 in column 5].

[1 = very much, 7 = not very much]

	Column 1 Seen Or heard [Tick]	Column 2 Ever used [Tick]	Column 3 Like/ Dislike [Score]	Column 4 Trust/ Distrust [Score]	Column 5 Prestig- ious? [Score]
<b>Tea</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quick Brew	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tetley	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Yorkshire	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PG Tips	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Typhoo	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Which words come to mind when thinking about these brands?:

- Quick Brew.....
- Tetley.....
- Yorkshire.....
- PG Tips.....
- Typhoo.....

Please answer the questions below ,following the SAME instructions

1. Looking at the brands below, please tick which of these brands you have seen or heard of before. [Please place ticks in column 1 below].
2. Looking again at the list of brands below, please tick those which you have ever used before. [Please place ticks in column 2 ].
3. Thinking now about those brands which you ticked in column 1, please tell me how much you like or dislike each brand. [A score of 1 is 'like a lot', whilst a score of 7 is 'dislike a lot'. Please place your score of 1,2,3,4,5,6 or 7 in column 3].
4. Looking again at those brands which you ticked in column 1, please tell me how much you trust each brand. [A score of 1 is trust a lot, a score of 7 is distrust a lot. Please place the appropriate score of 1,2,3,4,5,6 or 7 in column 4.]
5. Now thinking about the same set of brands, please tell me how much you feel these brands are prestigious. [A score of 1 is very prestigious, a score of 7 is not very prestigious. Please place the score of 1,2,3,4,5,6 or 7 in column 5].

[1 = very much, 7 = not very much]

	Column 1 Seen Or heard [Tick]	Column 2 Ever used [Tick]	Column 3 Like/ Dislike [Score]	Column 4 Trust/ Distrust [Score]	Column 5 Prestig- ious? [Score]
<b>Crisps</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Golden Wonder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Smiths	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
KP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Walkers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pringles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Which words come to mind when thinking about these brands?:

- Golden Wonder.....
- Smiths.....
- KP.....
- Walkers.....
- Pringles.....



Please answer the questions below, following the SAME instructions

1. Looking at the brands below, please tick which of these brands you have seen or heard of before. [Please place ticks in column 1 below].
2. Looking again at the list of brands below, please tick those which you have ever used before. [Please place ticks in column 2].
3. Thinking now about those brands which you ticked in column 1, please tell me how much you like or dislike each brand. [A score of 1 is 'like a lot', whilst a score of 7 is 'dislike a lot'. Please place your score of 1, 2, 3, 4, 5, 6 or 7 in column 3].
4. Looking again at those brands which you ticked in column 1, please tell me how much you trust each brand. [A score of 1 is trust a lot, a score of 7 is distrust a lot. Please place the appropriate score of 1, 2, 3, 4, 5, 6 or 7 in column 4.]
5. Now thinking about the same set of brands, please tell me how much you feel these brands are prestigious. [A score of 1 is very prestigious, a score of 7 is not very prestigious. Please place the score of 1, 2, 3, 4, 5, 6 or 7 in column 5].

[ 1 = very much, 7 = not very much]

Biscuits	Column 1	Column 2	Column 3	Column 4	Column 5
	Seen Or heard [Tick]	Ever used [Tick]	Like/ Dislike [Score]	Trust/ Distrust [Score]	Prestigious? [Score]
Jacobs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fox's	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
McVities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Huntley & Palmer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Burton's	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Which words come to mind when thinking about these brands?:

- Jacobs.....
- Fox's.....
- McVities.....
- Huntley & Palmer.....
- Burton's.....

Appendix 5

Please answer the questions below, following the SAME instructions

1. Looking at the brands below, please tick which of these brands you have seen or heard of before. [Please place ticks in column 1 below].
2. Looking again at the list of brands below, please tick those which you have ever used before. [Please place ticks in column 2].
3. Thinking now about those brands which you ticked in column 1, please tell me how much you like or dislike each brand. [A score of 1 is 'like a lot', whilst a score of 7 is 'dislike a lot'. Please place your score of 1, 2, 3, 4, 5, 6 or 7 in column 3].
4. Looking again at those brands which you ticked in column 1, please tell me how much you trust each brand. [A score of 1 is trust a lot, a score of 7 is distrust a lot. Please place the appropriate score of 1, 2, 3, 4, 5, 6 or 7 in column 4.]
5. Now thinking about the same set of brands, please tell me how much you feel these brands are prestigious. [A score of 1 is very prestigious, a score of 7 is not very prestigious. Please place the score of 1, 2, 3, 4, 5, 6 or 7 in column 5].

[ 1 = very much, 7 =not very much]

Breakfast Cereals	Column 1	Column 2	Column 3	Column 4	Column 5
	Seen Or heard [Tick]	Ever used [Tick]	Like/ Dislike [Score]	Trust/ Distrust [Score]	Prestigious? [Score]
Nestle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Jordans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Weetabix	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Kelloggs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quaker	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Which words come to mind when thinking about these brands?:

- Nestle.....
- Jordans.....
- Weetabix.....
- Kelloggs.....
- Quaker.....

Please answer the questions below, following the SAME instructions

1. Looking at the brands below, please tick which of these brands you have seen or heard of before. [Please place ticks in column 1 below].
2. Looking again at the list of brands below, please tick those which you have ever used before. [Please place ticks in column 2].
3. Thinking now about those brands which you ticked in column 1, please tell me how much you like or dislike each brand. [A score of 1 is 'like a lot', whilst a score of 7 is 'dislike a lot'. Please place your score of 1, 2, 3, 4, 5, 6 or 7 in column 3].
4. Looking again at those brands which you ticked in column 1, please tell me how much you trust each brand. [A score of 1 is trust a lot, a score of 7 is distrust a lot. Please place the appropriate score of 1, 2, 3, 4, 5, 6 or 7 in column 4].
5. Now thinking about the same set of brands, please tell me how much you feel these brands are prestigious. [A score of 1 is very prestigious, a score of 7 is not very prestigious. Please place the score of 1, 2, 3, 4, 5, 6 or 7 in column 5].

[1 = very much, 7 = not very much]

	Column 1 Seen Or heard [Tick]	Column 2 Ever used [Tick]	Column 3 Like/ Dislike [Score]	Column 4 Trust/ Distrust [Score]	Column 5 Prestig- ious? [Score]
<b>Watches</b>					
Timex	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Swatch	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Citizen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Accurist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sekonda	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Which words come to mind when thinking about these brands?:

- Timex.....
- Swatch.....
- Citizen.....
- Accurist.....
- Sekonda.....

Please answer the questions below, following the SAME instructions

1. Looking at the brands below, please tick which of these brands you have seen or heard of before. [Please place ticks in column 1 below].
2. Looking again at the list of brands below, please tick those which you have ever used before. [Please place ticks in column 2].
3. Thinking now about those brands which you ticked in column 1, please tell me how much you like or dislike each brand. [A score of 1 is 'like a lot', whilst a score of 7 is 'dislike a lot'. Please place your score of 1, 2, 3, 4, 5, 6 or 7 in column 3].
4. Looking again at those brands which you ticked in column 1, please tell me how much you trust each brand. [A score of 1 is trust a lot, a score of 7 is distrust a lot. Please place the appropriate score of 1, 2, 3, 4, 5, 6 or 7 in column 4].
5. Now thinking about the same set of brands, please tell me how much you feel these brands are prestigious. [A score of 1 is very prestigious, a score of 7 is not very prestigious. Please place the score of 1, 2, 3, 4, 5, 6 or 7 in column 5].

[1 = very much, 7 = not very much]

	Column 1 Seen Or heard [Tick]	Column 2 Ever used [Tick]	Column 3 Like/ Dislike [Score]	Column 4 Trust/ Distrust [Score]	Column 5 Prestig- ious? [Score]
<b>Frozen Foods</b>					
Birds Eye	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ross	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
McCain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Findus	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Green Giant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Which words come to mind when thinking about these brands?:

- Birds Eye.....
- Ross.....
- McCain.....
- Findus.....
- Green Giant.....



Appendix 5

In order to ensure that the responses collected within these questionnaires conform to quota requirements, it is necessary to collect some very basic demographic information. Please circle the appropriate categories:

Sex: Male Female

Age: 20-30 31-40 41-50 51-60 61+

Occupation: \_\_\_\_\_

Highest level of educational attainment: (please circle)

CSE GCSE/O A-Level ONC/D HNC/D BA/BSc

MA/MSc/Mphil PhD Professional Qualification.....

Nationality: \_\_\_\_\_

Thankyou for your cooperation within this survey.

## Appendix 6



**LEEDS UNIVERSITY  
BUSINESS SCHOOL**

**October 2000 Sample =76**

**Street interviews for questionnaire responses – Hull 4/10/00**

Do you have a Personal Computer? Yes = 63%

Do you have access to the Internet? Yes = 72% n = 55

If so .... Where?      At home      = 25%  
                                  At work      = 20%  
                                  Both above      = 47%  
                                  University      = 11%

<b>Internet Brands</b>	Column 1 [Tick] Seen Or heard Y	Column 2 [Tick] Ever used Y	Column 3 [Score] Trust/ Distrust 1=low 7=high	Column4 [Score] Hi/Low Prestige 1= low 7= high
<b>Lastminute.com</b>	<b>59%</b>	<b>14%</b>	<b>4.02(n=44)</b>	<b>3.85(n41)</b>
<b>Askjeeves.com</b>	<b>64%</b>	<b>18%</b>	<b>4.32(n=44)</b>	<b>4.15(n41)</b>
<b>Amazon.com</b>	<b>71%</b>	<b>28%</b>	<b>4.57(n=51)</b>	<b>4.5(n48)</b>
<b>Fish4it.com</b>	<b>29%</b>	<b>12%</b>	<b>4.04(n=23)</b>	<b>3.81(n21)</b>
<b>Lycos.com</b>	<b>62%</b>	<b>29%</b>	<b>4.2(n=44)</b>	<b>4.41(n44)</b>

**Aware of any others? Yahoo (6), AltaVista (5), Karoo (4), AOL (3), MSN (2)**

**Sex:** Male 53%      Female 47%

**Age:** 20-30 [30%]      31-40 [20%] 41-50 [26%] 51-60 [17%] 61+ [7%]

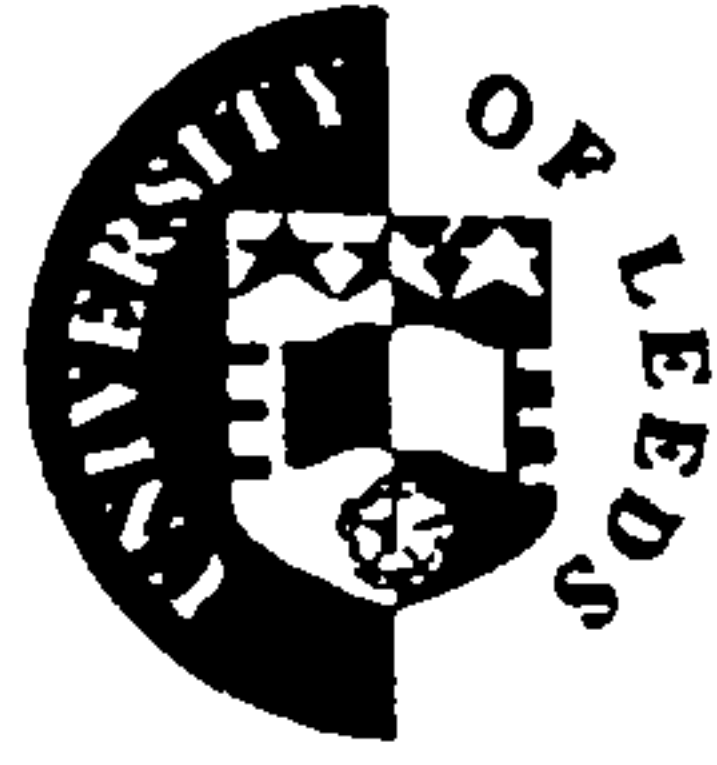
**Highest level of education attained:**

CSE/GCSE/A Level = 55%    ONC/D/HNC/D/BA/BSc = 39%

MA/MSc/M Phil/PhD/Professional Qualification = 7%



## Appendix 7

**LEEDS UNIVERSITY  
BUSINESS SCHOOL****Leeds University Business School****PhD Research Questionnaire****July/August 2000**

This questionnaire will provide valuable help with PhD research at Leeds University. Please follow the instructions at the start of the questionnaire.

The following questionnaire contains information about fictitious brands within various goods and services markets within the UK. Please read the information for each brand carefully, gaining a clear impression of each brand before providing your responses to the brief questions posed.

Appendix 7

**Supermarkets**

**Brand L:**

Brand L has only recently opened supermarkets in the UK, but it is expanding the number of stores it operates and it is doing well against competitors so far. This supermarket is based upon a 'no-frills' approach, with low prices, relatively simple basic stores, few additional services, products displayed in their boxes to keep costs down, and cheaper areas for its store locations. It is claimed that the quality of its products are similar to those of other UK supermarkets, but at much reduced prices due to its 'no-frills' approach. Brand L's customers seem satisfied with the reliability of its products and keep shopping there in steadily increasing numbers. This chain of supermarkets is performing well in its home country within Europe.

**Brand M:**

Brand M has been a UK supermarket for many years. Although certainly not the largest chain of supermarkets, it is one of the top 10 sellers. It has been growing in size due to the satisfaction of its customers and the reliability of its own brand products. Brand M regularly introduces improvements and new products/services for its customers. The Brand has recently received publicity on performing well in various Independent Consumer Testing Research (e.g Good Housekeeping) which looked at things such as reliability, consistent quality, satisfaction and value for money.

Brand M tends to price products below the most expensive supermarkets, and at a similar level to most other major supermarkets. All their own products carry a no strings guarantee and a free 0800 number for customer queries. Brand M is also becoming well known for its ethical business policies.

Consumer Survey Information – UK Supermarket Brands			
[Maximum score of 5 ●●●●● on any of the items below]			
	Brand L	Brand M	Brand leader
Design/Styling	●●	●●●●	●●●●●
Product quality	●●●	●●●●●	●●●●●
Value for money	●●●●	●●●●●	●●●●●
Cares about customers	●●	●●●●●	●●●●●
Queuing times	●●	●●●●●	●●●●●
Innovative	●●	●●●●●	●●●●●
Appeal	●●	●●●●●	●●●●●
Product Range offered	●	●●●	●●●●●
Family Facilities	●	●●●	●●●●●
Helpful staff	●●	●●●●●	●●●●●
Store design	●●	●●●●●	●●●●●
Services Offered	●	●●●●●	●●●●●
Store location convenience	●●	●●●●●	●●●●●
Customer helpline?	●●	●●●●●	●●●●●
Overall Rating	●●	●●●●●	●●●●●

Source: UK Consumer Magazine – July 2000

Thinking now about the information provided on the opposite page regarding fictitious brands L and M, please read the questions below and provide your reply for each brand separately:

**Brand L**

On the basis of the information you have been provided, to what extent do you think that you would trust Brand L?

Distrust Greatly 1 2 3 4 5 6 7 Trust Greatly

On the basis of the information provided, to what extent would you think of brand L as prestigious?

Low Prestige 1 2 3 4 5 6 7 High Prestige

**Brand M**

On the basis of the information provided, to what extent do you think that you would trust Brand M?

Distrust Greatly 1 2 3 4 5 6 7 Trust Greatly

On the basis of the information provided, to what extent would you think of brand M as prestigious?

Low Prestige 1 2 3 4 5 6 7 High Prestige

**Coffee**

**Brand L:**

Brand L coffee has been steadily increasing its sales over the 30 years since it was launched. The brand can be bought in most grocery shops and is popular with its consumers. The brand is priced at a similar level to its coffee competitors, and is of a similar quality level. Whilst the brand is not one of the top sellers in the coffee market – consumer taste tests show that the taste of its products compares well with its larger competitors, and it has few issues with consumer complaints. The brand is advertised quite regularly, and you can sometimes get it in café's, restaurants and pubs.

**Brand M**

Brand M coffee was launched 5 years ago into the coffee market, but it is proving very popular so far and is growing very quickly. The brand has a strong image and attractive packaging, and is mainly bought by younger, higher income consumers. The product is of a higher quality than many of its competitors and sells at a higher price. The brand has already brought out several new innovative products since it was launched. The brand has been advertised very often and can be bought from most large and some smaller grocery shops, and is available at many up and coming coffee bars.

Consumer Survey Information – UK Coffee Brands			
[Maximum score of 5 ●●●●● on any of the items below]			
	Brand L	Brand M	Brand leader
Taste	●●●	●●●●●	●●●●●
Aroma	●●	●●●●●	●●●●●
Freshness	●●●	●●●●●	●●●●●
Value for money	●●●	●●●	●●●●●
Product Quality	●●●	●●●●●	●●●●●
Innovative	●●	●●●●●	●●●●●
Packaging	●●●	●●●●●	●●●●●
Range/Variety	●●●	●●●	●●●●●
Customer helpline?	●●	●●●●●	●●●●●
Overall Rating	●●●	●●●●●	●●●●●

Source: UK Consumer Magazine July 2000

Thinking now about the information provided on the opposite page regarding fictitious brands L and M, please read the questions below and provide your reply for each brand separately:

**Brand L**

On the basis of the information you have been provided, to what extent do you think that you would trust Brand L?

Distrust Greatly 1 2 3 4 5 6 7 Trust Greatly

On the basis of the information provided, to what extent would you think of brand L as prestigious?

Low Prestige 1 2 3 4 5 6 7 High Prestige

**Brand M**

On the basis of the information provided, to what extent do you think that you would trust Brand M?

Distrust Greatly 1 2 3 4 5 6 7 Trust Greatly

On the basis of the information provided, to what extent would you think of brand M as prestigious?

Low Prestige 1 2 3 4 5 6 7 High Prestige



Appendix 7

**Pens**

**Brand L:**

Brand L is an up and coming make of pen, which has been on sale in the UK for quite a while, but fewer years than the top selling brands. It has been growing in size due to amongst other things, the satisfaction of its customers and the reliability of its products. Brand L regularly introduces improvements and new products for its customers. The Brand has recently received publicity on performing well in Independent Consumer Testing Research (e.g. Good Housekeeping) which looked at things such as reliability, consistent quality, satisfaction and value for money. Brand L pens are style conscious and whilst not being cheap, are seen as offering good value for money. All products carry a no strings guarantee and a free 0800 number for customer queries. Brand L is also well known for its ethical business policies.

**Brand M:**

Brand M was one of the first brands of pens in the UK, and has been one of the leading brands for many years. It has however steadily lost customers over the years having offered few innovations or improvements to its products. A couple of years ago the brand suffered some minor poor publicity regarding the quality of some of its products and how it handled complaints – this was featured on a Consumer Complaint TV programme. Brand M, although not exclusive or particularly prestigious, tends to be more expensive than many of its mass-market competitors. The brand is supported by a band of loyal customers who have bought little else over the years.

Consumer Survey Information – UK Pen Brands [Maximum score of 5 ●●●●● on any of the items below]			
	Brand L	Brand M	Brand leader
Design/Styling	●●●●	●●●	●●●
Long-lasting	●●●●	●●●	●●●●
Value for money	●●●●	●●●	●●●●
Writing comfort	●●●●	●●●●	●●●●
Writing smoothness	●●●	●●●	●●●●
Product Quality	●●●●	●●●	●●●●
Innovation	●●●●	●●	●●●
Appeal	●●●●	●●●	●●●●
Range	●●●	●●●	●●●●
Guarantees	●●●	●●	●●●●
Customer helpline?	●●●●	●●	●●●●
Overall	●●●●	●●●	●●●●

Source: UK Consumer Magazine July 2000

Thinking now about the information provided on the opposite page regarding fictitious brands L and M, please read the questions below and provide your reply for each brand separately:

**Brand L**

On the basis of the information you have been provided, to what extent do you think that you would trust Brand L?

Distrust Greatly 1 2 3 4 5 6 7 Trust Greatly

On the basis of the information provided, to what extent would you think of brand L as prestigious?

Low Prestige 1 2 3 4 5 6 7 High Prestige

**Brand M**

On the basis of the information provided, to what extent do you think that you would trust Brand M?

Distrust Greatly 1 2 3 4 5 6 7 Trust Greatly

On the basis of the information provided, to what extent would you think of brand M as prestigious?

Low Prestige 1 2 3 4 5 6 7 High Prestige

**Tea**

**Brand L**

Brand L is a well-known brand of tea with easily recognisable packaging which is sold around the world. Brand L has been on sale in the UK for many years, and whilst it is not a big UK tea brand, it consistently sells a reasonable amount from year to year. The brand has always been seen as a reliable good quality tea, although perhaps not to everyone's taste. The brand cannot be bought in many supermarkets and grocers – probably due to its relatively low number of customers. The brand is rarely advertised within the UK.

**Brand M:**

Brand M is a well-known brand, which has been around for many years and was advertised heavily in the past, but not at all in the last 10 years. People have not been buying the brand as much in the last few years, and customers cannot find it in as many shops as it was in its heyday. Brand M is at the 'cheap and cheerful' end of the tea market, but is seen as offering good value for money amongst the dwindling band of consumers. The brand is not sold outside the UK.

Consumer Survey Information – UK Tea Brands [Maximum score of 5 ●●●●● on any of the items below]			
	Brand L	Brand M	Brand leader
Taste / Flavour	●●●	●●	●●
Freshness	●●●	●●	●●●●
Value for money	●●●	●●●●	●●●●
Product Quality	●●●	●●●	●●●●
Innovative	●●	●●	●●●
Packaging	●●●	●●	●●●
Range/Variety	●●●	●●	●●●
Customer helpline?	●●	●●●	●●●●
Overall	●●●	●●	●●●●

Source: UK Consumer Magazine July 2000

Thinking now about the information provided on the opposite page regarding fictitious brands L and M, please read the questions below and provide your reply for each brand separately:

**Brand L**

On the basis of the information you have been provided, to what extent do you think that you would trust Brand L?

Distrust Greatly 1 2 3 4 5 6 7 Trust Greatly

On the basis of the information provided, to what extent would you regard brand L to be prestigious?

Low Prestige 1 2 3 4 5 6 7 High Prestige

**Brand M**

On the basis of the information provided, to what extent do you think that you would trust Brand M?

Distrust Greatly 1 2 3 4 5 6 7 Trust Greatly

On the basis of the information provided, to what extent would you regard brand M to be prestigious?

Low Prestige 1 2 3 4 5 6 7 High Prestige

Appendix 8

Please now allocate the ideas below to one of the headings 'line', 'related' or 'unrelated', using the definitions on the opening page.

Please now allocate the ideas below to one of the headings 'line', 'related' or 'unrelated', using the definitions on the opening page.

<u>Grocery Retailers</u>	<u>Line</u>	<u>Related</u>	<u>Unrelated</u>
Restaurant Chain			8
Chemist shops	4	4	
Car Insurance	4	4	
Internet delivery			7
Opticians Services			8
Pensions			7
Jewellery		6	8
Home furnishings			8
Car Import &	3		
Retailing			8
Cinemas			8
Pregnancy test kits		5	
Life Insurance		6	8
Giftware		6	
Electrical goods		6	
Mortgages			8
PEP's & TESSA's			8
Florist service		4	
Travel-agency/operator			7
Hairdressing- salons			7
Function-Catering		6	8
Legal advice			
Cholesterol-testing kits		6	

<u>Pens</u>	<u>Line</u>	<u>Related</u>	<u>Unrelated</u>
Personal computers			8
Watches			7
Jewellery		4	
Calligraphy sets	3	5	
Writing paper	2		7
Fashion Pens			
Mobile Phones			5
Leather brief-cases		4	
Pencils			7
Personal-computers			7
Branded -Clothing		4	
Giftware			9
Holidays			7
Video cameras			







# LEEDS UNIVERSITY BUSINESS SCHOOL

## PhD Research Survey

January 2001

This survey will provide valuable help with PhD research at Leeds University. Please follow the instructions at the start of the survey. Please take your time to familiarise yourself with the information at the start of the survey, and then provide your impressions about the brands as instructed. When providing your responses, please try to give your initial impressions without labouring over your decisions. The survey takes the form of responses to rating scales and should take approximately 45-50 minutes of your time. There is an optional £5 payment for completing the survey – this is drawn from University funds.

Thanks for your help

Please contact Mr Jon Reast on 01430-422217 when you have completed the survey, collection will then be arranged.

### Purpose of the survey

Thank you for agreeing to take part in this survey. The purpose of the survey is to gather customers' reactions to potential 'new products and services'.

Whilst you would normally make decisions about new products on the basis of much more information than is provided here, when companies are first thinking of ideas information is often less detailed.

This survey is concerned with brands. You will be asked to give your impressions about two SUPERMARKET brands with which you will probably be familiar, and a third fictitious supermarket brand for which you will be provided with some background history. We are interested in your opinions of all the brands, even if you haven't used them before. Please try to respond to all sections of the survey, even if you may feel that your responses are based upon only vague impressions.

Having given your impression of each particular brand, you will then be asked to evaluate some new product ideas for each of the brands. You will find clear instructions at the start of each section of this questionnaire.

### Some Information about you

Before starting the survey it would be helpful if you could provide some basic information about yourself so that we can ensure that all types of people are covered in the survey. Please note that you will not be re-approached as a follow up to this survey, nor will this information be divulged to anyone else.

Please circle the appropriate categories:

<b>Sex</b>	Male	Female			
<b>Age</b>	20-30	31-40	41-50	51-60	61+

Highest level of education attained  
(or equivalent qualification)

CSE	GCSE	A Level	ONC/D	HNC/D	BA/BSc
MA/MSc/M Phil	PhilD	Professional Qualification			

Occupation of main earner within household:  
.....

Now, please carefully read the instructions provided on the reverse of this page before proceeding.



Appendix 9

**Instructions:**  
Based upon your very broadest perceptions of the three SUPERMARKET brands, please provide your impressions of the two real and the fictitious (made up) brand. Please circle the number which best reflects your feelings about the individual brands e.g.

	1	2	3	4	5	6	7
<b>Unfriendly</b>							<b>Friendly</b>
<b>Sainsbury</b>							
Doesn't seem to be trustworthy							Seems to be trustworthy
Doesn't seem to be honest							Seems to be honest
Doesn't seem to be fair-minded							Seems to be fair-minded
Doesn't seem to be reliable							Seems to be reliable
Unlikely to give satisfaction							Likely to give satisfaction
Doesn't seem to have a good image							Seems to have a good image
Likely to provide poor customer service							Likely to provide good customer service
<b>Co-op</b>							
Doesn't seem to be trustworthy							Seems to be trustworthy
Doesn't seem to be honest							Seems to be honest
Doesn't seem to be fair-minded							Seems to be fair-minded
Doesn't seem to be reliable							Seems to be reliable
Unlikely to give satisfaction							Likely to give satisfaction
Doesn't seem to have a good image							Seems to have a good image
Likely to provide poor customer service							Likely to provide good customer service
<b>Brand L</b>							
Doesn't seem to be trustworthy							Seems to be trustworthy
Doesn't seem to be honest							Seems to be honest
Doesn't seem to be fair-minded							Seems to be fair-minded
Doesn't seem to be reliable							Seems to be reliable
Unlikely to give satisfaction							Likely to give satisfaction
Doesn't seem to have a good image							Seems to have a good image
Likely to provide poor customer service							Likely to provide good customer service

Please continue to the next page

**Instructions:**

Please read this background information about the two real SUPERMARKET brands Sainsbury and Co-op, and also the fictitious 'Brand L' before proceeding further. Please try to gain as good an impression of the fictitious brand as possible from the information provided.

**Sainsbury:**

Sainsbury was established over 100 years ago, and has been a leading supermarket in the UK for many years. In many ways it was at its strongest in the 1980s and early 1990s with its slogan 'good food costs less at Sainsbury's'. The supermarket serves millions of customers every week and has 100's of stores across the UK. In recent years, Tesco has become the UK's most popular supermarket, topping Sainsbury from its number 1 spot. Sainsbury is clearly trying to lure shoppers back, with its new slogan 'making life taste better', and its close association with the popular Jamie Oliver, otherwise known as the 'Naked Chef'. Sainsbury is also known for its I Homebase DIY shops, which have been around since the 1980s, but which it has recently announced it is selling.

**Co-op**

The Co-op is a long established retailer, opening its first shops over 150 years ago. Co-op is not only a grocery retailer, but also a food manufacturer and dairy producer in its own right. Co-op has long been established in many other business areas including department stores, banking, travel and insurance services. The Co-op has been under increasing pressure from other UK supermarkets over the last 20 years, and it has become less popular overall with UK shoppers. The Co-op is still the world's largest 'co-operative', owned and controlled by its members, and it still claims to be managed on the original principles of honesty, openness and social responsibility. The Co-op argue that part of this is reflected in its 'honest labelling policy'. The Co-op still has 100's of stores around the UK, some very large and some smaller more community based stores.

**Brand L**

Brand L has only recently opened supermarkets in the UK, but it is expanding the number of stores it operates and it is doing well against competitors so far. This supermarket is based upon a 'no-frills' approach, with low prices, relatively simple basic stores, few additional services (such as acceptance of credit cards), products displayed in their boxes to keep costs down, and cheaper areas for its store locations. It is claimed that the quality of its products are similar to those of other UK supermarkets, but at much reduced prices due to its 'no-frills' approach. Brand L's customers seem satisfied with the reliability of its products and keep shopping there in steadily increasing numbers. This chain of supermarkets is performing well in its home country within Europe.

**Consumer Survey Information - UK Supermarket Brands**  
[● = poor, ●●●●● = excellent]

	Sainsbury	Co-op	Brand L
Design/Styling	●●●●●	●●●●●	●●●●●
Product quality	●●●●●	●●●●●	●●●●●
Value for money	●●●●●	●●●●●	●●●●●
Cares about customers	●●●●●	●●●●●	●●●●●
Queuing times	●●●●●	●●●●●	●●●●●
Innovative	●●●●●	●●●●●	●●●●●
Appeal	●●●●●	●●●●●	●●●●●
Product Range offered	●●●●●	●●●●●	●●●●●
Family Facilities	●●●●●	●●●●●	●●●●●
Helpful staff	●●●●●	●●●●●	●●●●●
Store design	●●●●●	●●●●●	●●●●●
Services Offered	●●●●●	●●●●●	●●●●●
Store location convenience	●●●●●	●●●●●	●●●●●
Customer helpline?	●●●●●	●●●●●	●●●●●
Overall Rating	●●●●●	●●●●●	●●●●●

Source UK Consumer Magazine - November 2000



Appendix 9

**Further Instructions: Guidance example**

You are now asked to provide some impressions of the Sainsbury brand specifically - can you please now look at the illustrative scale below. At each end of the scale there is a word that could be used to describe the brand, with a range of numbers to show the extent to which you agree with the opposing descriptions. Please circle the number that best shows your impression e.g.

Unfriendly 1 2 3 4 5 6 7 Friendly

Now, thinking about SAINSBURY, please complete the following section:

Is a brand I don't trust	1	2	3	4	5	6	7	Is a brand I trust
Is insincere	1	2	3	4	5	6	7	Is sincere
Has dissimilar values to me	1	2	3	4	5	6	7	Has similar values to me
Rarely 'delivers'	1	2	3	4	5	6	7	Always 'delivers'
Is one that most people have a low opinion	1	2	3	4	5	6	7	Is one that most people have a high opinion
Is unpredictable	1	2	3	4	5	6	7	Is predictable
Has a poor reputation	1	2	3	4	5	6	7	Has a good reputation
Brand name does not guarantee satisfaction	1	2	3	4	5	6	7	Brand name guarantees satisfaction
Is untruthful	1	2	3	4	5	6	7	Is truthful
Gives you little confidence in	1	2	3	4	5	6	7	Gives you confidence in
Is not at all concerned about customers	1	2	3	4	5	6	7	Is very concerned about customers
Is a brand with which I've had poor personal experience	1	2	3	4	5	6	7	Is a brand with which I've had good personal experience
Has inconsistent quality	1	2	3	4	5	6	7	Has consistent quality
Is a brand where people I know have had poor experience	1	2	3	4	5	6	7	Is a brand where people I know have had good experience
Is low quality	1	2	3	4	5	6	7	Is high quality
Is not dependable	1	2	3	4	5	6	7	Is dependable
Is not fair-minded	1	2	3	4	5	6	7	Is fair-minded
Is not expert in its field	1	2	3	4	5	6	7	Is expert in its field
Has poor competence	1	2	3	4	5	6	7	Is highly competent
Has poorly skilled personnel	1	2	3	4	5	6	7	Has skilled personnel
Provides poor customer service	1	2	3	4	5	6	7	Provides good customer service
Communicates poorly with customers	1	2	3	4	5	6	7	Communicates well with customers
Does not handle issues amicably and fairly	1	2	3	4	5	6	7	Handles issues amicably and fairly
Does few new things	1	2	3	4	5	6	7	Does lots of new things
Is not a very popular brand	1	2	3	4	5	6	7	Is a very popular brand

Does not fulfil my expectations	1	2	3	4	5	6	7	Fulfils my expectations
Is just the same as other supermarket brands	1	2	3	4	5	6	7	Is different to other supermarket brands
Does not provide good value for money	1	2	3	4	5	6	7	Provides good value for money
Does not have a good image overall	1	2	3	4	5	6	7	Has a good image overall
Is not highly visible in the media	1	2	3	4	5	6	7	Is highly visible in the media
Is a brand I have not used before	1	2	3	4	5	6	7	Is a brand I have used a great deal

You are now asked to look at some new product ideas for the SAINSBURY supermarket brand, and then your give your responses to those ideas. The 'brand history' information about the Sainsbury brand is provided again for easy reference.

**For guidance purposes:**

'Brand History' information repeated from an earlier page to help with 'scoring'. If necessary, please take a few moments to re-familiarise yourself with the Sainsbury brand prior to completing the exercise on the next page.

**Sainsbury**

Sainsbury's was established over 100 years ago, and has been a leading supermarket in the UK for many years. In many ways it was at its strongest in the 1980s and early 1990s with its slogan 'good food costs less at Sainsbury's'. The supermarket serves millions of customers every week and has 100's of stores across the UK. In recent years, Tesco has become the UK's most popular supermarket, topping Sainsbury from its number 1 spot. Sainsbury is clearly trying to lure shoppers back, with its new slogan 'making life taste better', and its close association with the popular Jamie Oliver, otherwise known as the 'Naked Chef'. Sainsbury's is also known for its Homebase DIY shops, which have been around since the 1980s, but which it has recently announced it is selling.

**Consumer Survey Information - UK Supermarket Brands**  
 (● = poor, ●●●●● = excellent)

Design/Styling	Sainsbury	Co-op	Brand L.
Product quality	●●●●●	●●●●●	●●●●●
Value for money	●●●●●	●●●●●	●●●●●
Cares about customers	●●●●●	●●●●●	●●●●●
Queuing times	●●●●●	●●●●●	●●●●●
Innovative	●●●●●	●●●●●	●●●●●
Appeal	●●●●●	●●●●●	●●●●●
Product Range offered	●●●●●	●●●●●	●●●●●
Family facilities	●●●●●	●●●●●	●●●●●
Helpful staff	●●●●●	●●●●●	●●●●●
Store design	●●●●●	●●●●●	●●●●●
Services Offered	●●●●●	●●●●●	●●●●●
Store location convenience	●●●●●	●●●●●	●●●●●
Customer helpline?	●●●●●	●●●●●	●●●●●
Overall Rating	●●●●●	●●●●●	●●●●●

Source: UK Consumer Magazine - November 2000



Appendix 9

**Instructions: SAINSBURY NEW PRODUCT IDEAS**

You are now asked to look at some 'new product and service' ideas for Sainsbury, and then give your responses to those ideas.

<b>IDEA 1: LEGAL ADVICE</b>	
In principle, to what extent are you likely to consider trying this new service from SAINSBURY?	
Idea 1	Not at all likely    1 2 3 4 5 6 7    Very likely
In principle, to what extent do you trust SAINSBURY to provide this new service?	
Idea 1	Very little    1 2 3 4 5 6 7    Very much
<b>IDEA 2: GIFTWARE</b>	
In principle, to what extent are you likely to consider trying these new products from SAINSBURY?	
Idea 2	Not at all likely    1 2 3 4 5 6 7    Very likely
In principle, to what extent do you trust SAINSBURY to provide these new products?	
Idea 2	Very little    1 2 3 4 5 6 7    Very much
<b>IDEA 3: HOME DELIVERY SERVICE</b>	
In principle, to what extent are you likely to consider trying this new service from SAINSBURY?	
Idea 3	Not at all likely    1 2 3 4 5 6 7    Very likely
In principle, to what extent do you trust SAINSBURY to provide this new service?	
Idea 3	Very little    1 2 3 4 5 6 7    Very much

You are now asked to give some impressions of the CO-OP brand - thinking about CO-OP. please complete the following section:

CO-OP .....	1	2	3	4	5	6	7	
Is a brand I don't trust								Is a brand I trust
Is insincere	1	2	3	4	5	6	7	Is sincere
Has dissimilar values to me	1	2	3	4	5	6	7	Has similar values to me
Rarely 'delivers'	1	2	3	4	5	6	7	Always 'delivers'
Is one that most people have a low opinion	1	2	3	4	5	6	7	Is one that most people have a high opinion
Is unpredictable	1	2	3	4	5	6	7	Is predictable
Has a poor reputation	1	2	3	4	5	6	7	Has a good reputation
Brand name does not guarantee satisfaction	1	2	3	4	5	6	7	Brand name guarantees satisfaction
Is untruthful	1	2	3	4	5	6	7	Is truthful
Gives you little confidence in	1	2	3	4	5	6	7	Gives you confidence in
Is not at all concerned about customers	1	2	3	4	5	6	7	Is very concerned about customers
Is a brand with which I've had poor personal experience	1	2	3	4	5	6	7	Is a brand with which I've had good personal experience
Has inconsistent quality	1	2	3	4	5	6	7	Has consistent quality
Is a brand where people I know have had poor experience	1	2	3	4	5	6	7	Is a brand where people I know have had good experience
Is low quality	1	2	3	4	5	6	7	Is high quality
Is not dependable	1	2	3	4	5	6	7	Is dependable
Is not fair-minded	1	2	3	4	5	6	7	Is fair-minded
Is not expert in its field	1	2	3	4	5	6	7	Is expert in its field
Has poor competence	1	2	3	4	5	6	7	Is highly competent
Has poorly skilled personnel	1	2	3	4	5	6	7	Has skilled personnel
Provides poor customer service	1	2	3	4	5	6	7	Provides good customer service
Communicates poorly with customers	1	2	3	4	5	6	7	Communicates well with customers
Does not handle issues amicably and fairly	1	2	3	4	5	6	7	Handles issues amicably and fairly
Does few new things	1	2	3	4	5	6	7	Does lots of new things
Is not a very popular brand	1	2	3	4	5	6	7	Is a very popular brand
Does not fulfil my expectations	1	2	3	4	5	6	7	Fulfills my expectations
Is just the same as other supermarket brands	1	2	3	4	5	6	7	Is different to other supermarket brands
Does not provide good value for money	1	2	3	4	5	6	7	Provides good value for money
Does not have a good image overall	1	2	3	4	5	6	7	Has a good image overall
Is not highly visible in the media	1	2	3	4	5	6	7	Is highly visible in the media
Is a brand I have not used before	1	2	3	4	5	6	7	Is a brand I have used a great deal

Appendix 9

You are now asked to look at some new product ideas for the CO-OP brand, and then you give your responses to those ideas. The 'brand history' information about the CO-OP brand is provided again for easy reference.

**For guidance purposes:**

'Brand History' information repeated from an earlier page to help with 'scoring'. If necessary, please take a few moments to re-familiarise yourself with the CO-OP brand prior to completing the exercise on the next page.

**CO-OP**

The Co-op is a long established retailer, opening its first shops over 150 years ago. Co-op is not only a grocery retailer, but also a food manufacturer and dairy producer in its own right. Co-op has long been established in many other business areas including department stores, banking, travel and insurance services. The Co-op has been under increasing pressure from other UK supermarkets over the last 20 years, and it has become less popular overall with UK shoppers. The Co-op is still the worlds largest 'co-operative', owned and controlled by its members, and it still claims to be managed on the original principles of honesty, openness and social responsibility. The Co-op argue that part of this is reflected in its 'honest labelling policy'. The Co-op still has 100's of stores around the UK, some very large and some smaller more community based stores.

**Consumer Survey Information – UK Supermarket Brands**

(● = poor, ●●●●● = excellent)

	Sainsbury	Co-op	Brand L
Design/Styling	●●●●●	●●●●●	●●●●●
Product quality	●●●●●	●●●●●	●●●●●
Value for money	●●●●●	●●●●●	●●●●●
Cares about customers	●●●●●	●●●●●	●●●●●
Queuing times	●●●●●	●●●●●	●●●●●
Innovative	●●●●●	●●●●●	●●●●●
Appeal	●●●●●	●●●●●	●●●●●
Product Range offered	●●●●●	●●●●●	●●●●●
Family Facilities	●●●●●	●●●●●	●●●●●
Helpful staff	●●●●●	●●●●●	●●●●●
Store design	●●●●●	●●●●●	●●●●●
Services Offered	●●●●●	●●●●●	●●●●●
Store location convenience	●●●●●	●●●●●	●●●●●
Customer helpfulness?	●●●●●	●●●●●	●●●●●
Overall Rating	●●●●●	●●●●●	●●●●●

Source: UK Consumer Magazine – November 2000

You are now asked to look at some 'new product and service' ideas for CO-OP, and then give your responses to those ideas.

**IDEA 1: LEGAL ADVICE**

In principle, to what extent are you likely to consider trying this new service from Co-op?

Idea 1	Not at all likely	1	2	3	4	5	6	7	Very likely
Idea 1	Very little	1	2	3	4	5	6	7	Very much

**IDEA 2: GIFTWARE**

In principle, to what extent are you likely to consider trying these new products from Co-op?

Idea 2	Not at all likely	1	2	3	4	5	6	7	Very likely
Idea 2	Very little	1	2	3	4	5	6	7	Very much

**IDEA 3: HOME DELIVERY SERVICE**

In principle, to what extent are you likely to consider trying this new service from Co-op?

Idea 3	Not at all likely	1	2	3	4	5	6	7	Very likely
Idea 3	Very little	1	2	3	4	5	6	7	Very much

Please continue to the next page



**BRAND: 'L' NEW PRODUCT IDEAS**

You are now asked to look at the same 'new product and service' ideas for 'Brand L', and then give your responses to those ideas.

**IDEA 1: LEGAL ADVICE**

In principle, to what extent would you be likely to consider trying this new service from Brand L.?

Idea 1 Not at all likely 1 2 3 4 5 6 7 Very likely

In principle, to what extent do you trust Brand L to provide this new service?

Idea 1 Very little 1 2 3 4 5 6 7 Very much

**IDEA 2: GIFTWARE**

In principle, to what extent would you be likely to consider trying these new products from Brand L.?

Idea 2 Not at all likely 1 2 3 4 5 6 7 Very likely

In principle, to what extent do you trust Brand L to provide these new products?

Idea 2 Very little 1 2 3 4 5 6 7 Very much

**IDEA 3: HOME DELIVERY SERVICE**

In principle, to what extent would you be likely to consider trying this new service from Brand L.?

Idea 3 Not at all likely 1 2 3 4 5 6 7 Very likely

In principle, to what extent do you trust Brand L to provide this new product?

Idea 3 Very little 1 2 3 4 5 6 7 Very much

Thank you for taking the time to complete this survey. Please now call Jon Reast on 01430-422217 to arrange for payment and collection.

**For guidance purposes:**

Fictitious Brand History' information repeated from previous page to help with 'scoring'. Please take a few moments to re-familiarise yourself with Brand L prior to completing the exercise on the next page.

**Brand L.**

Brand L has only recently opened supermarkets in the UK, but it is expanding the number of stores it operates and it is doing well against competitors so far. This supermarket is based upon a 'no-frills' approach, with low prices, relatively simple basic stores, few additional services (such as acceptance of credit cards), products displayed in their boxes to keep costs down, and cheaper areas for its store locations. It is claimed that the quality of its products are similar to those of other UK supermarkets, but at much reduced prices due to its 'no-frills' approach. Brand L's customers seem satisfied with the reliability of its products and keep shopping there in steadily increasing numbers. This chain of supermarkets is performing well in its home country within Europe.

**Consumer Survey Information - UK Supermarket Brands**

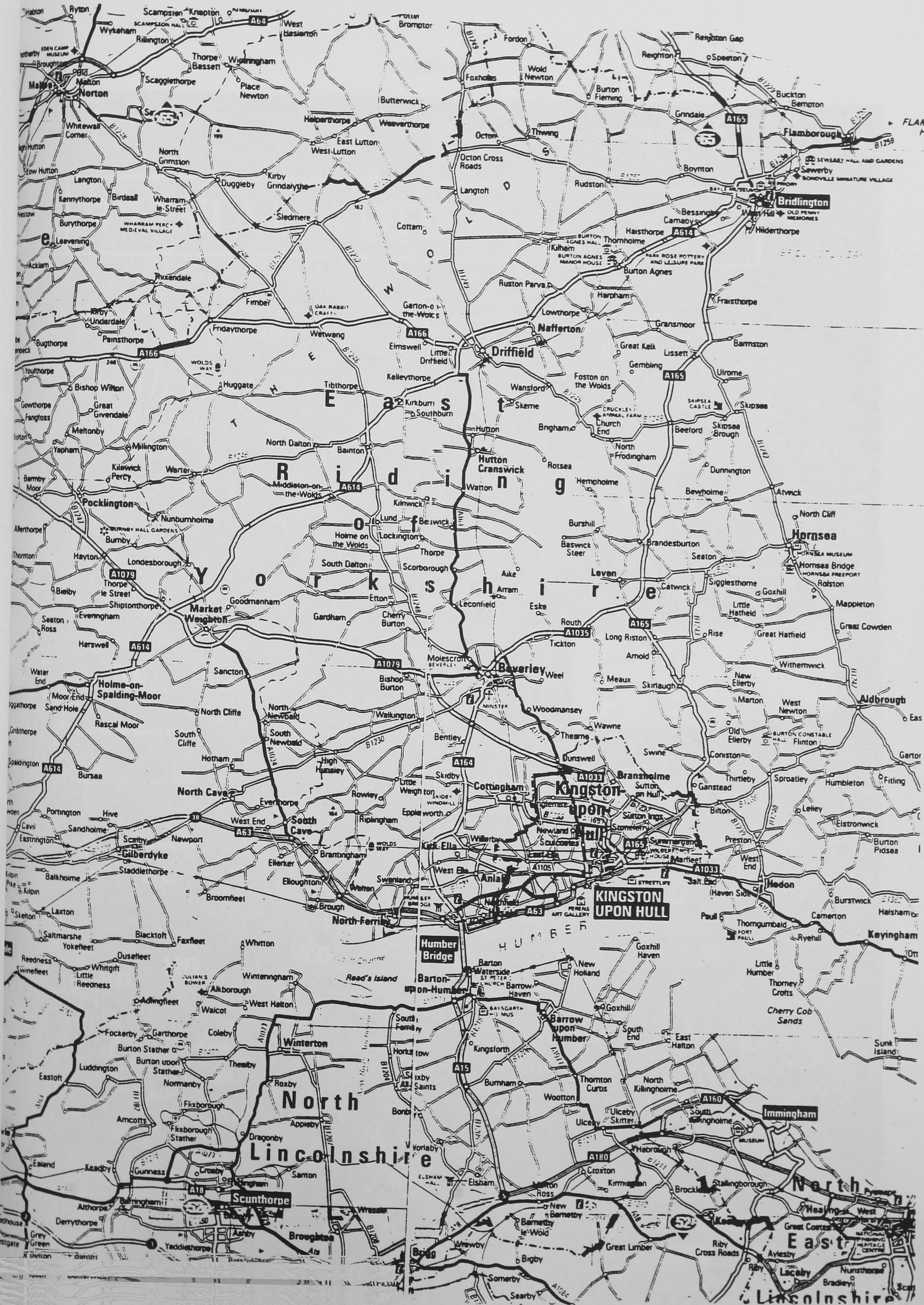
(● = poor, ●●●●● = excellent)

	Sainsbury	Co-op	Brand L
Design/Styling	●●●●●	●●●●●	●●●●●
Product quality	●●●●●	●●●●●	●●●●●
Value for money	●●●●●	●●●●●	●●●●●
Cares about customers	●●●●●	●●●●●	●●●●●
Queuing times	●●●●●	●●●●●	●●●●●
Innovative	●●●●●	●●●●●	●●●●●
Appeal	●●●●●	●●●●●	●●●●●
Product Range offered	●●●●●	●●●●●	●●●●●
Family Facilities	●●●●●	●●●●●	●●●●●
Helpful staff	●●●●●	●●●●●	●●●●●
Store design	●●●●●	●●●●●	●●●●●
Services Offered	●●●●●	●●●●●	●●●●●
Store location convenience	●●●●●	●●●●●	●●●●●
Customer helpline?	●●●●●	●●●●●	●●●●●
Overall Rating	●●●●●	●●●●●	●●●●●

Source: UK Consumer Magazine - November 2000



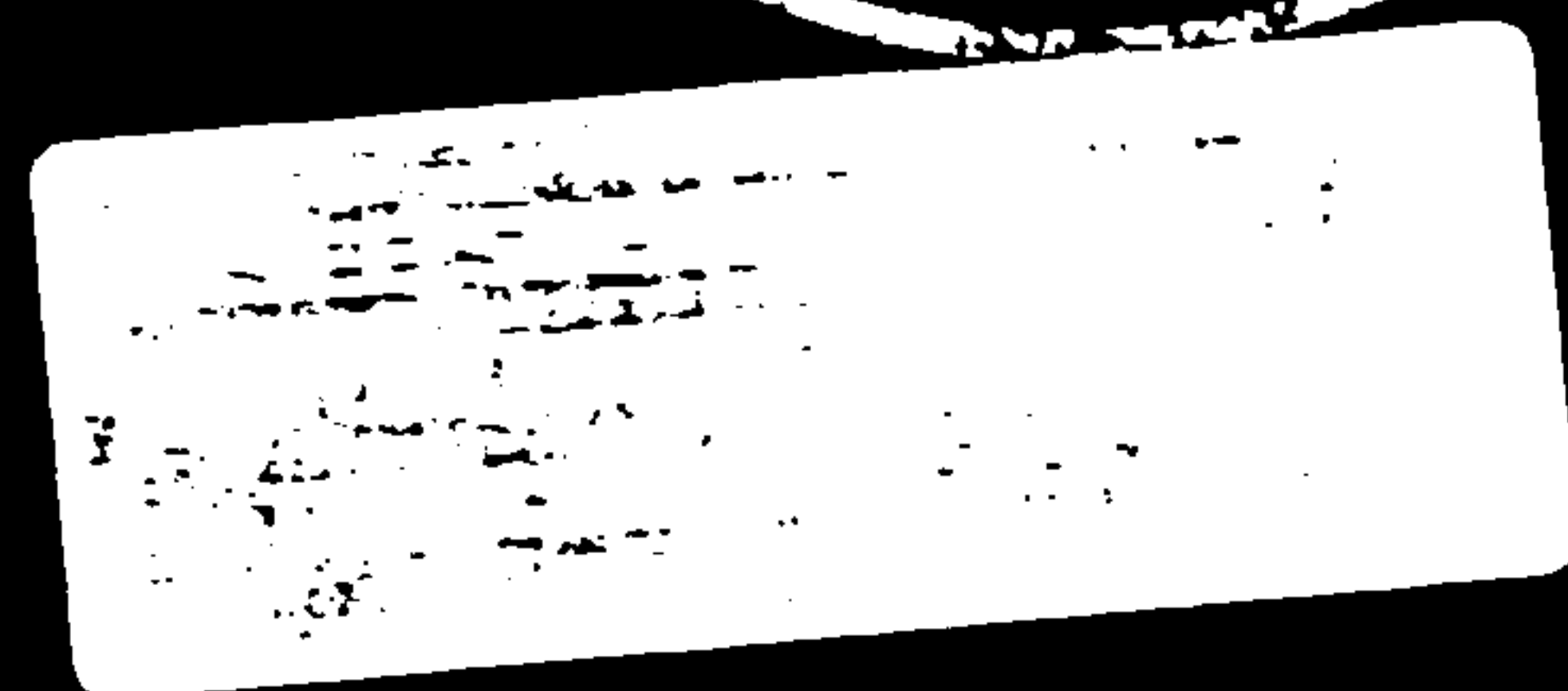
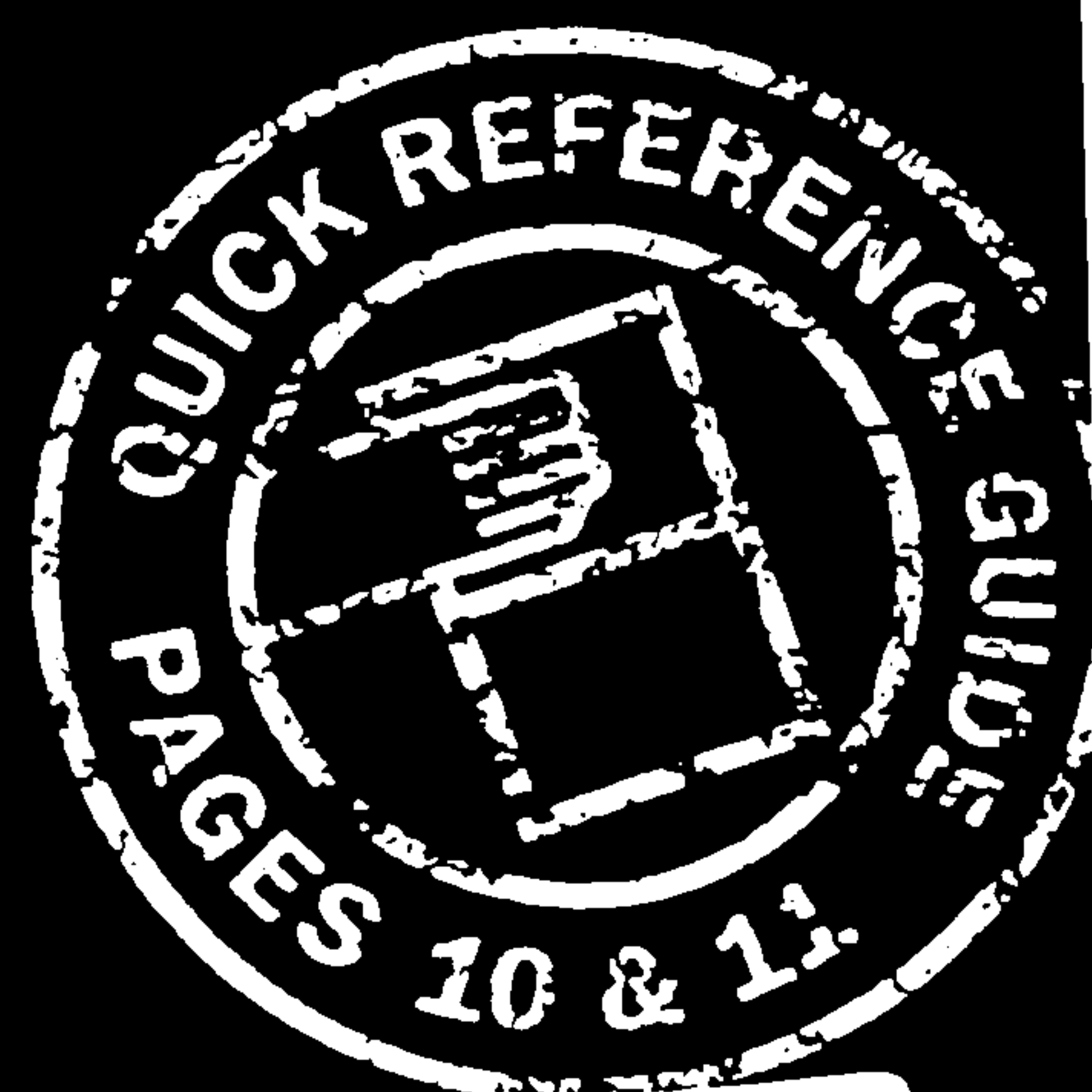
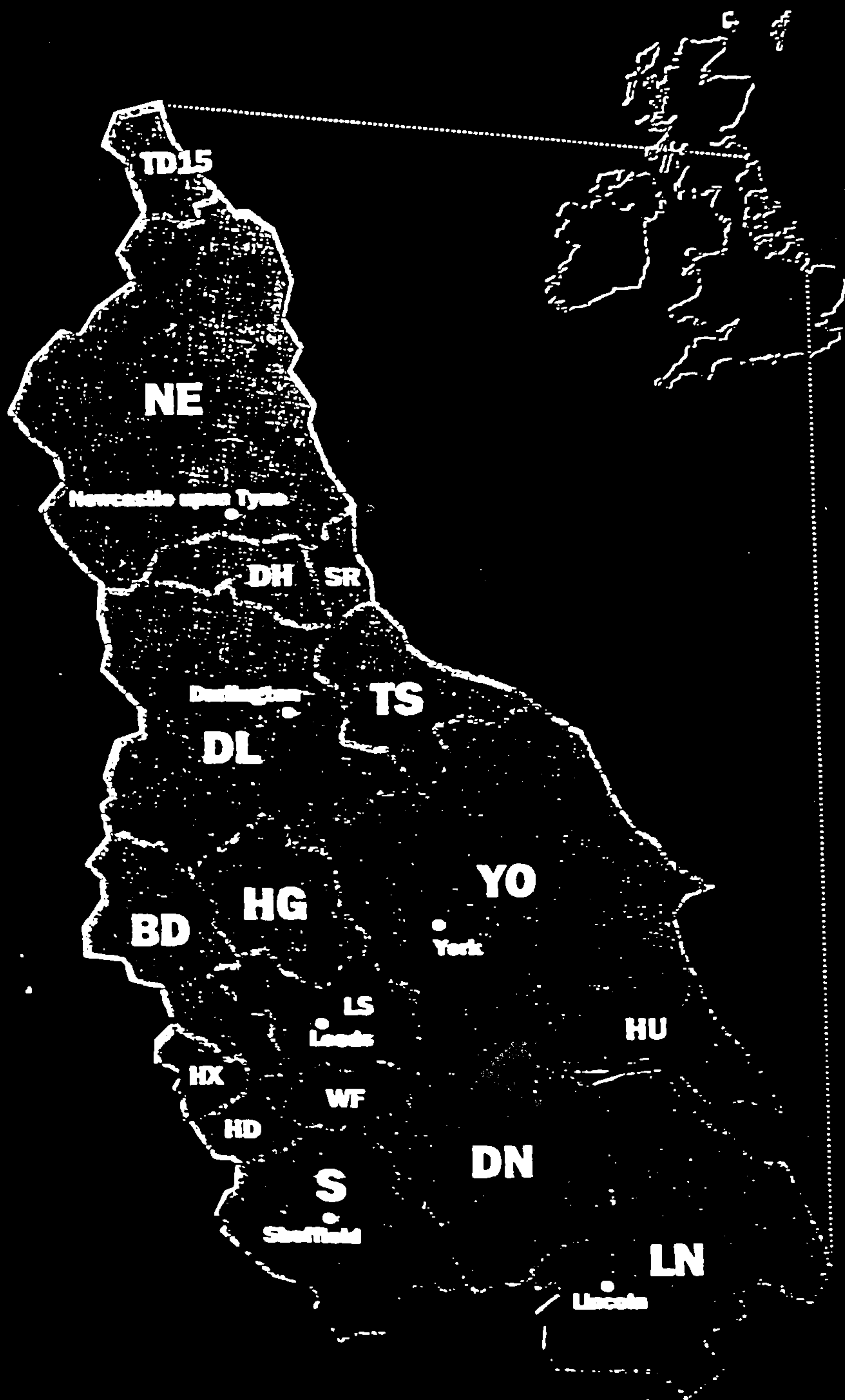
Appendix 10





# POSTAL ADDRESS BOOK

*North East*  
1999/2000



*Use this book for...*

*Postal service information*

*Correct addresses and their Postcodes*

*...to get the fastest, safest, most economical delivery of your mail*



Appendix 12

TABLE C.5 Continued  $\alpha = .01$

k	F	N - k - 1																
		10	12	14	16	18	20	25	30	35	40	50	60	80	100	150	200	
2	2	59	53	48	43	40	36	30	26	23	20	17	14	11	9	7	5	
2	3	58	52	46	42	38	35	30	25	22	19	16	13	10	8	6	4	
2	4	57	49	44	39	36	32	26	22	19	16	13	11	8	7	5	4	
3	2	67	60	55	50	46	42	35	30	27	24	20	17	13	11	7	5	
3	3	63	58	52	47	43	40	34	29	25	22	19	16	12	10	7	5	
3	4	61	54	48	44	40	37	31	26	23	20	16	14	11	9	6	5	
4	2	70	64	58	53	49	46	39	34	30	27	23	19	15	12	8	6	
4	3	67	62	56	51	47	44	37	32	28	25	21	18	14	11	8	6	
4	4	64	58	52	47	43	40	34	29	26	23	19	16	13	11	7	6	
5	2	73	67	61	57	52	49	42	37	32	29	25	21	16	13	9	7	
5	3	70	65	59	54	50	46	39	34	30	27	23	19	15	12	9	7	
5	4	65	60	55	50	46	43	36	31	28	25	20	17	14	12	8	6	
6	2	74	69	63	59	55	51	44	39	34	31	26	23	18	14	10	8	
6	3	72	67	61	56	51	48	41	36	32	28	24	20	16	13	10	7	
6	4	66	61	56	52	48	45	38	33	29	26	22	19	15	13	9	7	
7	2	76	70	65	60	56	53	46	40	36	33	28	25	19	15	11	9	
7	3	73	68	62	57	53	50	42	37	33	30	25	21	17	14	10	8	
7	4	67	62	58	54	49	46	40	35	31	28	23	20	16	14	10	8	
8	2	77	72	66	62	58	55	48	42	38	34	29	26	20	16	12	9	
8	3	74	69	63	58	54	51	44	39	34	31	26	22	18	15	11	9	
8	4	67	63	59	55	50	47	41	36	32	29	24	21	17	15	11	9	
9	2	78	73	67	63	60	56	49	43	39	36	31	27	21	17	12	10	
9	3	74	69	64	59	56	52	45	40	35	32	27	23	19	16	12	9	
9	4	68	63	60	56	51	48	42	37	33	30	25	22	18	16	12	9	
10	2	79	74	68	65	61	58	51	45	40	37	32	28	22	18	13	10	
10	3	74	69	65	60	57	53	47	41	37	33	28	24	20	17	13	10	
10	4	68	64	61	56	52	49	43	38	34	31	26	23	19	17	13	9	
12	2	80	75	70	66	63	60	53	48	43	39	34	30	24	20	14	11	
12	3	74	70	66	62	58	55	48	43	39	35	30	26	21	18	14	10	
12	4	69	65	61	57	53	50	44	40	35	32	27	24	20	18	13	10	
14	2	81	76	71	68	65	62	55	50	45	41	36	32	25	21	15	11	
14	3	74	70	67	63	60	56	50	45	41	37	31	27	22	19	15	11	
14	4	69	65	61	57	54	52	45	41	36	33	28	25	21	19	14	10	
16	2	82	77	72	69	66	63	57	52	47	43	38	34	27	22	16	12	
16	3	74	70	67	64	61	58	52	47	42	39	33	29	23	20	15	11	
16	4	70	66	62	58	55	52	46	42	37	34	29	26	22	20	14	11	
18	2	82	78	73	70	67	65	59	54	49	45	39	35	28	23	17	12	
18	3	74	70	67	65	62	59	53	48	44	41	35	30	24	21	16	12	
18	4	70	65	62	58	55	53	47	43	38	35	30	27	23	20	15	11	
20	2	82	78	74	71	68	66	60	55	50	46	41	36	29	24	18	13	
20	3	74	70	67	65	62	60	55	50	46	42	36	32	26	22	17	12	
20	4	70	66	62	58	55	53	47	43	39	36	31	28	24	21	16	11	

Note: Decimals are omitted; k = number of candidate predictors; n = sample size; F = criterion F-to-enter  
 Source: Adapted from Tables 1 and 2 in "Tests of significance in forward selection regression," by L. Wilkinson and G. E. Dallal, *Technometrics*, 1981, 23(4), 377-380. Reprinted with permission from *Technometrics*. Copyright 1981 by the American Statistical Association and the American Society for Quality Control. All rights reserved.

TABLE C.5 Critical Values for Squared Multiple Correlation ( $R^2$ ) in Forward Stepwise Selection  $\alpha = .05$

k	F	N - k - 1																
		10	12	14	16	18	20	25	30	35	40	50	60	80	100	150	200	
2	2	43	38	33	30	27	24	20	16	14	13	10	8	6	5	3	2	
2	3	40	36	31	27	24	22	18	15	13	11	9	7	5	4	2	2	
2	4	38	33	29	26	23	21	17	14	12	10	8	7	5	4	3	2	
3	2	49	43	39	35	32	29	24	21	18	16	12	10	8	7	4	2	
3	3	45	40	36	32	29	26	22	19	17	15	11	9	7	6	4	3	
3	4	42	36	33	29	27	25	20	17	15	13	11	9	7	5	4	3	
4	2	54	48	44	39	35	33	27	23	20	18	15	12	10	8	5	4	
4	3	49	43	39	36	33	30	25	22	19	17	14	11	8	7	5	4	
4	4	45	39	35	32	29	27	22	19	17	15	12	10	8	6	5	3	
5	2	58	52	47	43	39	36	31	26	23	21	17	14	11	9	6	5	
5	3	52	46	42	38	35	32	27	24	21	19	16	13	9	8	5	4	
5	4	46	41	38	35	32	29	24	21	18	16	13	11	9	7	5	4	
6	2	60	54	50	46	41	39	33	29	25	23	19	16	12	10	7	5	
6	3	54	48	44	40	37	34	29	25	22	20	17	14	10	8	6	5	
6	4	48	43	39	36	33	30	26	23	20	17	14	12	9	7	5	4	
7	2	61	56	51	48	44	41	35	30	27	24	20	17	13	11	7	5	
7	3	59	50	46	42	39	36	31	26	23	21	18	15	11	9	7	5	
7	4	50	45	41	38	35	32	27	24	21	18	15	13	10	8	6	4	
8	2	62	58	53	49	46	43	37	31	28	26	21	18	14	11	8	6	
8	3	57	52	47	43	40	37	32	28	24	22	19	16	12	10	7	5	
8	4	51	46	42	39	36	33	28	25	22	19	16	14	11	9	7	5	
9	2	63	59	54	51	47	44	38	33	30	27	22	19	15	12	9	6	
9	3	58	53	49	44	41	38	33	29	25	23	20	16	12	10	7	6	
9	4	52	46	43	40	37	34	29	25	23	20	17	14	11	10	7	6	
10	2	64	60	55	52	49	46	39	34	31	28	23	20	16	13	10	7	
10	3	59	54	50	45	42	39	34	30	26	24	20	17	13	11	8	6	
10	4	52	47	44	41	38	35	30	26	24	21	18	15	12	10	8	6	
12	2	66	62	57	54	51	48	42	37	33	30	25	22	17	14	10	8	
12	3	60	55	52	47	44	41	36	31	28	25	22	19	14	12	9	7	
12	4	53	48	45	41	39	36	31	27	25	22	19	16	13	11	9	7	
14	2	68	64	60	56	53	50	44	39	35	32	27	24	18	15	11	8	
14	3	61	57	53	49	46	43	37	32	29	27	23	20	15	13	10	8	
14	4	43	49	46	42	40	37	32	29	26	23	20	17	13	11	9	7	
16	2	69	66	61	58	55	53	46	41	37	34	29	25	20	17	12	9	
16	3	61	58	54	50	47	44	38	34	31	28	24	21	17	14	11	8	
16	4	53	50	46	43	40	38	33	30	27	24	21	18	14	12	10	8	
18	2	70	67	65	60	57	55	49	44	40	36	31	27	21	18	13	9	
18	3	62	59	55	51	49	46	40	35	32	30	26	23	18	15	12	9	
18	4	54	50	46	44	41	38	34	31	28	25	22	19	15	13	11	8	
20	2	72	68	64	62	59	56	50	46	42	38	33	28	22	19	14	10	
20	3	62	60	56	52	50	47	42	37	34	31	27	24	19	16	12	9	
20	4	54	50	46	44	41	37	35	32	29	26	23	20	16	14	11	8	

(continued)



Dependent variable: Trust Brand to Provide Extension 1+2+3  
Independent variables: Six Postulated Dimensions of Brand Trust  
N=204

Variable	B	SEB	Beta	T	Sig T
Probity	-.142	.187	-.114	-.757	.450
Equity	.353	.205	.255	1.726	.086
Reliability	.306	.230	.238	1.306	.194
Satisfaction	.181	.139	.162	1.303	.195
Communication	-.054	.134	-.045	-.410	.683
Process	.063	.166	.045	.382	.703

Multiple R .510  
R Square .261  
Adj. R Square .232  
Standard Error 1.12

Analysis of Variance (\* = p < .01, \*\* = p < .05)

Sum of Squares	DF	Mean Square
68.61	6	11.435
194.7	155	1.256

Regression F= 9.103  
Residual F=

Table A4: Multiple regression - Combined Experiment Sample Brand 2

Dependent variable: Brand Extension LTT 1+2+3  
Independent variables: Six Postulated Dimensions of Brand Trust  
N=247

Variable	B	SEB	Beta	T	Sig T
Probity	-.317	.193	-.192	-1.645	.101
Equity	-.137	.198	-.079	-.690	.491
Reliability	.454	.241	.284	1.885	.061
Satisfaction	.129	.176	.085	.735	.463
Communication	.383	.186	.198	2.058	.041
Process	.060	.152	.038	.396	.692

Multiple R .343  
R Square .118  
Adj. R Square .095  
Standard Error 1.443

Analysis of Variance (\* = p < .01, \*\* = p < .05)

Sum of Squares	DF	Mean Square
65.916	6	10.98
493.57	237	2.083

Regression F= 5.27  
Residual F=

Table A5: Multiple regression - Tea Large Sample Brand 1

Dependent variable: Brand Extension LTT 1+2+3  
Independent variables: Six Postulated Dimensions of Brand Trust  
N=247

Variable	B	SEB	Beta	T	Sig T
Probity	-.623	.228	-.415	-2.730	.007
Equity	.209	.226	.132	.922	.358
Reliability	.490	.258	.334	1.901	.059
Satisfaction	.529	.150	.406	3.517	.001
Communication	.255	.165	.165	1.549	.123
Process	-.200	.160	-.131	-1.250	.213

Multiple R .536  
R Square .287  
Adj. R Square .269  
Standard Error 1.31

Analysis of Variance (\* = p < .01, \*\* = p < .05)

Sum of Squares	DF	Mean Square
163.40	6	27.235
405.80	236	1.720

Regression F= 15.83  
Residual F=

Table A6: Multiple regression - Tea Large Sample Brand 2

Dependent variable: Brand Extension LTT 1+2+3  
Independent variables: Six Postulated Dimensions of Brand Trust  
N=204

Variable	B	SEB	Beta	T	Sig T
Probity	-.282	.202	-.176	-1.393	.165
Equity	.036	.201	.022	.179	.858
Reliability	.205	.269	.124	.765	.445
Satisfaction	.254	.152	.186	1.670	.097
Communication	.151	.097	.128	1.549	.123
Process	.146	.148	.100	.992	.322

Multiple R .342  
R Square .117  
Adj. R Square .089  
Standard Error 1.31

Analysis of Variance (\* = p < .01, \*\* = p < .05)

Sum of Squares	DF	Mean Square
43.473	6	7.245
329.183	191	1.723

Regression F= 4.204  
Residual F=

Table A1: Multiple regression - Combined Experiment Sample Brand 1

Dependent variable: Brand Extension LTT 1+2+3  
Independent variables: Six Postulated Dimensions of Brand Trust  
N=204

Variable	B	SEB	Beta	T	Sig T
Probity	-.028	.224	-.020	-.128	.898
Equity	-.165	.244	-.105	-.673	.502
Reliability	.064	.275	.046	.242	.809
Satisfaction	.346	.166	.272	2.078	.039
Communication	.228	.160	.166	1.426	.156
Process	.152	.198	.095	.764	.446

Multiple R .429  
R Square .184  
Adj. R Square .152  
Standard Error 1.33

Analysis of Variance (\* = p < .01, \*\* = p < .05)

Sum of Squares	DF	Mean Square
62.56	6	10.247
277.76	155	1.792

Regression F= 5.819  
Residual F=

Table A2: Multiple regression - Combined Experiment Sample Brand 2

Dependent variable: Trust Brand to Provide Extension 1+2+3  
Independent variables: Six Postulated Dimensions of Brand Trust  
N=204

Variable	B	SEB	Beta	T	Sig T
Probity	-.127	.149	-.100	-.852	.395
Equity	.236	.148	.183	1.589	.114
Reliability	.361	.198	.274	1.819	.070
Satisfaction	.150	.112	.138	1.336	.183
Communication	-.021	.072	-.023	-.298	.766
Process	.084	.109	.052	.552	.582

Multiple R .488  
R Square .339  
Adj. R Square .215  
Standard Error .969

Analysis of Variance (\* = p < .01, \*\* = p < .05)

Sum of Squares	DF	Mean Square
56.245	6	9.374
197.48	191	1.034

Regression F= 9.97  
Residual F=

Table A3: Multiple regression - Combined Experiment Sample Brand 1

Dependent variable: LTT Brand Extension 2  
Independent variables: Six Postulated Dimensions of Brand Trust  
N=204

Variable	B	SEB	Beta	T	Sig T
Probability	.215	.240	.111	899	.370
Equity	-.182	.242	-.092	-.754	.452
Reliability	.193	.320	.096	605	.546
Satisfaction	.165	.182	.099	905	.367
Communication	.204	.116	.143	1762	.080
Process	.200	.176	.112	1135	.258

Multiple R .384  
R Square .148  
Adj R Square .121  
Standard Error 1.57  
F= 5.519  
Sign F= (N=)

Table A10: Multiple regression – Combined Experiment Sample Brand 1

Dependent variable: LTT Brand Extension 3  
Independent variables: Six Postulated Dimensions of Brand Trust  
N=204

Variable	B	SEB	Beta	T	Sig T
Probability	-.649	.277	-.306	-2.346	.020
Equity	.334	.279	.155	1.197	.233
Reliability	.120	.369	.054	.325	.745
Satisfaction	.196	.210	.107	.931	.353
Communication	.097	.134	.062	.728	.468
Process	.115	.204	.059	.565	.573

Multiple R .218  
R Square .047  
Adj R Square .017  
Standard Error 1.82  
F= 1.581  
Sign F= 1.55

Table A11: Multiple regression – Combined Experiment Sample Brand 1

Dependent variable: LTT Brand Extension 1  
Independent variables: Six Postulated Dimensions of Brand Trust  
N=204

Variable	B	SEB	Beta	T	Sig T
Probability	.019	.312	.010	.062	.951
Equity	-.268	.343	-.122	-.781	.436
Reliability	-.108	.385	-.053	-.279	.780
Satisfaction	.425	.232	.239	1.828	.069
Communication	.495	.224	.257	2.212	.028
Process	.264	.278	.118	.948	.344

Multiple R .428  
R Square .184  
Adj R Square .152  
Standard Error 1.87  
F= 5.806  
Sign F= (N=)

Table A12: Multiple regression – Combined Experiment Sample Brand 2

Dependent variable: Trust Brand to Provide Extension 1+2+3  
Independent variables: Six Postulated Dimensions of Brand Trust  
N=247

Variable	B	SEB	Beta	T	Sig T
Probability	-.090	.142	-.070	-.641	.522
Equity	-.050	.146	-.038	-.349	.728
Reliability	.301	.177	.241	1.700	.091
Satisfaction	.247	.129	.207	1.911	.057
Communication	.335	.137	.222	2.444	.015
Process	-.096	.112	-.078	-.861	.390

Multiple R .467  
R Square .218  
Adj R Square .198  
Standard Error 1.06  
F= 11.02  
Sign F= (N=)

Table A7: Multiple regression – Tea Large Sample Brand 1

Dependent variable: Trust Brand to Provide Extension 1+2+3  
Independent variables: Six Postulated Dimensions of Brand Trust  
N=247

Variable	B	SEB	Beta	T	Sig T
Probability	-.079	.198	-.061	-.401	.689
Equity	-.160	.196	-.117	-.815	.416
Reliability	.598	.223	.472	2.678	.008
Satisfaction	.074	.130	.066	.572	.568
Communication	.306	.143	.229	2.144	.033
Process	-.074	.139	-.057	-.537	.592

Multiple R .533  
R Square .284  
Adj R Square .266  
Standard Error 1.13  
F= 15.61  
Sign F= (N=)

Table A8: Multiple regression – Tea Large Sample Brand 2

Dependent variable: LTT Brand Extension 1  
Independent variables: Six Postulated Dimensions of Brand Trust  
N=204

Variable	B	SEB	Beta	T	Sig T
Probability	-.397	.298	-.170	-1.332	.184
Equity	.077	.301	.033	.258	.797
Reliability	.328	.398	.135	.825	.411
Satisfaction	.421	.227	.210	1.854	.065
Communication	.122	.144	.071	.844	.400
Process	.025	.220	.012	.115	.909

Multiple R .084  
R Square .055  
Adj R Square .046  
Standard Error 1.96  
F= 2.903  
Sign F= .010

Table A9: Multiple regression – Combined Experiment Sample Brand 1



Dependent variable: LTT Brand Extension 2 N=204

Independent variables: Six Postulated Dimensions of Brand Trust

Variable	B	SEB	Beta	T	Sig T
Probit	271	284	136	955	341
Equity	-357	311	-184	-1146	254
Reliability	111	350	163	317	752
Satisfaction	226	213	145	1059	291
Communication	172	203	102	846	399
Process	218	253	111	864	389

Multiple R: 364  
R Square: 132  
Adj R Square: 109K  
Standard Error: 1703

Analysis of Variance  
Sum of Squares: 68.054  
Mean Square: 11.342  
DE: 6  
Regression: 154  
Residual: 3910  
F= 3.910  
Sign F= (K)

Table A13: Multiple regression - Combined Experiment Sample Brand 2

Dependent variable: TTP Brand Extension 2 N=204

Independent variables: Six Postulated Dimensions of Brand Trust

Variable	B	SEB	Beta	T	Sig T
Probit	-2.23	.179	-.014	-.124	.901
Equity	1.64	.181	.104	.907	.366
Reliability	4.24	.239	.262	1.775	.078
Satisfaction	2.32	.136	.174	1.703	.090
Communication	.012	.087	.011	.144	.885
Process	.029	.132	.021	.227	.821

Multiple R: 505  
R Square: 255  
Adj R Square: .232  
Standard Error: 1.17

Analysis of Variance  
Sum of Squares: 90.82  
Mean Square: 15.138  
DE: 6  
Regression: 191  
Residual: 1089  
F= 1.889  
Sign F= (KK)

Table A16: Multiple regression - Combined Experiment Sample Brand 1

Dependent variable: LTT Brand Extension 3 N=204

Independent variables: Six Postulated Dimensions of Brand Trust

Variable	B	SEB	Beta	T	Sig T
Probit	-416	277	-253	-1515	134
Equity	187	304	138	233	824
Reliability	231	341	138	678	499
Satisfaction	343	206	233	1664	1098
Communication	134	198	102	173	862
Process	152	247	128	212	832

Multiple R: 258  
R Square: 166  
Adj R Square: 130  
Standard Error: 166

Analysis of Variance  
Sum of Squares: 30.570  
Mean Square: 5.095  
DE: 6  
Regression: 155  
Residual: 429.47  
F= 1.839  
Sign F= .095

Table A14: Multiple regression - Combined Experiment Sample Brand 2

Dependent variable: TTP Brand Extension 1 N=204

Independent variables: Six Postulated Dimensions of Brand Trust

Variable	B	SEB	Beta	T	Sig T
Probit	-1.234	.187	-.066	-.066	.948
Equity	3.24	.189	.199	1.717	.088
Reliability	4.07	.250	.244	1.631	.105
Satisfaction	1.05	.142	.076	.736	.461
Communication	1.18	.091	.140	1.304	.194
Process	-1.108	.138	-.074	-.786	.433

Multiple R: 484  
R Square: 234  
Adj R Square: 210  
Standard Error: 1.23

Analysis of Variance  
Sum of Squares: 88.75  
Mean Square: 14.79  
DE: 6  
Regression: 191  
Residual: 9.74  
F= 1.518  
Sign F= (KK)

Table A15: Multiple regression - Combined Experiment Sample Brand 1

Dependent variable: TTP Brand Extension 3 N=204

Independent variables: Six Postulated Dimensions of Brand Trust

Variable	B	SEB	Beta	T	Sig T
Probit	-352	248	-185	-1.422	157
Equity	207	250	106	.829	408
Reliability	291	330	147	882	379
Satisfaction	117	188	.071	.620	536
Communication	-195	120	-.139	-1.628	105
Process	250	182	142	1.369	173

Multiple R: 238  
R Square: 157  
Adj R Square: 127  
Standard Error: 1.62

Analysis of Variance  
Sum of Squares: 30.512  
Mean Square: 5.085  
DE: 6  
Regression: 191  
Residual: 2.657  
F= 1.914  
Sign F= (KK)

Table A17: Multiple regression - Combined Experiment Sample Brand 1

Dependent variable: TTP Brand Extension 1 N=204

Independent variables: Six Postulated Dimensions of Brand Trust

Variable	B	SEB	Beta	T	Sig T
Probit	.008	.215	.006	.038	.970
Equity	4.32	.236	.266	1.829	.069
Reliability	1.97	.265	.133	.743	.458
Satisfaction	2.24	.160	.171	1.399	.164
Communication	-1.02	.154	-.072	-.661	.510
Process	.123	.192	.075	.640	.523

Multiple R: 536  
R Square: 287  
Adj R Square: 260  
Standard Error: 1.29

Analysis of Variance  
Sum of Squares: 104.46  
Mean Square: 17.411  
DE: 6  
Regression: 155  
Residual: 10.41  
F= 1.672  
Sign F= (KK)

Table A18: Multiple regression - Combined Experiment Sample Brand 2

Table A19: Multiple regression – Combined Experiment Sample Brand 2

Dependent variable: TTP Brand Extension 2 N=204  
 Independent variables: Six Postulated Dimensions of Brand Trust

Variable	B	SEB	Beta	T	Sig T
Probability	.204	.242	-.133	-.842	.401
Equity	.055	.266	.033	.210	.834
Reliability	.502	.297	.324	1.689	.093
Satisfaction	.181	.181	.132	1.001	.319
Communication	.039	.174	.027	.229	.819
Process	.144	.215	.084	.669	.505

Multiple R: .440  
 R Square: .194  
 Adj. R Square: .162  
 Standard Error: 1.44

Analysis of Variance (\* = p < .01, \*\* = p < .05)

Sum of Squares	DF	Mean Square
76.67	6	12.779
318.82	153	2.084

Regression: F = 6.133  
 Residual: F = 2.084

Table A20: Multiple regression – Combined Experiment Sample Brand 2

Dependent variable: TTP Brand Extension 3 N=204  
 Independent variables: Six Postulated Dimensions of Brand Trust

Variable	B	SEB	Beta	T	Sig T
Probability	-.238	.277	-.144	-.860	.391
Equity	.508	.304	.277	1.675	.096
Reliability	.206	.342	.123	.603	.547
Satisfaction	.126	.208	.085	.646	.546
Communication	-.129	.198	-.081	-.650	.517
Process	.015	.246	.008	.062	.951

Multiple R: .291  
 R Square: .084  
 Adj. R Square: .049  
 Standard Error: 1.66

Analysis of Variance (\* = p < .01, \*\* = p < .05)

Sum of Squares	DF	Mean Square
39.18	6	6.530
425.02	145	2.930

Regression: F = 2.366  
 Residual: F = 2.760

Table A21: Multiple regression – Tea Large Sample Brand 1

Dependent variable: LTT Brand Extension 1 N=247  
 Independent variables: Six Postulated Dimensions of Brand Trust

Variable	B	SEB	Beta	T	Sig T
Probability	-.292	.280	-.123	-1.041	.299
Equity	.096	.288	.039	.335	.738
Reliability	.437	.350	.190	1.246	.214
Satisfaction	.040	.256	.019	.160	.873
Communication	.597	.271	.216	2.205	.028
Process	-.091	.221	-.041	-.415	.678

Multiple R: .299  
 R Square: .089  
 Adj. R Square: .066  
 Standard Error: 2.10

Analysis of Variance (\* = p < .01, \*\* = p < .05)

Sum of Squares	DF	Mean Square
102.67	6	17.113
1045.26	237	4.410

Regression: F = 3.88  
 Residual: F = 4.410

Table A22: Multiple regression – Tea Large Sample Brand 1

Dependent variable: LTT Brand Extension 2 N=247  
 Independent variables: Six Postulated Dimensions of Brand Trust

Variable	B	SEB	Beta	T	Sig T
Probability	-.225	.247	-.190	-.913	.362
Equity	-.423	.254	-.196	-1.664	.097
Reliability	.187	.309	.094	.607	.545
Satisfaction	.336	.223	.176	1.489	.138
Communication	.193	.239	.080	.808	.420
Process	.387	.195	.197	1.989	.048

Multiple R: .267  
 R Square: .071  
 Adj. R Square: .048  
 Standard Error: 1.84

Analysis of Variance (\* = p < .01, \*\* = p < .05)

Sum of Squares	DF	Mean Square
62.35	6	10.392
810.44	237	3.039

Regression: F = 3.039  
 Residual: F = 3.039

Table A23: Multiple regression – Tea Large Sample Brand 1

Dependent variable: LTT Brand Extension 3 N=247  
 Independent variables: Six Postulated Dimensions of Brand Trust

Variable	B	SEB	Beta	T	Sig T
Probability	-.436	.247	-.212	-1.770	.078
Equity	-.085	.254	-.040	-.388	.716
Reliability	.742	.308	.371	2.408	.017
Satisfaction	.012	.223	.007	.056	.955
Communication	.363	.238	.151	1.525	.129
Process	-.114	.195	-.058	-.587	.558

Multiple R: .272  
 R Square: .074  
 Adj. R Square: .051  
 Standard Error: 1.84

Analysis of Variance (\* = p < .01, \*\* = p < .05)

Sum of Squares	DF	Mean Square
64.722	6	10.787
808.918	237	3.413

Regression: F = 3.16  
 Residual: F = 3.413

Table A24: Multiple regression – Tea Large Sample Brand 1

Dependent variable: LTT Brand Extension 1 N=247  
 Independent variables: Six Postulated Dimensions of Brand Trust

Variable	B	SEB	Beta	T	Sig T
Probability	-.888	.320	-.444	-2.772	.006
Equity	.445	.319	.212	1.393	.165
Reliability	.869	.362	.445	2.398	.017
Satisfaction	.377	.211	.217	1.784	.076
Communication	.172	.231	.083	.741	.459
Process	-.185	.226	-.091	-.819	.413

Multiple R: .455  
 R Square: .207  
 Adj. R Square: .187  
 Standard Error: 1.834

Analysis of Variance (\* = p < .01, \*\* = p < .05)

Sum of Squares	DF	Mean Square
209.57	6	34.92
801.79	236	3.397

Regression: F = 10.28  
 Residual: F = 3.397



Dependent variable: LTT Brand Extension 2  
Independent variables: Six Postulated Dimensions of Brand Trust  
N=247

Variable	Unstandardised			Standardised		
	B	SEB	T	Beta	T	Sig. T
Probit	-575	298	-1.931	-.321	-1.931	.055
Equity	337	296	1.141	.180	1.141	.255
Reliability	146	337	.434	.084	.434	.665
Satisfaction	688	197	3.487	.443	3.487	.001
Communication	-011	215	-.046	-.046	-.046	.956
Process	-1062	209	-3.080	-.035	-3.080	.004
Multiple R	.366					
R Square	.149					
Adj. R Square	.128					
Standard Error	1.70					
Analysis of Variance						
	DF	Sum of Squares	Mean Square	F=		
Regression	6	120.27	20.046	2.917		
Residual	235	685.49	2.917	6.872		
F=	6.872					

Table A25: Multiple regression - Large Tea Sample Brand 2

Dependent variable: TTP Brand Extension 2  
Independent variables: Six Postulated Dimensions of Brand Trust  
N=247

Variable	Unstandardised			Standardised		
	B	SEB	T	Beta	T	Sig. T
Probit	.083	.184	.451	-.052	-.451	.652
Equity	.013	.189	.070	.008	.070	.944
Reliability	226	.230	.983	.147	.983	.327
Satisfaction	334	.168	1.985	.228	1.985	.048
Communication	158	.178	.890	.085	.890	.375
Process	-.091	.145	-.629	-.061	-.629	.530
Multiple R	.651					
R Square	.423					
Adj. R Square	.401					
Standard Error	1.37					
Analysis of Variance						
	DF	Sum of Squares	Mean Square	F=		
Regression	6	63.56	10.593	5.56		
Residual	237	451.24	1.904	1.984		
F=	5.56					

Table A28: Multiple regression - Tea Large Sample Brand 1

Dependent variable: LTT Brand Extension 3  
Independent variables: Six Postulated Dimensions of Brand Trust  
N=247

Variable	Unstandardised			Standardised		
	B	SEB	T	Beta	T	Sig. T
Probit	-417	291	-1.431	-.225	-1.431	.154
Equity	-144	290	-.497	-.074	-.497	.620
Reliability	468	329	1.420	.259	1.420	.157
Satisfaction	499	192	2.599	.311	2.599	.010
Communication	614	210	2.920	.323	2.920	.004
Process	-360	205	-1.754	-.192	-1.754	.081
Multiple R	.482					
R Square	.232					
Adj. R Square	.212					
Standard Error	1.67					
Analysis of Variance						
	DF	Sum of Squares	Mean Square	F=		
Regression	6	200.09	33.349	11.87		
Residual	236	662.55	2.807	2.807		
F=	11.87					

Table A26: Multiple regression - Tea Large Sample Brand 2

Dependent variable: TTP Brand Extension 3  
Independent variables: Six Postulated Dimensions of Brand Trust  
N=247

Variable	Unstandardised			Standardised		
	B	SEB	T	Beta	T	Sig. T
Probit	-130	.188	-.692	-.080	-.692	.490
Equity	-216	.194	-1.114	-.127	-1.114	.266
Reliability	385	.235	1.635	.245	1.635	.103
Satisfaction	187	.172	1.091	.125	1.091	.276
Communication	339	.182	1.864	.179	1.864	.064
Process	.038	.149	.262	.025	.262	.794
Multiple R	.355					
R Square	.126					
Adj. R Square	.104					
Standard Error	1.408					
Analysis of Variance						
	DF	Sum of Squares	Mean Square	F=		
Regression	6	68.042	11.340	5.705		
Residual	237	471.118	1.988	1.988		
F=	5.705					

Table A29: Multiple regression - Tea Large Sample Brand 1

Dependent variable: TTP Brand Extension 1  
Independent variables: Six Postulated Dimensions of Brand Trust  
N=247

Variable	Unstandardised			Standardised		
	B	SEB	T	Beta	T	Sig. T
Probit	-.058	.154	-.379	-.041	-.379	.705
Equity	.050	.158	.317	.034	.317	.752
Reliability	290	.193	1.508	.210	1.508	.133
Satisfaction	219	.141	1.555	.166	1.555	.120
Communication	505	.149	3.390	.303	3.390	.001
Process	-236	.122	-1.940	-.174	-1.940	.054
Multiple R	.493					
R Square	.243					
Adj. R Square	.224					
Standard Error	1.15					
Analysis of Variance						
	DF	Sum of Squares	Mean Square	F=		
Regression	6	101.49	16.91	12.71		
Residual	237	315.42	1.331	1.331		
F=	12.71					

Table A27: Multiple regression - Tea Large Sample Brand 1

Dependent variable: TTP Brand Extension 1  
Independent variables: Six Postulated Dimensions of Brand Trust  
N=247

Variable	Unstandardised			Standardised		
	B	SEB	T	Beta	T	Sig. T
Probit	-.051	.223	-.229	-.035	-.229	.819
Equity	-.152	.222	-.685	-.100	-.685	.494
Reliability	.777	.252	3.083	.548	3.083	.002
Satisfaction	.013	.147	.090	.010	.090	.928
Communication	228	.161	1.418	.153	1.418	.158
Process	-.092	.157	-.587	-.062	-.587	.558
Multiple R	.523					
R Square	.274					
Adj. R Square	.258					
Standard Error	1.28					
Analysis of Variance						
	DF	Sum of Squares	Mean Square	F=		
Regression	6	146.19	24.36	14.82		
Residual	236	387.93	1.644	1.644		
F=	14.82					

Table A30: Multiple regression - Tea Large Sample Brand 2

Dependent variable: TTP Brand Extension 2 N=247  
 Independent variables: Six Postulated Dimensions of Brand Trust

Variable	B	SEB	Standardised	Beta	T	Sig T
Probability	-.007	.241		-.005	-.030	.976
Equity	.146	.240		.094	.609	.543
Reliability	.346	.273		.240	1.268	.206
Satisfaction	.048	.160		.038	.303	.762
Communication	.256	.174		.169	1.467	.144
Process	-.154	.169		-.103	-.907	.365
Multiple R	.425					
R Square	.181					
Adj. R Square	.160					
Standard Error	1.38					
Regression F=						
Residual F=						
Sum of Squares						
Mean Square						
Sign F= (N)						

Table A31: Multiple regression – Tea Large Sample Brand 2

Dependent variable: TTP Brand Extension 3 N=247  
 Independent variables: Six Postulated Dimensions of Brand Trust

Variable	B	SEB	Standardised	Beta	T	Sig T
Probability	-.209	.232		-.142	-.901	.369
Equity	-.476	.230		-.309	-2.069	.040
Reliability	.704	.262		.491	2.688	.008
Satisfaction	.129	.154		.101	.841	.401
Communication	.455	.168		.301	2.717	.007
Process	.026	.163		.018	.162	.871
Multiple R	.490					
R Square	.240					
Adj. R Square	.220					
Standard Error	1.32					
Regression F=						
Residual F=						
Sum of Squares						
Mean Square						
Sign F= (N)						

Table A32: Multiple regression – Tea Large Sample Brand 2



# Changes in Media Weight versus Changes Market Share

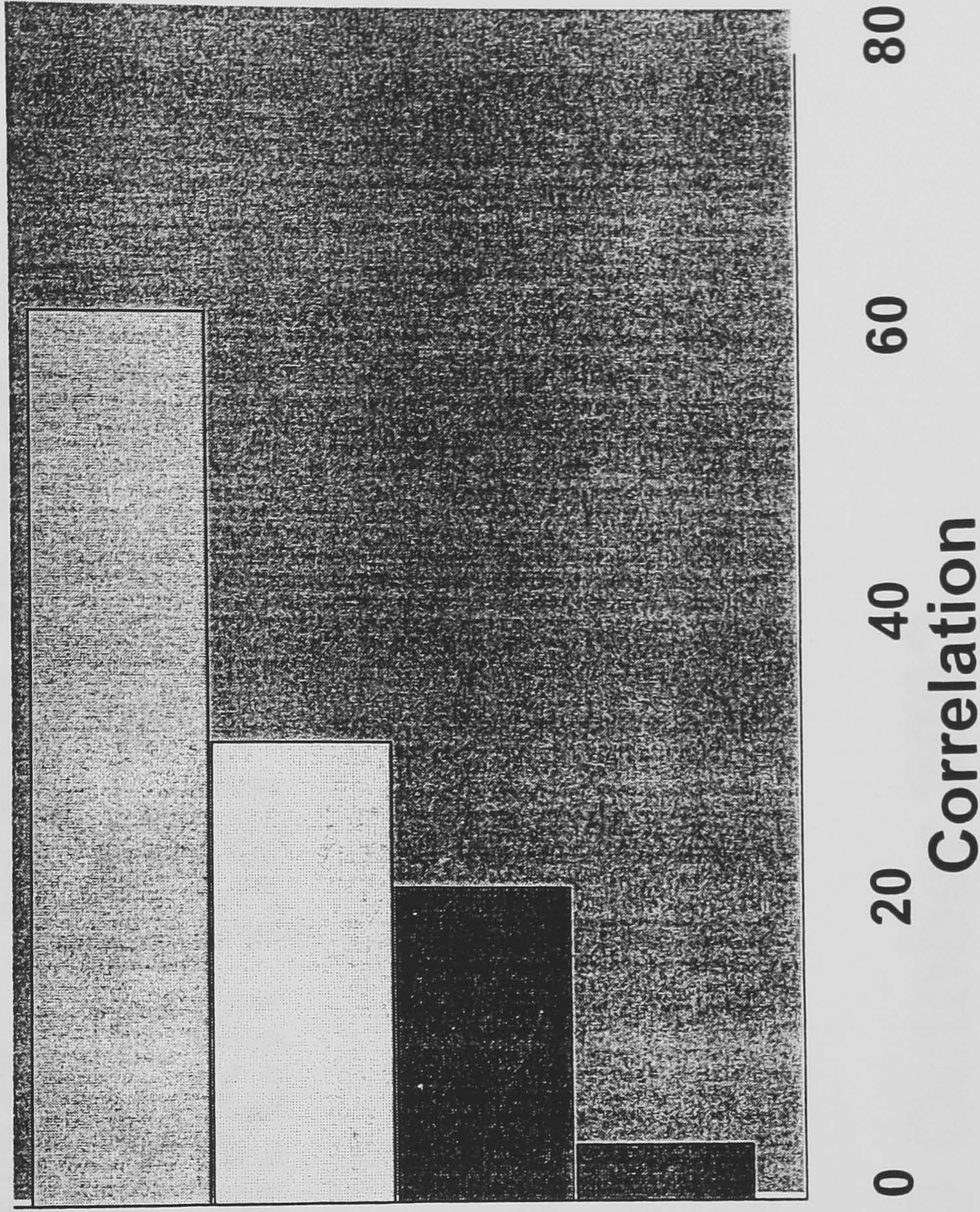
R<sup>2</sup> values

“Effective” SOV  
With High Impact

“Effective” SOV  
= Impact \* SOV

Share of Voice (SOV)

Raw GRPs



Based on 100 Brands - change over a 3 year period



# **Advertising - How it works**

## **A research perspective**

Appendix 14

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**Presentation to the  
Leeds University  
Business School**

**30 October 2002**

**Gordon Pincott**